FORUM MONDIAL
BÂTIMENTS ET CLIMAT
BUILDINGS AND CLIMATE
GLOBAL FORUM

BUILDING AND CLIMATE GLOBAL FORUM REPORT

7-8TH MARCH 2024, PALAIS DES CONGRÈS, PARIS

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The Buildings and Climate Global Forum, co-organized by France and the United Nations Environment Programme (UNEP), with the support of the Global Alliance for Buildings and Construction (GlobalABC), was held on March 7-8, 2024, at the Palais des Congrès in Paris. The Ministry of Ecological Transition, Energy, Climate and Risk Prevention entrusted the École nationale des ponts et chaussées, specifically the Executive Master ® Sustainable Real Estate & Buildings (MS® IBD), with drafting a report summarizing the conferences organized during the plenary and parallel sessions.

As a partner of GlobalABC and co-leader of the «Higher Education Institutions» (HEI) action group, the École nationale des ponts et chaussées mobilized its resources to organize this event effectively. A dedicated organization allowed for the assignment of a team of rapporteurs: each session was attended by a pair tasked with transcribing and synthesizing the key points under the supervision of a coordinator. Nearly 50 rapporteurs participated over the two days, under the overall coordination of Dominique Naert, Director of the MS IBD, assisted by Stéphanie Merger, Deputy Director, and Bruno Mesureur, Head of the International Module.

With more than 34 thematic sessions, round tables, exhibitions, and presentations, the forum provided an exceptional opportunity. Participants had the chance to listen to and actively engage in discussions during the sessions. This collaboration resulted in the production of a final report, the Global Forum Report, a testament to the successful partnership between the École nationale des ponts et chaussées, ADEME, the Ministry of Ecological Transition, and the GlobalABC team.

Since its foundation in 1747, the École nationale des ponts et chaussées has remained at the forefront of innovation, research, and education, offering programs that prepare students to tackle sustainable development challenges. These programs combine scientific and technical expertise with a deep understanding of social and environmental dimensions. In this context, in 2011, it created a program dedicated to sustainable real estate and construction, in line with the Grenelle Environment initiative.

For our volunteer rapporteurs, this event represented a unique experience. Their involvement was crucial in capturing and disseminating the key content, commitments, and declarations from the forum. Their work highlights the importance of their dedication to advancing the sustainable construction sector.

Finally, I would like to extend my heartfelt thanks to all the rapporteurs for their exemplary commitment, as well as Dominique Naert, Stéphanie Merger and Bruno Mesureur for their unfailing dedication to the success of the volunteer team. I also warmly thank our partners – ADEME, the Ministry of Ecological Transition, and GlobalABC – for their trust and support.

Anthony Briant
Director of École nationale des ponts et chaussées

The Buildings and Climate Global Forum – A Key Milestone For Accelerating Global Climate Action in the Buildings sector

The Buildings and Climate Global Forum held on March 7-8, 2024, in Paris, marked a before and after for international collaboration to reduce the emissions and strengthen the climate resilience of buildings. It demonstrated the power and breadth of the Global Alliance for Buildings and Construction (GlobalABC) proudly hosted by the United Nations Environment Programme (UNEP) and initiated at COP21 under the leadership of the French Government from the following observation: '*We will not be able to achieve the goals of the Paris Agreement without taking action in the building sector*'.

Bringing together more than 1,500 participants from over seventy countries, the Forum facilitated dialogue and exchanges between international experts and high-level representatives from governments and the private sector. It focused on collective action and solutions for adaptation and reducing carbon emissions throughout the lifecycle of buildings, from design to decommissioning. The major outcome was the 'Declaration de Chaillot' endorsed by over 60 governments. The declaration reflects a collective consensus to accelerate climate action and mainstream sustainable building practices.

The Declaration de Chaillot has given the mandate to GlobalABC for establishing and coordinating an Intergovernmental Council for Buildings and Climate (ICBC), an international cooperation platform for countries to implement the priorities laid out in the declaration. This platform will facilitate peer learning and enable the adoption by ICBC members of tools and recommendations for improved decision making and fostering enabling policies and measures for implementing climate actions.

As the host of the GlobalABC, UNEP is committed to mobilize all stakeholders and work with all members of the alliance to support ICBC members for sustained collaboration and concrete actions towards making near zero-emission, efficient, and resilient buildings the normal practice globally. This first Forum was a collaborative effort strongly supported by the GlobalABC community and this was key to its success. We sincerely hope that together we will make the ICBC a success and see future editions of the Buildings and Climate Global Forums.

Gulnara Roll
Head of GlobalABC Secretariat and Head Cities Unit
United Nations Environment Programme (UNEP)

The Buildings and Climate Global Forum, co-organised by France and the United Nations Environment Programme (UNEP), with the support of the Global Alliance for Buildings and Construction (GlobalABC), took place on 7 and 8 March 2024 in Paris. The Forum gathered ministers and high-level representatives of key organizations for the first time, to initiate a new impetus in international collaboration for building decarbonization and resilience after the 28th Conference of the Parties (COP28).

For two days, this Forum provided a unique opportunity to engage with ministers responsible for decarbonization and resilience of the buildings, real estate, and construction sectors from all world regions.

High-level representatives and experts of key stakeholder organizations were invited, across the entire buildings sector value chain, including local authorities, non-governmental organizations (NGOs), and businesses.

Over 800 participants were expected. Many sessions on key topics, Chief Executive Officer and ministerial roundtables, plenary meetings, solution exhibitions, and pitches provided the opportunity to exchange, network and work together.

Governments were invited to endorse a common declaration outlining common principles and a cooperation framework for global efforts to achieve decarbonization and climate change resilience in the buildings sector. All stakeholders of the buildings sector were invited to disclose specific engagements to support the Forum's ambition.

The Forum followed the successful launch of the Buildings Breakthrough at COP-28 (Dubai, 6December 2023); the Buildings Breakthrough was supported by 28 governments, the European Commission, and 19 international initiatives.

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1. Background

Towards a zero-emission, efficient, and resilient buildings and construction sector - where do we stand?

This section explores the current state of the buildings sector when it comes to decarbonization and resilience. It includes the presentation of the annual Global Status Report for Buildings and Construction.

As mentioned in the 2022 Global Status Report for Buildings and Construction, the warnings issued by the Intergovernmental Panel on Climate Change (IPCC) about the consequences of climate change have become reality. In 2022, the world saw heatwaves across the globe; wildfires that destroyed forests, homes, and lives; droughts that are threatening the food security of millions of people.

Decarbonizing the buildings sector by 2050 is critical to delivering these emission cuts – and to addressing the wider triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste. However, as the 2022 Buildings Global Status Report shows, the sector is not making the profound systemic changes needed to get on the path to this goal.

After the slowdown due to the pandemic, the sector's operational emissions rebounded in 2021 to reach 2% more than the historic peak established in 2019. Furthermore, a positive sign is that investments in the energy efficiency of buildings have increased by around 16% in 2021, but this growth is timid and must be supported to achieve decarbonization of the building sector. Building sector energy intensity did not improve in 2021 and renewable energy growth in buildings remains modest, although green building certification is improving. However, as the report shows, the sector is capable of change. For example, rising fossil fuel costs make continued investment in energy efficiency more attractive – although the erosion of purchasing power might slow investment. The solution may lie in governments directing relief towards low and zero-carbon building.

Opening plenary: https://youtu.be/PTGwoOZWDqE

2. The Buildings and Climate Global Forum

2.1 General presentation

The building sector represents 43% of French annual energy consumption and generates 23% of French greenhouse gas (GHG) emissions. The building sector accounts for approximately 19% of construction waste production, or 46 million tonnes per year (for comparison, each year, around 30 million tonnes of household waste are produced). 49% comes from demolition, 38% from rehabilitation and 13% from new construction.

The climate impact of buildings is likely to increase in the coming decades due to rapid growth, especially in urban areas in the Global South, and to aging infrastructure in the Global North. However, the buildings and construction sector are not on track to achieve decarbonization by 2050. It is therefore more urgent than ever to change the way humanity constructs and uses buildings.

In this context, the Buildings and Climate Global Forum brought together ministers, high-level representatives of key organizations, key stakeholders to promote the decarbonization and resilience of the buildings sector. The event is the first of its kind and will follow up on progress made at the recent United Nations Climate Change Conference (COP28).

Co-organized by France and the United Nations Environment Programme (UNEP), with the support of the Global Alliance for Buildings and Construction (GlobalABC), the forum took place on 7 and 8 March 2024 in Paris, France.

This forum was building on the successful launch of the Buildings Breakthrough which took place at COP28. This initiative that was supported by 28 governments and the European Commission, among, others, aspires to make near-zero-emission and resilient buildings the new normal by 2030.

2.2 Objectives of the Global Forum

The objectives are as follows:

- Showcase the impact of the buildings and construction sector on the environment, and its significant role in achieving climate goals
- Demonstrate the importance of multi-level international collaboration to tackle carbon emissions
- Promote cooperation and partnerships among international actors and organizations to accelerate the transition to near-zero emission and resilient buildings
- Explore sustainable design practices, technological innovations, and solutions in the sector
- Inspire policymakers to establish and implement policies that foster energy efficiency and resilience in buildings
- Highlight the Buildings Breakthrough as a complementary initiative providing a framework for advancing the international collaboration necessary for the decarbonization and resilience of buildings on a global level.

2.3 Main expected outcomes of the Global Forum

The main outcomes are as follows:

- Governments were invited to endorse a joint statement, the “Déclaration de Chaillot” (Chaillot Declaration), which outlines an international collaboration framework for decarbonizing the buildings sector and making it more resilient. This document is appended to the present Report.
- All stakeholders in the buildings sector were invited to disclose their commitments and contributions to decarbonizing the industry
- Organizations and stakeholder groups were invited to disclose priority actions, including the 2024 priority actions of the Buildings Breakthrough.

These outcomes were reiterated during the Opening ceremony, in particular by Christophe Béchu, French Minister for Ecological Transition and Territorial Cohesion.

- Commitment to accelerating actions towards the decarbonization of the building sector;
- Increasing resilience in the sector;
- Achieving a policy framework for national authorities;
- A sector which represents more than 20% of carbon emissions – the goal of the Forum is to go forward and share solutions for good practices;
- Finance, Energy and Resilience are key

Let’s note here some quotes from the Opening ceremony:

- “There are signs that efficient policies can change everything” (Oliver Rapf)
- “It’s important to make tangible reform” (Jamie Fergusson)

During his Opening speech, Christophe Béchu, Minister of Ecological Transition and Territorial Cohesion emphasized the following points:

- For the first time, public authorities are meeting to discuss this economic sector, which represents 13% of global GDP.

- Half of the buildings that will exist in 2060 are still to be built
- Life-cycle analysis and laws are needed to regulate urban development
- French solutions can be inspiring for other countries
- 1924 Olympic Games in Paris: for the first time the Athletes Village had electricity
- 2024 Olympic Games in Paris: for the first time, 100% of the installations are powered by renewable energies. The buildings are bio-sourced, resilient, and contribute to refilling groundwater. They are demonstrators of the sustainable city
- The willingness to work together will be reflected in the final document that will be signed by the end of the Forum. Nations must work together for a carbon-free construction sector

Opening Remarks by Inger Andersen, Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme delivered by Ligia Noronha, Assistant Secretary General of UNEP.

Building a better future through material efficiency

My thanks to Minister Christophe Béchu, Minister for Ecological Transition and Territorial Cohesion, and to the government of France for showing strong leadership on decarbonizing the buildings and construction sector. UNEP greatly appreciates France's partnership in the Global Alliance for Buildings and Construction and the Buildings Breakthrough, launched at COP28. This first Buildings and Climate Global Forum is an important next step in this agenda.
We need to provide a built environment that works for everyone to deliver on the sustainable development goals. But it cannot come at the expense of further climate disruption. The first global Stocktake found that the world is off track on the targets of the Paris Agreement. UNEP's Emissions Gap Report found that we need to shave 28 per cent off emissions by 2030 for 2°C, and 42 per cent for 1.5°C. Slow progress in decarbonizing the buildings and construction sector is part of the reason we are so far behind. Some 21 per cent of greenhouse gas emissions are linked to the sector.

We must act. And we have a chance to act. Half of the buildings that will exist by 2050 are not built. Another 20 per cent of building stock needs to be renovated by 2030 to make it zero-carbon ready. There are many elements to the transition. My colleagues from UN Habitat, the International Energy Agency, and the UN Office for Disaster Risk Reduction are today covering aspects such as adequate housing, energy decarbonization and efficiency, and climate resilience. I will focus on the need for a life-cycle approach to reduce embodied carbon from building materials. There is a good reason for this focus. In fast-developing economies, construction materials will dominate resource consumption. Associated emissions are expected to double by 2060. However, we can adopt three key strategies to avoid these emissions.

One, introduce circularity into the economy, thus aiming to reduce, or in some cases even avoid, extraction and production of new raw materials.
This means better design and reuse and recycling of materials. It also means renovations of old buildings, which create 75 per cent less emissions than new construction. These elements will obviously require strong policy support.

Two, shift to ethically produced bio-based building materials. Using materials like timber, bamboo and biomass could shave 40 per cent off 2050 emissions in some places. So, it makes sense to increase the market share of such low-carbon materials and increase finance in R&D.

Three, improve building materials and processes.

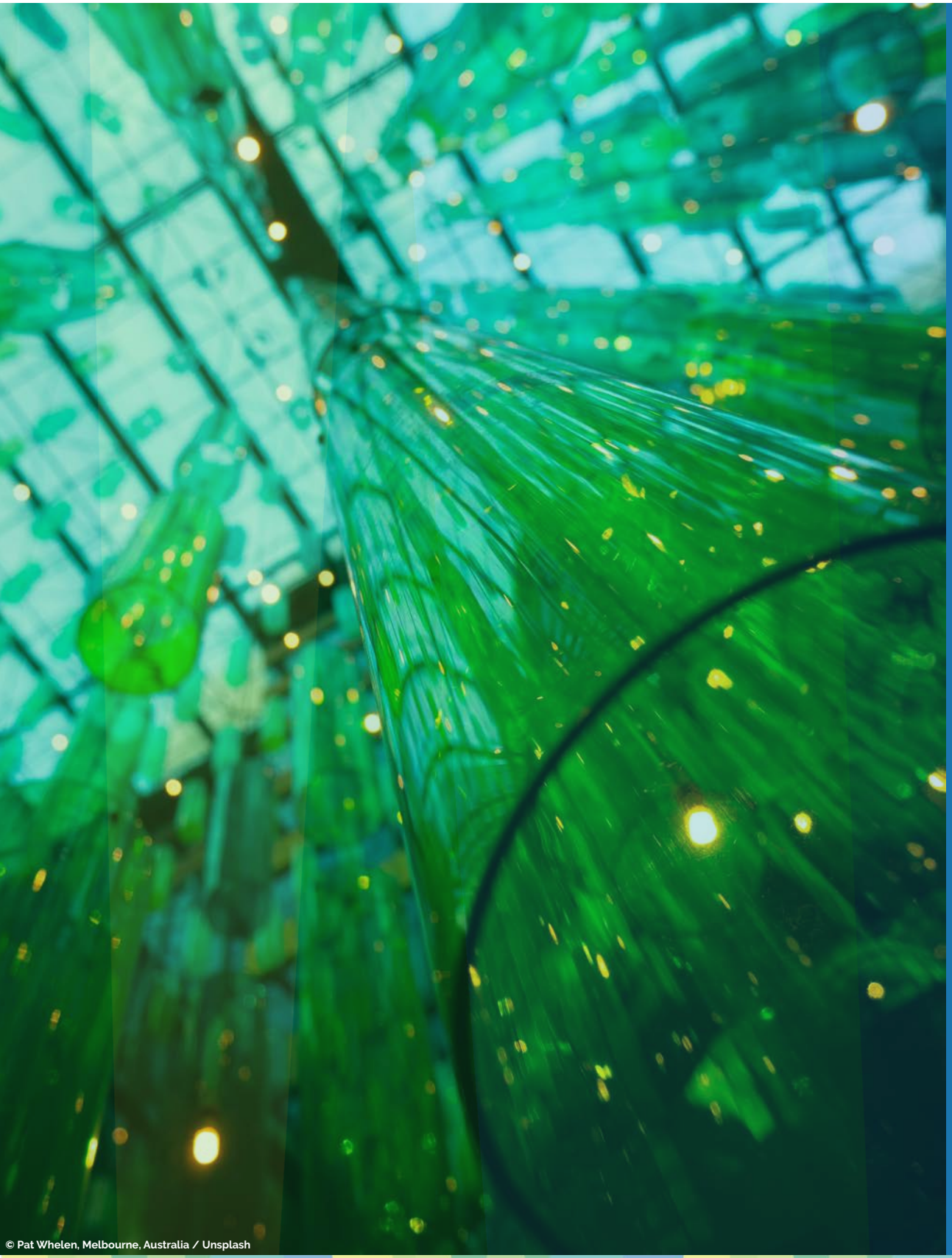
Embodied emissions from cement, iron and steel are significant, but they can be reduced or eliminated by changing formulas and processes. Green procurement protocols and policies could help incentivize industry to make these changes.

Friends, deploying these strategies would make a huge difference. Not just to climate change. Some 17 per cent of all plastics are used in buildings and construction. Those who work in these buildings inhale plastic dust from carpets, false ceilings and other plastic materials. So, finding safe alternatives as well as efficiencies could, if done right, contribute to both increasing worker's health and a reduction in CO_2 emissions, as well as support the long-term success of the instrument to end plastic pollution currently under negotiation. And, of course, support other international agreements, including the Kunming-Montreal Global Biodiversity Framework.

As we start a cycle of submitting new Nationally Determined Contributions under the Paris Agreement, countries have a chance to integrate these strategies into their plans. But international cooperation and multilevel governance will be crucial to accelerate action. I am pleased that boosting such cooperation is the aim of this Forum, which includes a Local Governments Roundtable. Those discussions will build on the outcomes of the Cities and Regions Summit, which took place on the side lines of the sixth session of the UN Environment Assembly, held last week in Nairobi.

My thanks again to France for its great leadership on buildings and construction. Transiting to low-carbon, climate resilient buildings will create jobs, improve lives and help to slow the triple planetary crisis: the crisis of climate change, the crisis of nature and land loss, and the crisis of pollution and waste. This Forum is therefore doing incredibly important work.
I look forward to hearing how you can increase international cooperation and multilevel governance for a decarbonized buildings and construction sector.

The full results of the Buildings and Climate Global Forum are detailed in the following chapters.



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3. Main commitments

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3.1 At ministerial level

The ministerial declaration aims to create dynamism in international collaboration and commitment, both from governments, state and non-state actors in the building and construction sector.

March 8. Ministerial Meeting: https://youtu.be/clp2VUn1CJM

During the Ministerial Meeting, on March 8, the ministers agreed on the Declaration and committed to:

- Implementing roadmaps, regulatory frameworks, and mandatory building and energy codes to move towards carbon-neutral buildings.
- Implementing an appropriate financial framework with financial and fiscal incentives, and regulatory tools to increase the share of resilient, near-zero emission, and affordable buildings.
- Promoting the adoption of labels, standards, and certifications.
- Leading by example by adopting ambitious policies regarding public procurement.
- Promoting the production, development, and use of low-carbon, sustainable, and cost-effective construction materials.
- Promoting collaborative value chains, as well as research and development of innovative solutions.
- Developing tools and regulatory frameworks to collect and share data and best practices.
- Improving skills by strengthening local know-how, considering mitigation and adaptation strategies.
- Developing multi-level governance, coordination among different stakeholders, and a more participatory approach to ensure coordination of implementation.

Some key quotes:

- "The US is happy to join the Chaillot Declaration and show our commitment to efforts that spur decarbonization and build resilience in the building sector". US. Jeffrey D. Little –General Deputy Assistant Secretary, U.S. Department of Housing and Urban Development

- "As Minister of State for Cities, I would like to express our support for the Chaillot Declaration de. Although the commitments listed in this important Declaration go beyond the scope of the Ministry of Cities, we are committed to playing our part and supporting the Brazilian government in whatever is within our purview so that they can be achieved".
- "To go further, we are examining the possibility of holding a ministerial meeting during COP30 to continue the discussions initiated in this Forum. And finally, we would like to announce that we will be suggesting and supporting a specific working Group to address the decarbonization of the buildings and real estate sector within the G20 framework." Mr. Jader Barbalho Filho, Minister of Cities, Brazil
- "The UK has a record to be proud of when it comes to net zero, having become the first major economy to halve its emissions. But we know climate change doesn't respect national borders, so we need to work together with our international partners and friends to meet this challenge head on. Signing the Chaillot Declaration today is another important step, helping to ensure our nation's buildings are fit for a low- carbon future, while also supporting the goals of the new Buildings Breakthrough." Lord Callanan, Minister for Energy Efficiency and Green Finance, United Kingdom.

The executive summary of the Ministerial Meeting can be found below.

The Chaillot Declaration marks a significant milestone in the operationalization of the Paris Agreement, with over 70 countries committing to transformative actions outlined in the Declaration. It represents a collective effort of government representatives, rallying behind a shared vision to drive the transition towards a sustainable economy.

At the core of the Declaration lies a comprehensive agenda aimed at mitigating CO2 emissions in the building sector and adapting to the impacts of climate change. Key provisions include prioritizing renovation over new construction, maximizing energy efficiency, and minimizing resource consumption. This represents a fundamental shift in approach, focusing on the virtuous rehabilitation of existing buildings and the utilization of local resources.


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Decarbonizing construction is another pivotal aspect, calling for the development of new material supply chains and the adoption of resilient practices. This involves transitioning from carbon-intensive materials to renewable alternatives and implementing localized production processes to reduce environmental impact. Furthermore, the Declaration emphasizes responsible land use and urban planning to combat urban sprawl and promote sustainable

development. It underscores the importance of building resilience in cities and territories to address the escalating risks posed by climate change-induced extreme weather events.

Preserving biodiversity and supporting financial mechanisms for sustainable construction are integral components of the Declaration.

Public assistance is proposed to cover the initial costs of adopting sustainable practices, while tax incentives and academic research support are envisioned to incentivize and advance resilient solutions.

In essence, the Chaillot Declaration represents a holistic approach to tackling climate change within the building and construction sector.

It calls for concerted efforts across governments, industries, and stakeholders to usher in a new era of sustainable development and resilience in the face of global environmental challenges.

The link to the Chaillot Declaration can be found in the annex of this summary report.

3.2 At local government level

3.2.1 Local Government Roundtable (March 7)

Key Statements from the Local Government Roundtable

- There is a consensus regarding the role that regions and cities should and could play in the decarbonization of buildings.
- It is important to include local governments in related international processes.
- Local government representatives have prepared a draft document on the decarbonization of buildings.

Some quotes from local government representatives

- "The specification of national level goals relating to climate change should leave room for diverse local conditions and solutions". Minas Gerais, Brazil.
- "In Africa, the decarbonization of buildings and the greening of cities are not the priority for governments and local authorities. Health, education, and security are. And there is not much money available. Hence a call to international finance institutions for concrete action: if you are developing projects and policies, please involve local governments, bring us to the table as we are the ones taking action and are conscious of local conditions." Lomé, Togo.

- "For concrete problems, people turn to local governments. Actions taken may seem small steps at global or national levels, but they are meaningful for the people at the local level." Ecuador.
- "Integrating social issues with decarbonization efforts, both between different countries and at the country level, calls for comparison between different solutions." Nantes, France.

Other quotes from the participants:

- "Natural disasters such as the 6 February 2023 earthquake can be turned into opportunities. Half a million buildings were damaged, but Gazantiep integrated decarbonization objectives into the reconstruction / renovation approach" Gazantiep, Turkey.

Executive Summary of the Local Government Roundtable

There is a consensus about the role of local stakeholders in efforts to promote decarbonization. However, attention also needs to be directed toward adaptation, not merely mitigation. This approach needs to integrate climate risks at several levels. The specification of national-level goals related to climate change should leave room for diverse local conditions and solutions.
The situation in the Global South was presented. The challenges are the same everywhere: insufficient infrastructures, impoverishment of the urban population, urban sprawl, illegal construction and settlements.

The main recommendations are as follows:

- Empowering local governments: to reinforce local governments' capacity, in terms of competence and of financing, with access to private and international financing.
- To encourage innovative solutions, adapted to local contexts, in terms of construction techniques and local materials. e.g. initiative in Cameroon to promote the use of local materials in construction.
- Importance of regulatory tools. e.g. a local urban plan can help to strengthen rules and regulations on building e.g. to foster development of industrial production of local materials.
- Moreover, a system of carbon emission tax levied on the extraction of minerals could be set up, compensable inside the State, to finance the circularity and decarbonization pathways. Standards could be worked out at the local level.

3.2.2 From Local Roots to Global Impact – Exploring the Role of Local Governments in Effective Multilevel Governance to Decarbonize Buildings

March 7. Round #1. Track #1. https://youtu.be/Yxnpbq1VkvU

This session showcased lessons learned and challenges faced by local governments, discussed climate action roadmaps and how they could enhance multi-level governance, and enabled local governments to play a central role in the buildings and construction sector decarbonization process.

Opening Remarks

Rogier Van Den Berg from the WRI Ross Center for Sustainable Cities welcomed participants to the thematic session and highlighted the importance of multi-level governance and the role of local and national authorities in accelerating the decarbonisation of buildings. He stressed that buildings are a major source of greenhouse gas emissions in cities and emphasised the need for effective implementation of policies at both national and local levels.

Keynote Speech

Aziza Akhmouch from the OECD Cities Division provided an overview of a comprehensive study conducted across 28 countries to examine policies for building decarbonisation. She highlighted that buildings account for 40% of energy-related CO2 emissions and discussed the collateral benefits of investing in energy-efficient buildings, such as job creation and reduced public health spending. Aziza emphasised the shared responsibility among different levels of government and the need for coherent policies and regulatory frameworks to support the decarbonisation agenda.

Panel 1: Bringing together diverse voices from local governments to share their insights, best practices and challenges

Mubarak Moukaila from CRC - West African Development Bank (BOAD) discussed the role of local governments in leading sustainable development and resilience efforts. He highlighted the importance of developing energy-efficient buildings and integrating renewable energy solutions. Mubarak emphasised the need for capacity building, legal arrangements, and financial support to enable local governments to mobilise resources effectively.

Pierpaolo Campostrini, CEO of CORILA and scientific advisor to Venice Sustainability Foundation in Venice shared insights on the preservation and sustainable practices in Venice. He discussed the challenges of maintaining cultural heritage while implementing energy-efficient solutions. Pierpalo emphasised the need for international standards and tailored approaches for historic buildings to ensure both decarbonisation and preservation.

Luc Gnacadja from Science TF of UN Decade of Ecosystem Restoration & OSS highlighted the role of city networks in supporting national and local collaborations for building decarbonisation. He discussed the importance of providing tools, data, and capacity building to local authorities. He also emphasised the need for mutual trust and cooperation between different levels of government and the significance of integrating financial leaders in sustainability projects.

Carlos Limongui, municipal prosecutor of San Bernardo, Ecuador, presented the "San Bernardino 2030" initiative, aiming to make the city carbon neutral. He discussed the use of incentives, such as tax exemptions and infrastructure improvements, to encourage private investments in sustainable buildings. Carlos highlighted the importance of public policies that facilitate and reduce risks for the private sector, promoting sustainable urban development.

Panel 2: National Initiatives and Local Adaptations

Sasaki Shunichi, Ministry of Land, Infrastructure, Transport and Tourism of Japan, discussed the country's national policies to support local government efforts in creating a decarbonised society. He emphasised the importance of adapting national initiatives to local circumstances and providing financial and technical support to local governments. Sasaki highlighted Japan's goals to achieve net-zero energy levels in new buildings by 2030 and all buildings by 2050.

Nune Petrosyan, Vice-Chair of Urban Development Commitee of the Republic of Armenia, outlined Armenia's energy efficiency policies and the role of local authorities in implementing these policies. She discussed the decentralisation efforts and the importance of capacity building and financial support to enable local authorities to achieve energy efficiency and decarbonisation goals.

Sondes Beji Kraiem, Director of UGPS, Ministry of Equipment and Housing of Tunisia discussed Tunisia's commitment to the Paris Agreement and the strategies implemented by various ministries to promote sustainable construction. She highlighted initiatives such as ecological neighbourhoods, thermal regulation of buildings, and the use of local and recycled materials. Saunders emphasised the role of public-private partnerships in achieving sustainability goals.

Amanda Johnson, from Habitat for Humanity International discussed the organisation's people-centred approach to decarbonisation and adaptation. She highlighted the importance of engaging communities, addressing energy poverty, and ensuring affordability in sustainable housing solutions. Amanda shared examples of successful programs in various countries and emphasised the need for incremental solutions and community involvement.

Closing Remarks

Lea Ranalder from UN Habitat and Sharon Gil from UNEP summarised the session, highlighting the importance of local governments in the decarbonisation of buildings. They emphasised the need for continued collaboration, capacity building, and financial support to achieve sustainable urban development. The session concluded with a call to action for stronger partnerships and practical steps towards achieving the goals of the Paris Agreement.

3.3 Commitments from CEOs (Business CEO roundtable)

The following statements with regard to commitments, decisions and quotes were recorded during the Business CEO roundtable.

Closed-door roundtable. March 7.

Main commitments / decisions / statements

No specific commitments in this session.

Calls to action

- Long term stability and consistency in legal and official framework: if governments change, the framework does not change.
- Policy signals must be simple, clear and reliable, with a common denominator / standard.
- Public regulations for homeowners.
- Better comprehensive multi-criteria approach: design, energy efficiency, renewable energies, resilience etc.
- Start from benefits and measure item. Benefits are not only financial but wider with social and planetary criteria. (Who benefits from what > public and private approach).
- Understand and define trajectories: translate into innovation and business model, and recognize failures,
- Favor collaboration / cooperation across value chain with all stakeholders (e.g. on data collecting & sharing + accelerate deployment of technological innovation, etc.)Innovation has to bring simplification
- Make policies more local, with regional execution
- Moving away from fossil energies: key driver.
- Retrofit on mature markets, low carbon new building on emerging countries.
- Huge public commitment needed.
- Collective plan where we bring together the whole value chain to transform the market

Some quotes from the participants:

- "We need to make sure we have aggressive goals: it is mandatory to engage all stakeholders to reduce CO2 emissions" Cristina Gamboa, World Green Building Council's CEO.
- "There is a very good level of trust and confidence: we all really committed and ready to go!" Benoit Bazin, Saint-Gobain's CEO
- "We need a huge public commitment" Benoit Bazin, Saint-Gobain's CEO.
- "It is a balance between self-interest and need for collective action" (last testimony of the session)

Executive summary of the Business CEO roundtable

Enabling sustainable development through stable legal frameworks and collaborative innovation. Long-term stability and consistency in legal and official frameworks are crucial for sustainable development. When governments change, the framework should not ensure continuity in policies. Policy signals must be simpler, clearer and reliable, adhering to common standards. Public regulations should also be extended to homeowners.

A comprehensive multi-criteria approach is essential, taking design, energy efficiency, renewable energies and resilience into consideration. Benefits, encompassing social and environmental criteria alongside financial gains, should be measured to understand who exactly benefits and how. Trajectories must be defined to spur innovation and develop sustainable business models, acknowledging failures as part of the learning process.
Collaboration across the value chain is vital, facilitating data collection and sharing, in addition to accelerating the deployment of technological innovation. This collaborative approach requires rethinking traditional job roles and ensuring that innovation brings simplification to processes. Policies should be made more local, allowing for regional execution and addressing specific needs.

Transitioning away from fossil fuels is a key driver, in addition to low carbon initiatives with a focus on retrofitting buildings on mature markets and implementing low-carbon new building practices in emerging countries. Achieving these goals necessitates a significant and stable public commitment, and a collective plan involving all stakeholders to transform the market towards sustainability.

3.4 Commitments from other stakeholders (Stakeholder's plenary)

March 8.

The following statements of commitments, decisions and quotes were recorded during the Stakeholder's plenary session.

Main commitments / decisions / statements

- Recalling every aspect of the building industry and associated environment, all participants agreed on the necessity of global forums and joint declarations to share ideas between all stakeholders.
- Since the sector is complex, multifactorial and acts as a chain, there is no silver bullet nor anyone to blame for the entirety of the emissions. Agreements are necessary to find solutions, and the Forum paves the way for more collaboration in the future.

Some quotes from the participants:

- "There is a need for a global framework [...] that is not about decarbonization for the sake of decarbonization" Tina Paillet, CEO RICS.
- "We should be mindful of the geographical context. In Nairobi, 60% of the economy is informal, but this sector should also go green. This requires a lot of capacity building but creates a purpose for finance" Nasra Nanda, CEO of Kenya Green Building Society.
- "Capacity building cannot be flying people from Africa to Europe to give them a 5-year training and getting them to apply their knowledge in their home country. It is inefficient and won't provide Africa with the necessary resilience based on local knowledge. Moreover, we are not on track for the first targets and don't have the time for this" Elizabeth Wagenci Chege, SE4ALL.

Executive summary of the session

During this session, two panels produced a synthesis of all Thursday's thematic discussions. Cristina Gamboa, the moderator, emphasized the need for collaboration and dialogue to catalyze the change and prepare for COP29.
Representing the industrial sector that produces the necessary energy and materials, V. Minier (Schneider Electric) and J. Pirinen (Stora Enso) expressed confidence in the future, insisting on efficiency, resilience and flexibility as well as accessibility: it is essential to have people on board. Pirinen further insisted on the necessity to track the whole life of products and expressed an interest in digitalization.

T. Paillet (RICS) and J. Yada (E3G) shared their views on the ways to get finance to invest in green buildings. Paillet, synthesizing a 2-year long consultation of the whole community by RICS, assessed that a transparent, coherent and verifiable framework is necessary to overcome confusion in the market and appealed for a bridging of the gap between local carbon solutions and global ones. Yada highlighted the need to assess and mitigate the risk, as insurance becomes more and more costly while building represents 55% of global wealth. She suggested tax incentives and carbon pricing to send signals to the finance sector as well as better data collection to assess risks.

Next, Nasra Nanda (Kenya Green building Society) focused on people's commitment. In order to preserve dignity in the global initiatives that often involve high level talks, she made a plea for a macro to micro approach that does not forget the informal sector often prevalent in the Global South.

As a member of the European Parliament and a former architect, Ciaran Cuffe pledged the EU's commitment. The recent context, marked by the Green Deal, the pandemic and the war in Ukraine (that triggered the energy crisis), showed that building is simultaneously an economic, social and environmental issue, as well as a geopolitical one.

A second panel focused on local and associative actors. J. Hosagrahar (UNESCO) reminded the audience that we should preserve our heritage to avoid new construction as much as possible, both in housing and infrastructure by using local resources and traditional methods.
K. Adjayi, Mayor of Lomé, Togo, outlined the situation in Africa. The quickly growing continent will have to overcome the challenge of providing housing for everyone, but writing this chapter is exciting: everything is still to be done, and innovative and fair legislations have to be put in place. In Lomé, he set up architecture schools where students can innovate to create tomorrow's housing.
J. Kakreski (International Code Council) expressed her views on international regulation. Many actors are aware of the importance of building codes and standards, and ISO is a significant but insufficient step towards more resilience. However, she reminded the audience that enforcing the code is as important as writing it, and that capacity building goes beyond training: it is about creating an ecosystem capable of innovating and adapting the codes to local context. Again, flexibility is a key word in this discussion.

Finally, E. Wagenci Chege, Sustainable Energy for All, picked up on her predecessor's points to appeal for intelligent capacity building. Cooperation and dialogue are necessary to learn from each other and stay focused on the green transition, avoiding the risk of doing business as usual. Yet, the recent context and especially the pandemic showed that new technologies could be used to upscale capacity building.

3.5 Global Engagement Plenary Session

March 8. Plenary session. https://youtu.be/AMya-JjoZBk

The Global Engagement Plenary Session witnessed the unveiling of the "Declaration de Chaillot" (Chaillot Declaration) and launched the Buildings Breakthrough priority actions. This session highlighted the commitments of stakeholders across the supply chain and the power of international collaborations in achieving near-zero buildings. It also announced the collective engagements of key stakeholder groups from across the value-chain. The session commenced with a warm welcome from the organisers, celebrating International Women's Day. Mariana CASTAÑO CANO, founder of 10 Billion Solutions, moderated this session. She welcomed participants and highlighted the importance of gender equality in the climate and building sectors. She invited Béatrice Lièvre-Péry, President of the Cercle des Femmes dans l'Immobilier, to open the session.

Opening Address

Béatrice Lièvre-Thery, CEO of Sogeprom emphasised the necessity of gender diversity in the real estate industry. She shared personal anecdotes about the challenges women face in this field and stressed the importance of women's perspectives in building sustainable cities. Béatrice highlighted the role of the Cercle des Femmes dans l'Immobilier in promoting diversity and equality in the sector.

Keynote Speech

Guillaume Kasbarian, Minister in Charge of Housing, Ministry of Ecological Transition and Territorial Cohesion, France, expressed gratitude for the attendees' participation. He underscored the significance of the Chaillot Declaration, which represents a commitment by government representatives to engage the entire building value chain in decarbonisation efforts. He outlined the declaration's goals, means, and deadlines, and emphasised the importance of international cooperation in achieving climate goals.

Panel 1: Reactions to the Chaillot Statement

Niuava Eti Gie Malolo, Associate Minister, Ministry of Works, Transport and Infrastructure, Samoa expressed hope that the Chaillot Declaration brings for small island nations like Samoa. He highlighted the importance of collaboration and commitment to reducing greenhouse gas emissions and enhancing resilience in the construction sector.

Paula Pinho, Director at the Directorate-General for Energy, European Commission from the discussed the EU's ambitious objectives and policies for decarbonising buildings. She emphasised the importance of global cooperation and the comprehensive nature of the Chaillot Declaration in addressing the risks and opportunities in the sector.

Alice Wahome, Secretary General of the Cabinet, Ministry of Agriculture Public Affairs Housing and Urban Development of Kenya, reaffirmed Kenya's commitment to the Chaillot Declaration. She called for more countries to join the initiative and outlined Kenya's priorities for international collaboration to decarbonise the construction sector.

Shinichi Sakaki, Vice-Minister, Ministry of Land, Infrastructure, Transport and Tourism of Japan emphasised Japan's alignment with the goals of the Chaillot Declaration. He highlighted Japan's efforts to enhance operational carbon regulations and promote international cooperation for resilient and decarbonised buildings.

Panel 2: Stakeholder Engagement

Jo Da Silva, Global Sustainable Development Director, Arup announced the launch of the Market Transformation Action Agenda by the Global Business Council for Sustainable Development. She stressed the need for collective action and collaboration to achieve decarbonisation at scale in the built environment.

Benoit Bazin, President of Saint-Gobain discussed the industry's commitment to reduce CO2 emissions through innovation and data. He called for robust legal frameworks and long-term investment visions to support the decarbonisation of the built environment.

Régina Gonthier, President of the International Union of Architects presented a joint statement on sustainable architecture. She outlined guidelines for decarbonising construction and emphasised the importance of peace for achieving sustainability and resilience.

Robert Spencer, Vice President of the Sustainable Development Committee at FIDIC, announced several initiatives, including a net-zero procurement specification for engineering contracts. He highlighted the need for financial support and policy measures to mainstream sustainable practices.

Nicolas Picchiottino, Secretary General of the International Development Finance Club discussed the financial challenges and commitments of development banks in supporting low-carbon and resilient buildings. He emphasised the importance of collaborative partnerships and strategic planning.

Closing Remarks

The session concluded with a call to action for continued collaboration and implementation of the commitments made. Participants were encouraged to translate their discussions into tangible actions and to maintain the momentum for achieving the goals of the Chaillot Declaration. A family photo was taken to commemorate the event, highlighting the importance of gender equality in the transition to sustainable buildings.

3.6 Roadmaps and NDCs March 8. Parallel session bringing together Ministers and high-level representatives from business, international organizations and NGOS

Consultable on https://youtu.be/lTreF583JKc

As countries look to set out their Nationally Determined Contributions (NDCs) ahead of COP30, this dialogue focused on how countries can spearhead the decarbonization of the building sector by setting visionary roadmaps. The event explored the role of roadmaps in providing credible NDC implementation pathways and opportunity they present to catalyse cross-sector action around a unified direction and pace of the transition.

Steve Crosskey from UNOPS, served as the moderator for this session and opened the session, emphasizing the urgency of accelerating climate action, particularly in the buildings and construction sector, which is often underrepresented in Nationally Determined Contributions (NDCs). He noted that only 34 countries have roadmaps for the sector, highlighting the importance of today's discussion. He introduced **Lola Vallejo** from **UNFCCC** to provide context on the mitigation work programme.

Opening Remarks

Lola Vallejo, UNFCC discussed the urgency of both ambition and implementation in climate actions. She highlighted the importance of the *UNFCCC's new mitigation work programme*, which started at COP26 and focuses on cities, buildings, and urban systems this year. Lola Vallejo encouraged experts and government officials to participate in these dialogues to enhance the quality and substance of international climate negotiations.

Panel 1: Including Buildings in NDCs and Developing Roadmaps

Naselbah Almarzooqi from Ministry of Energy and Infrastructure, UAE shared the UAE's approach to incorporating sectoral goals into their NDCs, emphasizing the importance of setting interim targets to ensure progress towards net-zero emissions. She advised other countries to set specific goals for the built environment and utilize platforms like the GlobalABC for knowledge exchange.

Ksenia Petrichenko from IEA explained the significance of roadmaps in creating shared visions and identifying key milestones for achieving net-zero emissions. She emphasized the need for a comprehensive approach that includes regular instruments, financial incentives, and information mechanisms to support NDCs.

Peter Graham from Global Buildings Performance Network highlighted the tools and methodologies available to support countries in setting ambitious goals for their construction sectors. He discussed the importance of stakeholder engagement and developing bottom-up implementation plans.

Gianpiero Nacci, Acting Director of the Green Economy and Climate Action Team, EBRD stressed the importance of clear long-term policy signals for development banks to prioritize investments in the construction sector. He explained how such signals help align investments, optimize delivery channels, and mitigate risks, ultimately enabling the mobilization of private capital.

Azmeri Ashrafi, Senior Planner, Urban Development Directorate, the Ministry of Housing and Public Works, Bangladesh, discussed the challenges Bangladesh faced in creating a comprehensive roadmap, such as coordinating between various policies and institutions. She emphasized the need for a unified goal to achieve decarbonization in the construction sector.

Panel 2: Implementation Challenges and Successes

Halil Hasar, Director of Climate Change Presidency, Ministry of Environment, Urbanization & Climate Change Turkey highlighted the importance of roadmaps in achieving Turkey's NDC goals. He discussed how recent disasters had prompted the government to plan for the construction of over 1 million new buildings with a focus on energy efficiency and climate resilience.

Audrey Nugent, Global Advocacy and Campaigns Director, World Green Buildings Council discussed the importance of a lifelong carbon approach in developing roadmaps and NDCs. She emphasized the need for comprehensive data to create robust and effective climate action plans.

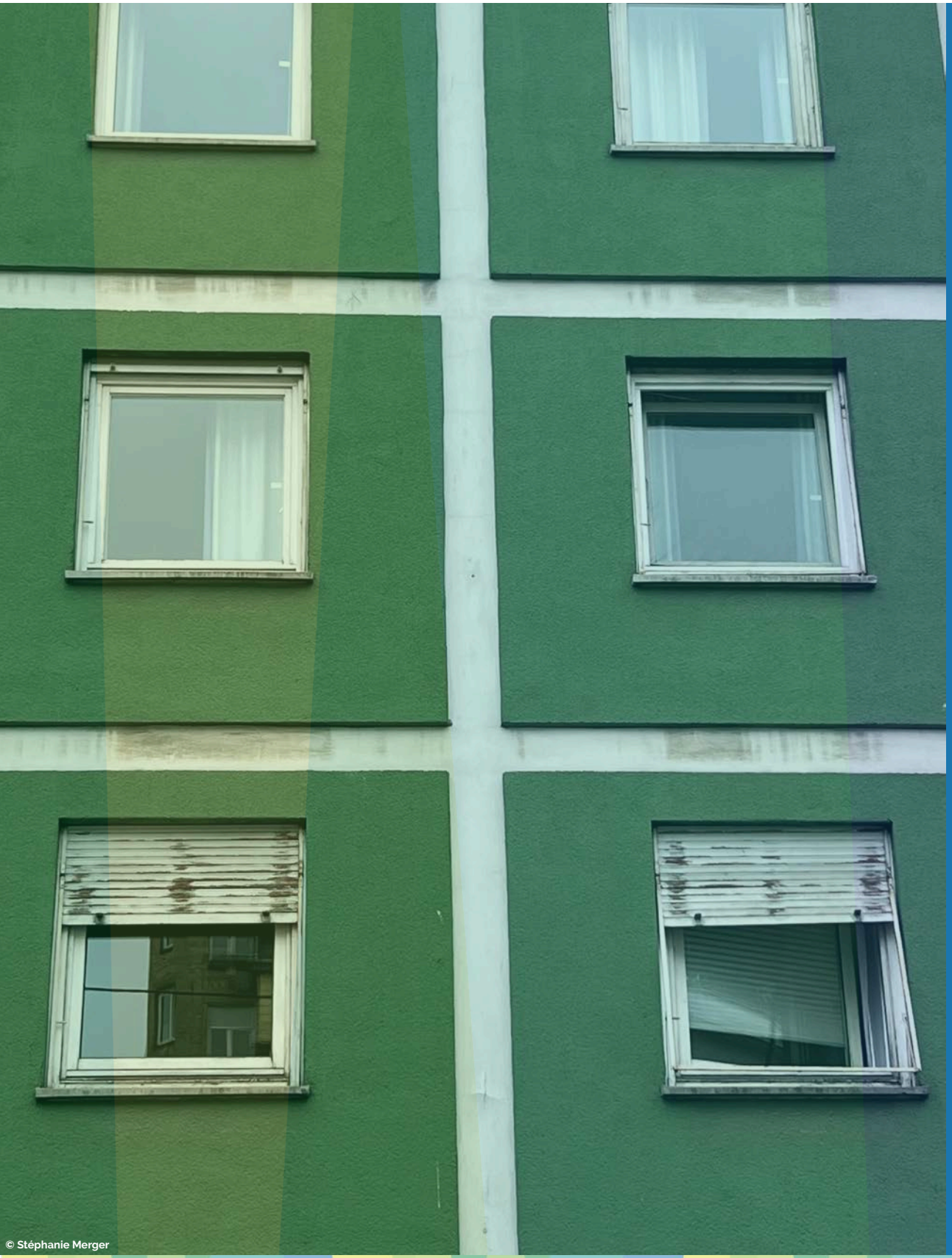
Rogier Van Den Berg, Global Director, WRI Ross Center for Sustainable Cities elaborated on the importance of multi-level governance in developing and implementing roadmaps. He shared examples from various countries, highlighting the need for structured approaches and coordination between national and local authorities.

Eng. R.H. Ruvinis, Chairman of the Construction Industry Development Authority, Sri Lanka spoke about the role of standards, regulations, and professional qualifications in decarbonizing the construction sector. He emphasized the need for transparency and the regulation of the property development sector.

Nasra Nanda, CEO of Kenya Green Building Society explained the importance of roadmaps in aligning private sector efforts with national climate priorities. She highlighted the need for collaborative and inclusive approaches to address climate vulnerabilities and development priorities in the global south.

Closing Remarks

Steve Crosskey (UNOPS) thanked the panelists and audience for their participation, emphasizing the need for continued action and collaboration to achieve climate goals. He encouraged attendees to engage with initiatives like the GlobalABC to share experiences and best practices, ensuring the success of climate action plans.



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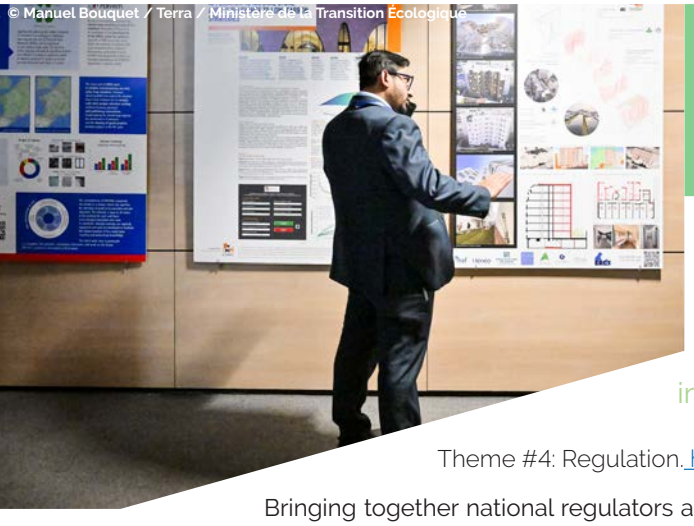
4. Thematic sessions



4.1 Theme 1: Regulations from the perspective of governments / stakeholders

4.1.1 Regulation - March 8. Parallel session bringing together Ministers and high-level representatives from business, international organizations and NGOs

Theme #4: Regulation. https://youtu.be/K_aY4FV3Qbs

Bringing together national regulators and city policymakers alongside business and industry leaders, this high-level dialogue explored the opportunity these levers present as they 'raise the bar' and 'level the playing field' for all actors. The session spotlighted existing regulation and policy leading on whole-life carbon and resilience. The session reflected on the enablers required to support establishing and implementing building codes in developing countries.

Opening Remarks

Aziza Akhmouch, Head of Division - Cities, Urban Policies and Sustainable Development OECD welcomed participants to the high-level dialogue on regulation. She emphasised the shared responsibility of decarbonising and enhancing the resilience of the construction sector, highlighting the critical role of regulatory measures in achieving these goals. Aziza introduced the session's focus on the collaboration between national, subnational governments, and city networks, setting the stage for discussions on regulatory challenges and solutions in the construction sector.

Keynote Speech

Takeshi Miyamori from the OECD presented key findings from a major survey conducted with the French government across nearly 30 countries on strategies to decarbonise buildings. Takeshi highlighted the importance of regulatory measures, the need for step-by-step policy development, and the significance of multilateral approaches to implement and strengthen these policies. He emphasised that countries are prioritising carbon packaging and safety for future policies and the necessity of collaboration between private sectors and national governments.

Panel: Role of Governments in Decarbonising Buildings

Bruno Nabagné KONE, Minister of Construction, Housing and Urban Development, Côte d'Ivoire discussed Côte d'Ivoire's urban transition and the legislative efforts to decarbonise buildings, such as the *Urban Planning and Construction Code and the Housing and Living Environment Code*. He highlighted the country's focus on habitat densification, greening urban spaces, and waste management. He emphasised the importance of balancing the need for housing with environmental concerns.

Shinichi Sakaki, Vice-Minister, Ministry of Land, Infrastructure, Transport and Tourism of Japan outlined Japan's goal to achieve net-zero energy levels for buildings by 2050 and all new buildings by 2030. He discussed the step-by-step Introduction of mandatory energy efficiency standards, capacity-building programmes, and financial support measures to mitigate negative impacts on the economy. The Vice-Minister highlighted Japan's inclusive and holistic approach to regulatory measures.

Diana Durazo, Executive Commissioner of Environment and Sustainable Development, State of Sonora, Mexico shared Sonora's efforts in climate change adaptation and mitigation, particularly in the construction sector. She emphasised the importance of educating citizens on better building materials and the state's collaboration with the World Resources Institute to reduce electric bills through energy-efficient building practices.

Irene Skoula, Director, Energy and Buildings, C40 discussed C40's commitment to developing pathways for net-zero carbon buildings and clean construction. She highlighted examples from cities like Johannesburg, Tokyo, and Boston, showcasing various regulatory measures and initiatives to decarbonise buildings. Irene stressed the importance of using municipal powers to implement life cycle carbon assessments and low-carbon materials.

Closing Remarks

Aziza Akhmouch, Head of Division - Cities, Urban Policies and Sustainable Development, OECD reiterated the importance of regulatory measures in achieving decarbonisation goals. She highlighted the role of collaboration between public and private sectors and the necessity of clear, consistent policies to guide investments. The session concluded with a call to action for continued dialogue and collaboration to support sustainable development in the construction sector.

4.1.2 Harmonizing Policies to Achieve Whole Life Carbon and Resilient Building Goals

March 7. Round 1. Track #4 https://youtu.be/hunOth5d7z4

This session highlighted the importance and current state of building codes, standards, assessment frameworks, and certification schemes in delivering global climate goals. It also developed a global Whole Life Carbon and Resilience Framework that sets out principles for the alignment of existing standards and supports their effective implementation. The session presented the results of a mapping exercise to assess the current state of alignment and how alignment on standards can support alignment on rating tools and inform effective policy. It also explored practical and proven steps that different value-chain stakeholders can take to ensure globally agreed principles support the development and deployment of national or subnational codes and standards. It also aimed to build consensus and commitment from different actors to accelerate efforts to replicate these approaches, with a focus on regions where policies are non-existent, unenforced or lacking in ambition and scope.

Opening Remarks

Cristina Gamboa, CEO of the World Green Building Council, opened the session by highlighting the urgent need for global alignment and harmonization in standards related to decarbonization and resilience for the built environment. She acknowledged the progress made in developing standards but emphasized that the current pace of adoption is insufficient. Cristina advocated for a unified approach to standards and reporting frameworks to reduce confusion, guide investment, and enhance performance across various regions. She recognized the necessity for localized solutions but called for a transparent global framework to ensure consistent progress and effective climate action.

Judy Zakreski, Senior Vice President of Global Operations & Solutions at the International Code Council (ICC), followed Cristina's remarks by underscoring the importance of not only having strong and harmonized building standards but also ensuring their effective implementation. She highlighted that successful decarbonization and resilience in construction depend on robust enforcement, material availability, skilled practitioners, and capacity building. Judy stressed that without these elements, even the best standards cannot achieve their intended outcomes, pointing to the need for comprehensive implementation strategies and support mechanisms.

Panel Discussions

The session featured two panels of experts who provided insights into various approaches and experiences related to building standards and resilience.

Panel 1

Amit Patel, Head of Construction Standards at RICS, emphasized the importance of carbon literacy, noting that while there is some level of understanding within certain environments, there is a significant gap in knowledge outside of these spaces. He stressed the need for broader education and engagement on carbon issues, suggesting that we need to develop a common framework and shared understanding to move forward effectively. Amit Patel also highlighted the importance of identifying and addressing gaps in regional education and capacity related to carbon literacy.

Marjolaine Meynier-Millefert, President of Alliance, HQE-GBC and member of the French National Assembly, highlighted France's advanced environmental regulation, RE2020, which emerged from years of collective innovation and collaboration. She emphasized the importance of adapting regulations to local needs while valuing diverse approaches in achieving sustainability goals. Marjolaine advocated for a flexible, holistic framework that accommodates regional specifics while fostering global collaboration and innovation.

Nasir Khan, Registrar at the Pakistan Engineering Council, provided an overview of Pakistan's sustainability initiatives, including water harvesting codes, renewable energy systems implemented in over 70,000 homes, and a nationwide tree-planting campaign. He emphasized ongoing efforts in water conservation, sustainable urban planning, and construction code development.

Nasir highlighted the need for capacity building among stakeholders, support for enforcement, and engagement with financial institutions to advance sustainability and resilience in Pakistan.

Stanislas Pottier, President of BBCA, discussed BBCA's focus on developing and implementing low-carbon building standards across Europe. He highlighted a pragmatic, data-driven approach to decarbonization, noting BBCA's collaboration with construction, engineering, and architectural firms. Stanislas emphasized BBCA's independence from material suppliers and its efforts to work with regulatory authorities to ensure effective implementation and progress in reducing building carbon emissions.

Panel 2

Masaya Sasaki, Director for Building and Environment at MLIT of Japan, outlined Japan's strategy for achieving net-zero emissions in the building sector by 2050 through phased mandatory standards and a comprehensive capacity-building program. Japan is integrating a Whole Life Carbon approach and seeking international collaboration to accelerate its efforts. Masaya emphasized the importance of a phased and collaborative approach to meet ambitious climate targets.

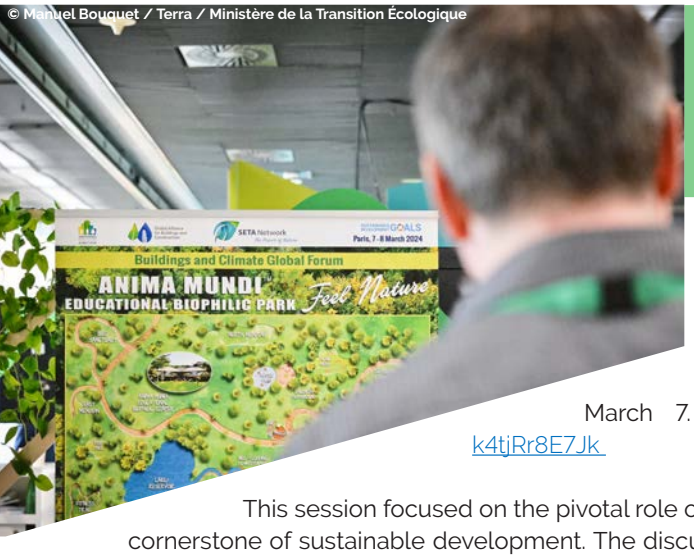
Lars Riemann, Global Executive Director of Buildings at Ramboll described Ramboll's efforts to reduce building carbon footprints, including setting goals and tracking progress using the CO2mpare database. He also highlighted Ramboll's involvement in the Open Data for Climate Initiative, which aims to create and share a global database of material and product-level data to standardize carbon assessments and enhance transparency. Lars's insights underscored the importance of data and collaboration in achieving effective carbon reduction.

Katarina Uherova Hasbani, Global Director of Strategy and Advisory at AESG discussed the challenges of balancing high ambitions with basic compliance in markets such as the UAE and KSA. She highlighted AESG's work in sustainability and decarbonization for both visionary and conventional projects, stressing the need for capacity building and the use of appropriate materials and technologies to address diverse market needs.

Sarah Zaleski, Chief Products Officer at U.S. Green Building Council highlighted the role of standards and certifications, particularly LEED V5, in advancing market transformation and achieving decarbonization goals. She emphasized that these tools enhance carbon literacy and provide actionable pathways for buildings to meet future decarbonization targets. Sarah's comments reflected the importance of certification systems in guiding and validating progress toward sustainability goals.

Closing Remarks

Tina Paillet from RICS closed the session by emphasizing the urgency of accelerating industry action on sustainability and carbon reduction. She acknowledged the significant progress made but noted that considerable work remains. Tina underscored the importance of balancing global standards with local needs, improving capacity building, and fostering transparency and data sharing to enhance measurement and progress toward decarbonization goals.



4.2 Theme 2: Financing sustainable buildings and cities, insurable buildings

4.2.1. Financing Green buildings for sustainable development – How development banks can scale up action

March 7. Round #2 Track #3 https://youtu.be/k4tjRr8E7Jk

This session focused on the pivotal role of financing in advancing green buildings as a cornerstone of sustainable development. The discussion centered on how development banks can scale up their actions to meet the substantial investment needs required for energy-efficient and climate-resilient buildings. By bringing together experts from various development banks and organizations, the session aimed to explore both the challenges and opportunities in mobilizing finance for green buildings, ultimately contributing to global efforts to mitigate climate change and promote sustainable development.

Anna Zinecker from PEEB served as the moderator for this session and welcomed participants to the session on financing green buildings for sustainable development. She emphasized the importance of development banks in scaling up their actions and mobilizing finance for green buildings. Anna highlighted the collaboration between IFD, the French Development Bank, and GIZ through the PEEB program and set the stage for discussing the challenges and solutions in green building finance.

Keynote Speech

Emmanuel Baudran from AFD emphasized the crucial role of Public Development Banks in addressing the substantial investment needs for energy efficiency and green buildings. He pointed out that buildings contribute to 40% of global emissions and highlighted the need for significant investments, amounting to trillions by 2050. Emmanuel stressed that AFD, along with other public development banks, must amplify efforts to support climate-friendly investments. He highlighted initiatives such as the pooled financing initiative involving over 500 development banks, which represent a significant portion of global investments.

Panel: Needs and opportunities – How can we scale-up actions by development banks?

Jamie Ferguson from IFC discussed IFC's focus on mobilizing private sector investments in green buildings. He highlighted IFC's significant investments in climate finance, with 46% of their investments last year dedicated to this area. Jamie mentioned IFC's tools like the Edge Green self-certification and Building Resilience Index, which help promote green and resilient building practices. He emphasized the importance of collaboration with partners to change market behaviors and support green mortgage competitiveness.

Ghizlaine Nourlil, from la Caisse des dépôts et de gestion (CDG) du Maroc, shared Morocco's efforts to align with national sustainable development strategies, focusing on reducing energy consumption and carbon emissions in the building sector. She highlighted the need for effective implementation, technology access, customer awareness, and investor attraction. Ghizlaine discussed CDG's investments in energy-saving and carbon reduction projects, emphasizing the importance of integrating human and social considerations into energy transition strategies.

Manelle Ait-Sahlia from AFD highlighted AFD's approach to mainstreaming energy efficiency across various sectors. She discussed the importance of translating strategic directions into operational tools, methodologies, and indicators. Manel emphasized the need for a systemic approach, combining project support, financial assistance, policy dialogue, and capacity building. She cited the Partnership for Energy Efficiency in Buildings (PEEB) as an example of AFD's efforts to integrate energy efficiency into their projects.

Lutz Morgenstern from the German Federal Ministry for Economic Affairs and Climate Action, discussed the challenges and solutions for green building finance, emphasizing the importance of public support, national development banks, and public-private integration. He highlighted Germany's commitment to climate finance through the International Climate Initiative (ICCI) and shared examples of innovative financing mechanisms. Lutz stressed the importance of capacity building, local expertise, and mobilizing private capital to achieve climate goals.

Rasmi Hamzeh, from Jordan Renewable Energy and Energy Efficiency Fund shared Jordan's experience with the Energy Efficiency Revolving Fund and the challenges faced in financing energy efficiency projects. He emphasized the need for capacity building and policy alignment to support green building initiatives.
Rasmi highlighted the importance of collaboration between development banks and local financial institutions to ensure effective implementation and scaling of energy efficiency projects.

Thierno-Habib Hann from Shelter Afrique discussed the significant housing deficit in Africa and the importance of sustainable housing solutions. He highlighted new technologies that can reduce carbon emissions and create jobs. Thierno-Habib called for large-scale, sustainable affordable housing projects and emphasized the need for collaboration and innovative financing mechanisms to address the housing crisis and promote sustainable development.

Anna Campos Garcia, Regional Coordinator for disaster risk management in Africa, World Bank, underscored the importance of integrating resilience and green agendas in building regulations. She discussed the need for updated building codes and technical capacity to support governments in implementing sustainable building practices. Anna highlighted the World Bank's commitment to climate finance and the importance of a holistic approach to combining energy efficiency, resilience, and social inclusion in development projects.

Closing Remarks

Ommid Saberi, from IFC reiterated the importance of prioritizing funding for green buildings and mobilizing private finance. He emphasized the need for collaboration and human capital development to achieve climate goals. The session concluded with a call to action and a celebration of the expanding PEEB program.

4.2.2. Assets and insurable buildings in climate change

March 7. Round #3 Track #3. https://youtu.be/mZ5bXVLevYc

The session explored how the financial and insurance institutions were adapting new mechanisms (public insurance, private insurance, PPP insurance) to this changing reality and how financial institutions were integrating adaptation and resilience into their investment strategies. The key role that adaptation and resilience could play in managing buildings and the construction sector in the face of climate risks was highlighted, while considering the geographical specificities and socio-economic characteristics of the territories.

Karim Selouane, CEO, Resallience, opened the session by emphasizing the urgent need for innovative financial and insurance mechanisms to mitigate global risks in the built environment. He stressed the importance of fostering resilience, particularly in underinsured regions like Africa, and called for greater solidarity between developed and developing countries.

Christian Pierotti, Chair, GFIA Climate Risk Working Group, highlighted the increasing losses from natural catastrophes and the necessity for adaptable models to manage these risks in the built environment. He advocated for prevention through better land use, building codes, and innovative construction techniques. Christian Pierotti also underscored the role of public-private partnerships and the need to balance solidarity with adequate risk assessment.

Panel Discussion - Scaling adaptation and resilience finance / insurance in the built environment

After the introductory remarks, **Hugh Garnett, Senior Programme Manager - Real Assets, IIGCC** introduced and moderated the panel discussion.

Younes Lammat, Morocco National Fund for Solidarity (PPP World Bank and FSEC) discussed Morocco's dual-pillar approach to managing climate change impacts and natural disasters, which includes a government-funded compensation scheme for uninsured populations and a compulsory insurance scheme for those with private insurance. This public-private partnership aims to provide comprehensive coverage and strengthen Morocco's response to natural disasters.

Saoirse Jones, Executive Director, Head of Insurance Development Forum Engagement, Zurich Insurance Company Ltd, highlighted the critical role of insurance in building resilience against climate change, emphasizing the importance of financial protection, risk pricing, and collaboration between public and private sectors to enhance resilience in vulnerable communities.

Naa Ayeleysa Quaynor-Mettle, Climate & Green Building Lead, REALL focused on the need for affordable, green, and resilient housing in emerging markets. She discussed the challenges of scaling these initiatives due to limited data and the informal economy, and highlighted innovative financial mechanisms, such as guarantees and pilot projects in Kenya, to overcome these barriers.
Brendan Abadie, Sustainable investment, Asset Management, Phoenix Group, emphasized the importance of long-term investment strategies in managing physical risks and promoting sustainability. He discussed the role of partial guarantees and the need for accurate data and collaboration among stakeholders to support investment in green buildings and resilience.

Closing Remarks

Karim Selouane underscored the need to systematically integrate climate adaptation into financial mechanisms across all phases of the construction cycle, from design to renewal. He called for the development of tools, metrics, and analysis to support climate adaptation, and encouraged investment professionals to incorporate these factors into their research and decision-making processes. Karim also stressed the importance of aligning adaptation strategies with local contexts and promoting climate adaptation training for professionals, alongside public-private partnerships and PPP initiatives.

4.2.3. Private finance supporting the net zero transition for buildings

March 7. Round #4. Track #3. https://youtu.be/cHO09RiNwAI

This session aimed to support efforts to scale up private finance to advance the Net Zero transition of the buildings and construction sector (residential and commercial) across different regions.

Sarah Kemmit from UNEP FI welcomed everyone to the session focused on private finance supporting the net-zero transition for buildings. She introduced herself as the director of the Net-Zero Banking Alliance secretariat at the UN Environment Program. Sarah expressed excitement about discussing how private finance and various financial institutions are contributing to the transition in commercial and residential real estate, particularly in emerging markets. She outlined the session's format, which included Opening Remarks, presentations from five panelists, a panel discussion, and concluding remarks.

Opening Remarks

Adrienne Horel-Pages from La Banque Postale highlighted the importance of the real housing sector in closing the emissions gap, noting that in 2021, it accounted for 37% of global CO2 emissions. Adrien emphasized the significant renovation challenge in Europe, where 220 million buildings need renovation to meet Paris Agreement goals. She discussed the double penalty faced by the most vulnerable people living in inefficient buildings, leading to high energy costs and poor living

conditions. Adrien stressed the crucial role of financial institutions in providing financing for renovations and influencing the entire value chain to integrate environmental and social impacts into their business models. She introduced the Net-Zero Banking Alliance (NZBA Alliance) and its commitments, highlighting La Banque Postale's efforts to create impact mortgages and support renovations through financial incentives and public subsidies.

First Part of the session: Key challenges and opportunities in commercial real estate

Thomas Van Rompaey from AXA Investment Managers discussed the importance of data quality and availability in making informed investment decisions for sustainable buildings. He highlighted the need for standardized metrics and methodologies across regions and the role of environmental product declarations in life cycle assessments. Thomas emphasized the responsibility of the real estate purchasing industry to deliver efficient buildings and the importance of decarbonizing infrastructure alongside buildings. He called for collaboration within industry associations and with regulators to set clear guidelines and share lessons learned.

Tim Broeders from ING Netherlands shared ING's experience in promoting sustainability in commercial real estate since 2015. He emphasized the importance of clear goals, mandates, and the availability of sustainability data. Tim highlighted the need to retrofit existing building stock to achieve sustainability goals and stressed the social responsibility of making retrofits affordable. He also called for government support and clear policies to facilitate the transition to a low-carbon economy.

Second Part of the Session: Residential buildings – Key challenges

Dr. Tobias Horn from Deutsche Bank discussed the barriers to retrofitting residential buildings, including customer willingness, knowledge gaps, and financial constraints. He emphasized the importance of collective solutions, such as retrofitting entire districts rather than individual homes, and the need for better infrastructure. Tobias also highlighted the role of public buildings in setting an example and the need for improved data on energy efficiency.

Benjamin Bidabad from Société Générale outlined the challenges banks face in meeting their net-zero goals for residential real estate. He emphasized the difficulty of applying customer engagement, client selectivity, and asset selectivity strategies to individuals. Benjamin stressed the importance of focusing on renovation and the need for better incentives and simpler frameworks to make retrofits more attractive to homeowners. He also highlighted the benefits of using real emissions data instead of modeled data for more accurate assessments and transition paths.

Ommid Saberi from IFC focused on the situation in emerging markets, highlighting the importance of understanding local contexts and market maturity. He emphasized the need for low-cost solutions and passive measures to reduce energy costs for families. Ommid Saberi shared examples of successful retrofitting projects and government incentives, such as VAT discounts and lower interest rates, that have driven market change. He also discussed the importance of financial solutions, like the Magik program, and the need for taxonomies to standardize definitions and criteria for green buildings.

Questions & Answers Session

Sarah Kemmit asked the panelists to discuss the most effective strategies and measures to encourage private investment in greener buildings and the net-zero transition.

Thomas Van Rompaey emphasized the need for better data quality and availability, clear expectations, and collaboration with regulators and industry associations. He also highlighted the importance of sharing lessons learned.

Tim Broeders stressed the importance of clear goals and mandates, focusing on retrofitting existing buildings, and ensuring social affordability in sustainability efforts.

Dr. Tobias Horn suggested collective approaches to retrofitting, such as district-wide solutions, and improving infrastructure to support sustainable buildings.

Benjamin Bidabad called for real emissions data to improve transition paths and emphasized the need for incentives to make renovations more attractive to homeowners.

Ommid Saberi highlighted the importance of agility, incremental changes, and creating benefits for all players in the value chain to encourage implementation.

Closing Remarks

Sarah Kemmit concluded the discussion by thanking the panelists for their insights and leadership. She emphasized the importance of collaboration and knowledge sharing in achieving net-zero goals.

Steven Stone from UNEP provided final remarks, highlighting the importance of focus, funding, frameworks, fora (collaborative platforms), and leadership in driving the transition to sustainable buildings. He emphasized the need for measurable progress and the role of partnerships in achieving climate goals.

4.2.4. Finance / Acceptability

March 8. Parallel session bringing together ministers and high-level representatives from business, international organizations and NGOs. https://youtu.be/laq4UmiyNsM

This session examined the financial aspects of building and real estate in relation to the Paris Agreement's goals. It explored how to align these sectors' contributions and align financial systems and flows with the Paris Agreement.

First Panel: The Bigger Picture for the Construction Sector and Advanced Economies

Nick Mabey from E3G discussed the current state of financing for the construction sector in alignment with the Paris Agreement. He highlighted that while there is significant investment in property, only a small percentage is dedicated to efficiency improvements. He emphasized the need for systemic scaling and market transformation, particularly in Africa and South Asia, where much of the investment will be in new construction. Nick Mabey called for sectoral transition and investment plans linked to national contributions to give investors confidence and visibility. He stressed the importance of engaging finance ministers and framing efficiency and resilience in terms of financial stability and investment risk.

Ella Etienne-Denoy from CBRE shared insights on how investors view the alignment of their real estate portfolios with sustainability goals. She highlighted the growing alignment between investors, occupiers, and financiers around ESG criteria, driven by the need to avoid "stranded assets." Etienne-Denoy pointed out that financial tools like green leases and sustainability-linked rents are emerging, and that there is a push for consolidating methodologies and formalizing ESG-related KPIs. She stressed the importance of focusing on renovation rather than new construction in Europe, integrating climate adaptation, and making ESG topics more engaging and accessible.

Lutz Morgenstern from the Federal Ministry of Economic Affairs and Climate Action, Germany discussed Germany's ambitious energy and electricity legislation, focusing on stricter standards and substantial public financing for retrofitting and new heating systems. He emphasized the importance of continuous engagement with all partners to maintain public support. Lutz Morgenstern highlighted Germany's international efforts to improve access to climate finance, integrate public and private finance, and strengthen national development banks in developing countries. He mentioned the Climate Finance Fund for Cities as an example of how to support project preparation and mobilize private investment.

Ronan Dantec, French Senator and President of Climate Change Association explained France's approach to aligning the real estate sector with the Paris Agreement. He discussed the challenges of balancing the need for housing with the implementation of stricter energy standards, such as the ban on renting thermal colanders. Ronan Dantec highlighted France's focus on comprehensive renovations for the most modest households and the need for multi-level governance and local government involvement. He emphasized the importance of learning from different European approaches and integrating climate adaptation challenges into renovation strategies.

Second Panel: Emerging Markets and Africa

Jamie Fergusson from IFC highlighted the significant investment opportunity in green and resilient buildings in emerging markets, estimating a $1.5 trillion market over the next decade. He emphasized the need for new construction to lead with resilience and discussed IFC's role in building green finance lines, creating local capital markets, and promoting certification programs like EDGE. Jamie Fergusson also mentioned the importance of regulatory incentives and innovative approaches, such as expedited approvals for green buildings, to drive market change.

Jean-Pascal Boah, Director of International Cooperation and Sustainable Urban Development at the Ministry of Construction, Housing and Team Planning, Côte d'Ivoire discussed the housing challenges in Côte d'Ivoire, including a significant housing deficit and the need for urban policy reform to integrate climate change and ecological transition. He highlighted measures taken to address coastal erosion and flooding and the importance of local government involvement. Jean-Pascal Boah stressed the need for skills development, innovation, and public-private partnerships to address housing needs and promote sustainable urban development.

Ali Mohamed Hassan, Director Meteorology at the Ministry of Environment and Climate Change of Somalia, outlined Somalia's challenges in addressing climate change amidst ongoing conflicts and developmental needs. He emphasized the importance of international support and investment to build resilient infrastructure and create jobs for the Somali population. Hassan highlighted efforts to implement environmental regulations, improve construction standards, and raise awareness about sustainable practices. He called for international cooperation to support Somalia's recovery and development efforts.

Closing Remarks

Sarah Kemmit summarized the session, highlighting the complexity of the real estate sector and the need for detailed approaches across various dimensions to achieve net-zero emissions. She thanked the panelists and audience for their participation and emphasized the importance of continued collaboration and action to address the challenges and opportunities in the real estate sector.

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4.3 Theme 3: Sustainable cities, urban planning and public procurement

4.3.1 Advancing buildings' decarbonization and climate adaptation through urban planning

March 7. Round #2. Track #1. https://youtu.be/i6D-nDr0EY8

This session showcased and discussed some of the innovative and effective solutions that urban planners and policymakers can adopt to reduce the built environment emissions (operational and embodied); better adapt cities to the effects of climate change (such as the heat island effect, flash floods and droughts) and improve the quality of life in cities.

Introduction

Hélène Chartier, the Director of Urban Planning and Design at C40, initiated the session by stressing the pivotal role of urban planning in promoting building decarbonization and climate resilience. She highlighted that urban planning is not merely a separate sector but serves as a cross-cutting enabler for both emission reduction and climate resilience. Helene Chartier cited studies showing that improved land use policies could potentially reduce emissions by up to 25%, underscoring the need to address urban sprawl and to promote densification. She also pointed out that recent research from the University of Berkeley found that revising land use policies to curb urban sprawl is among the most effective measures local governments can take to reduce emissions.

Keynote Speech

Laura Petrella, Chief of Urban Planning, Finance, and Economy at UN-Habitat, emphasized the critical role urban planning plays in climate action, particularly in the rapidly expanding cities of the Global South. Petrella noted the challenges posed by the exponential growth of urban populations and the corresponding increase in building space. She argued that inadequate planning has led to unsustainable development patterns and stressed the need for a significant shift in urban planning. She advocated for the use of integrated urban design tools that not only improve the efficiency of buildings but also influence the overall microclimate, thus reducing the need for energy-intensive cooling and heating.

Panel 1: Urban Planning Policies for Decarbonization of Buildings

Kelly Alvarez Doran, Senior Fellow at Architecture 2030, discussed Toronto's efforts to decarbonize buildings, focusing on how urban planning policies like parking minimums and basement exemptions contribute to high embodied carbon emissions. He urged a review of these policies to align urban design with sustainability goals.

Stéphane Leclerc, Director of Urban Planning for the City of Paris, outlined Paris's bioclimatic master plan, which emphasizes transforming existing buildings to reduce emissions. He highlighted that 25% of Paris's carbon emissions come from the building sector and stressed the need for collaboration with the private sector to achieve the city's ambitious sustainability targets.

Monika Konrad, Deputy Director of the Urban Planning Department in Warsaw, introduced Warsaw's sustainable urban morphology and green building standards. She discussed the challenges of implementing these high standards, particularly in terms of cost and the need for legal tools to negotiate with the private sector.

Panel 2: Urban Planning Policies for Climate-Resilient Built Environments

The second panel focused on how urban planning can accelerate climate resilience, particularly through the development of policies that address issues such as urban heat islands, sea-level rise, and sustainable land use.

Brigitte Bariol-Mathais, Director of the Federation of Urban Planning Agencies in France, presented examples of how French cities are using urban planning to enhance climate resilience. She highlighted initiatives such as reducing soil consumption, developing canopy plans to combat urban heat islands, and planning for the impacts of sea level rise on coastal cities.

Clea Daridan, Senior Curator at Community Jameel, discussed the collaboration between C40 and Community Jameel to support rapidly growing cities in integrating climate action with urban planning. She emphasized the need for partnerships to expand these efforts, particularly in regions like Southwest Asia that face both rapid demographic growth and significant climate risks.

Dr. Abdelkhalek Ibrahim, Assistant Minister for Technical Affairs at the Ministry of Housing in Egypt, stressed the importance of urban planning in reducing emissions and adapting to climate change. He highlighted Egypt's initiatives, including the "Surge Initiative" launched at COP27, which aims to create resilient and sustainable cities, and called for continued global collaboration on these issues.

Conclusion

Sharon Gill, Manager at the Cities Unit of UNEP, concluded the session by emphasizing the critical role of urban planning in climate action and building decarbonization. She underscored the need for advocacy and collaboration to advance these initiatives, highlighting Egypt's upcoming World Urban Forum as an important platform for furthering these discussions.

4.3.2 Decarbonizing buildings, leveraging the power of public procurement

March 7. Round #2. Track #4. https://youtu.be/Ew_vSTSbyjM

The session brought together a wide array of participants including UN agencies, national and local government officials, business sector representatives, Global Alliance for Buildings and Construction partners, trade unions, and members of the One Planet Network. The primary aim was to explore strategic pathways and opportunities for decarbonizing the built environment by harnessing the influence of public procurement. This involves amplifying demand for net-zero emissions and resilient buildings, construction materials, and clean energy technologies, ultimately fostering conditions that can drive market transformation.

UN Agencies' Remarks

Jorge Laguna-Celis, Head of the 10YFP / One Planet Network Secretariat at UNEP, provided a crucial perspective on the role of public procurement in achieving sustainability goals. He articulated the significant challenge posed by the anticipated 60% increase in natural resource extraction required by 2060 to meet future building demands. This underscores the urgency of adopting strategies like retrofitting existing buildings, designing for circularity, and recovering materials. Jorge Laguna-Celis highlighted how public procurement can act as a catalyst for market innovation and transformation. By integrating sustainability criteria into procurement processes, national and local governments can drive the adoption of green practices and foster an environment conducive to technological advancements and sustainable development. He acknowledged the event's key partners, emphasizing the collaborative effort required to achieve these ambitious goals.

Anne-Claire Howard, Procurement Group Director at UNOPS, underscored the influential role of public procurement, which constitutes a significant portion of global GDP and infrastructure spending. She explained that public procurement can serve as a powerful tool for advancing sustainable practices and supporting innovation in the building sector. Anne-Claire highlighted the dual challenge of addressing urbanization and resource constraints while promoting circular economy principles. Her remarks focused on the necessity for public-private partnerships to address these challenges effectively. By setting high sustainability standards and fostering collaborative approaches, public procurement can drive progress and ensure that new construction and retrofitting projects contribute to broader sustainability objectives.

Panel Discussion

Moderated by **Mr. Paulo Magina, Deputy Head of Division for Infrastructure and Public Procurement at the OECD**, the panel discussion explored leadership roles and strategies at various government levels, as well as the need for market readiness and innovation.

Henry Kwabena Kokofu, Executive Director of the Environmental Protection Agency (EPA) of Ghana, emphasized Ghana's commitment to advancing sustainable building standards. He discussed the importance of integrating energy efficiency measures and promoting the use of renewable energy sources and sustainable materials. Henry Kokofu also highlighted the need for enhanced training and collaboration among procurement officers, architects, and contractors. This collaborative effort is crucial for advancing sustainable building practices and aligning with Ghana's climate goals. His comments illustrated the broader significance of national policies in shaping market practices and driving the adoption of green technologies.

Sarah Kowal, High-level Expert at DIE France, shared insights into France's efforts to achieve carbon neutrality by 2050. Sarah Kowal detailed the country's approach to modernizing public buildings, which are significant energy consumers. Sarah advocated for deep retrofitting and the use of biological base materials as key strategies to enhance energy efficiency. Sarah Kowal also emphasized the importance of long-term investment strategies and third-party financing to support these initiatives. Her remarks underscored the need for international cooperation and knowledge sharing to improve energy efficiency and accelerate the transition to low-carbon solutions.

Cassie Sutherland, Managing Director of Climate Solutions and Networks at C40, highlighted the role of the C40 network in guiding cities toward ambitious climate actions. She provided examples of successful initiatives such as Oslo's adoption of zero-emission construction machinery and Melbourne's power purchase agreements. Cassie Sutherland emphasized the importance of cities leading with innovation and collaborating with the private sector to integrate climate resilience and sustainability into public procurement practices. Her comments illustrated how urban centers can drive significant global emissions reductions and set benchmarks for other cities to follow.

Fehn Krestas, Head of Directorate for Building Policy, Climate Protection, and Sustainability at the German Federal Ministry for Housing, Urban Development, and Building, discussed Germany's comprehensive approach to sustainable public procurement. He highlighted Germany's goal of achieving carbon neutrality by 2045 and the role of green procurement in this effort. Fehn-Krestas described Germany's integration of CO2 emissions criteria throughout the building's life cycle and emphasized the use of standard assessment systems to prioritize cost-effective emission reduction solutions. His remarks highlighted the importance of aligning procurement practices with national climate goals and supporting market innovation.


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Johanna Pirinen, Senior Vice President of Sustainability at Stora Enso, focused on the critical role of public procurement in driving sustainable transformation through the use of biocompatible materials and wood construction solutions. She emphasized the need for balancing monetary and carbon budgets to accelerate market transformation. Johanna's comments highlighted the importance of incorporating

sustainability criteria into procurement processes to foster the adoption of innovative materials and construction methods.

Toby Morgan, Senior Manager of Built Environment at Climate Group, discussed the need for increased private sector financing to support public sector decarbonization efforts. He advocated for setting high standards and innovative funding models to drive progress. Toby emphasized the importance of capacity building and collaboration between the public and private sectors to achieve climate goals. His remarks illustrated the role of financial mechanisms in supporting the transition to sustainable building practices.

Closing Remarks

Dr. Mervyn Jones, Senior Advisor on Circular Economy at the Ministry of Infrastructure and Water Management of the Netherlands, emphasized the need for proactive involvement in the procurement process, particularly during pre-tendering stages. He stressed the importance of including Scope 3 emissions in carbon measurements and advocated for a collaborative approach to drive sustainability. Dr. Jones's comments highlighted the role of early engagement in shaping procurement decisions and ensuring effective carbon management.

Harri Hakaste, Senior Architect at the Ministry of the Environment of Finland, highlighted Finland's commitment to decarbonizing its building stock through new legislation. He emphasized the importance of international cooperation among Nordic countries to advance climate goals. Harri supported increasing market demand for low-carbon solutions and underscored the need for collaborative efforts and regulatory alignment across countries. His remarks illustrated the importance of cross-border collaboration in driving sustainable building practices.

4.3.3 Sustainable buildings talks. Public Procurement for Olympic Games

March 8. Sustainable Buildings Talks. https://youtu.be/jx-j8seQ2v0

As the event's organizer, Paris 2024 entrusts its suppliers and partners with many of the goods and services it needs to hold the Games. To that end, the organizers have set up a responsible purchasing strategy and are aiming high. While following the rules that apply to all public procurement, they are blazing new trails by raising the standards in calls for tenders and the criteria to award contracts, which may endure and even gain traction long after the Paris 2024 Games.

Paris 2024 will purchase roughly €2.5 billion worth of goods and services. Or €5 billion including the contracts that Solideo, public contracting authorities and private customers will award in preparation for the Games. This procurement process will be secure from a legal standpoint, make for smooth, seamless operations, make business sense, and will include high environmental and social standards.

Opening Remarks

Nicolas Ferrand, Executive Director, Société de Livraison des Ouvrages Olympiques, opened the session on sustainable building practices for the Olympic Games. He highlighted the exceptional public works management system established for the Paris 2024 Olympics, setting the stage for discussing the integration of sustainability into large-scale construction projects.

Keynote Speech

Nicolas Ferrand provided an overview of the organizational structure and objectives of SOLIDEO and Paris 2024. He emphasized the dual focus of creating infrastructure for the Games and ensuring these structures have a sustainable life beyond the event. Ferrand outlined the scope of the project, which involves 4.5 billion euros in investments and the delivery of 70 different structures.

Olympic Village Development

Nicola Ferrand discussed the construction of the Olympic Village, a project involving 330,000 square meters of floor area to accommodate athletes during the Games and 6,000 inhabitants and employees afterward. He highlighted the preservation of existing buildings, the integration of new structures, and the extensive use of sustainable materials such as ultra-low carbon concrete and wood. The project aimed to achieve a 47% reduction in carbon emissions compared to 2019 levels and ensured comfort standards for the projected climate of 2050 without air conditioning.

Environmental and Social Initiatives

Nicolas Ferrand outlined several key initiatives, including:

- The use of reversible geothermal energy for heating and cooling.
- The transport of construction materials via the Seine River to minimize environmental impact.
- The valorisation of 96% of deconstructed materials to promote a circular economy.
- The planting of 9,000 trees and the creation of complex ecosystems to enhance biodiversity.
- The implementation of innovative technologies, such as air-purifying devices by French SMEs.

Sports Facilities and Other Infrastructure

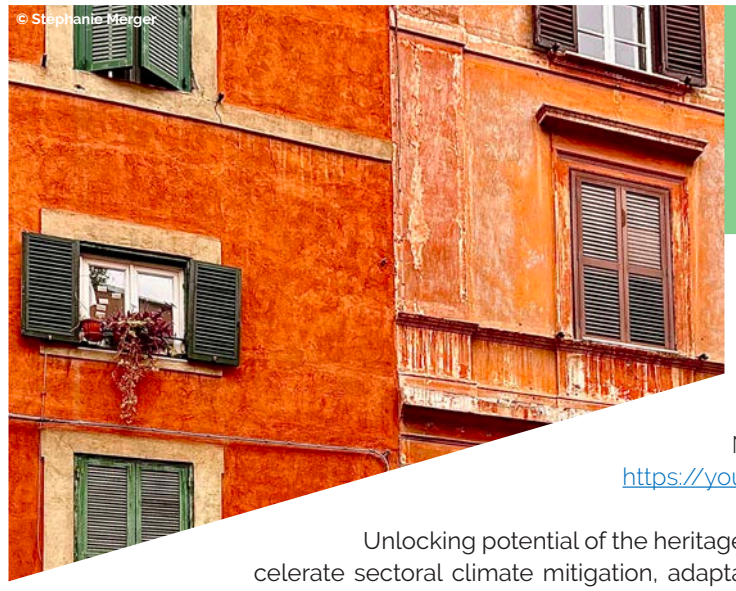
The session also covered the construction of sports facilities, including an arena in Porte de la Chapelle and a sailing facility in Marseille. Ferrand detailed the construction of eight swimming pools, three schools, a middle school, five bridges, and a highway interchange, emphasizing the integration of sustainability in all projects.

Social Impact and Inclusion

Ferrand highlighted the social dimension of the project, noting that over 10% of the hours worked were reserved for individuals far from employment. The project engaged SMEs from 85 French departments, representing nearly 40% of the total contract value. Additionally, the project achieved a fourfold reduction in workplace accidents compared to standard sites, ensuring safer working conditions.

Closing Remarks

Nicolas Ferrand concluded by affirming that the Paris 2024 project was completed on time and within budget, demonstrating the ability to deliver large-scale, sustainable urban projects. He emphasized that the achievements of SOLIDEO set a precedent for future construction practices, showcasing how dense, pleasant cities can be built with economic balance in the 21st century. The session ended with an invitation for further questions to be addressed via follow-up communication.



4.4 Theme 4: Renovation of the existing built environment, culture and heritage

4.4.1 Unlocking the potential of the heritage and existing built environment to accelerate sectoral climate

March 7. Round #3. Track #1.
https://youtu.be/Lx93W7uBmu8

Unlocking potential of the heritage and the existing built environment to accelerate sectoral climate mitigation, adaptation, and capacity building. This session demonstrated why the existing historic and indigenous built environment, and the knowledge held within it, must be central to the implementation of the Buildings Breakthrough priority recommendations.

Opening Remarks

Andrew Potts of Climate Heritage Network & Europe Nostra introduced the session, emphasizing the transformative potential of heritage and existing built environments in climate action. Andrew Potts highlighted the role of traditional knowledge in both new construction and the retrofitting of existing buildings, advocating for a holistic, people-centered approach to climate resilience. Andrew Potts discussed the Climate Heritage Network, a global network promoting the use of cultural heritage to achieve low-carbon, environmentally resilient futures. He emphasized the socio-cultural dimensions of climate action, arguing for the integration of cultural heritage in climate policy and planning to avoid the failures seen in current approaches.

Call to Action

Lori Ferris, Senior Fellow from Architecture 2030 and Climate Legacy Network introduced a word cloud exercise to identify the positive impacts of legacy and existing structures on climate action. She discussed the Friends of Cultural Climate Action group launched at COP28, emphasizing the role of cultural climate action in UN politics. She highlighted the 2030 Challenge by Architecture 2030, aiming for zero emissions in the built environment by 2030, including existing buildings, and introduced the CARE tool, an online platform for estimating carbon emissions in building reuse compared to new construction.

Keynote Speech

Jyoti Hosagrahar, Deputy Director, World Heritage Center, discussed the vulnerability of heritage sites to climate change and the potential of cultural heritage in climate mitigation and adaptation. She highlighted various UNESCO initiatives, such as the World Heritage Canopy platform and the Urban Heritage Climate Observatory, to integrate traditional environmental knowledge and modern climate action strategies.

Panel 1: Building Reuse and Circularity for Mitigation and Adaptation

Andréas Jaeger, Senior Expert, ICLEI discussed a project in Valladolid, Spain, transforming a historic palace into a positive energy building. He emphasized the importance of local government roles, financial incentives, and multi-level governance.

Constanza Milani, CNR Institute of Heritage Science highlighted the role of research and infrastructure in heritage science for climate action. She presented a multimodal platform for data-driven decision-making in the renovation of ancient buildings.

Graciela Melitzko-Thornton, Julie's Bicycle focused on the unique role of cultural communities in inspiring climate action. She presented a project with the England Arts Assembly achieving significant carbon emission reductions through energy management in cultural institutions.

Panel 2: Lessons from Heritage and Indigenous Knowledge for Zero Emissions, Resilient Building Practices

Rosie Paul, Masons Inc discussed the potential of traditional construction methods in India to offer low-carbon solutions. She emphasized the need for localized material sourcing and innovative uses of traditional techniques.

Greg Munro, Cities Alliance highlighted ancient water management systems in the Middle East and North Africa, advocating for the inclusion of women in water management and urban planning processes. He emphasized the importance of localized solutions and participatory processes in addressing climate challenges.

Conclusion

The session concluded with a call to integrate historical and traditional knowledge into modern climate action strategies, emphasizing the need for localized, context-specific solutions. Participants were encouraged to continue the conversation and explore collaborative opportunities in heritage and climate action.

4.4.2 Renovation of the global building stock at scale

March 7. Round #4. Amphitheater. https://youtu.be/sbKOcAwDdcQ

The key-point is: how to accelerate the renovation of existing buildings to reduce emissions and adapt to climate change?

The session introduced practical, proven, and scalable deep-retrofit approaches, showcasing their success in improving building performance to Near-Zero standards.

Opening Remarks

Ulla-Britt Krämer from the regional government of the province of Overijssel in the Netherlands, welcomed participants to the session on "Renewing Global Architecture at Scale." She emphasised the importance of scaling up good examples, ideas, and best practices in building renovation. Ulla highlighted the significance of the Indus Zero project and the development of a digital tool to accelerate residential area development, setting the stage for discussing the challenges and solutions in scaling up building renovations.

Keynote Speech

Dr. Lutz Morgenstern from BMWK emphasised the urgent need for decarbonising the housing sector to meet global climate goals. He highlighted that ambitious energy efficiency directives in the EU and Germany aim to shift from new building construction to extensive retrofitting. Dr. Morgenstern stressed the importance of moving from ambition to action and the role of public schemes in funding retrofitting projects.

Panel Discussion: Practical Solutions for Scaling Up Building Renovation

Li Zhe from MoHURD discussed China's extensive actions on energy saving and decarbonising buildings over the past 30 years. He highlighted the need for promoting energy efficiency in new buildings and renovating existing ones. Mr. Li shared China's achievements in renewable energy applications in buildings and outlined six key areas for future focus, including energy economy promotion and low-carbon transformation.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Ian Hutchcroft from Energies-prong Global Alliance addressed

the systemic issues hindering global building renovation. He proposed solutions such as funding mechanisms, industrialised retrofitting processes, and reducing costs. Ian emphasised the importance of ensuring quality and performance verification in renovation projects and the need for industrialising construction to achieve scale.

Fabien Lasserre from Vilogia shared Vilogia's experience in retrofitting social housing in France. He highlighted the challenges of scaling up from small pilots to larger districts and the need for effective communication with tenants. Fabien discussed the importance of involving tenants in the renovation process and addressing their specific needs to ensure successful project implementation.

Rodolphe DEBORRE from Rabot Dutilleul discussed the company's radical approach to decarbonising the construction industry. He highlighted their three-pronged strategy: employee training, standardising low-carbon construction, and achieving net-zero targets by 2030. Rodolphe emphasised the importance of embracing new practices and industrialised construction methods to support the transformation.

Alline Correa from ANRU presented ANRU's work in urban renewal, focusing on reducing territorial inequalities and improving energy efficiency. She shared examples from projects in northern France, showcasing the social and urban impacts of comprehensive renovation strategies. Aline highlighted the need for coordination and adaptability in long-term urban projects.

Liliana Campos-Arriaga from PEEB discussed the diverse building environment in Mexico and the challenges of implementing energy-efficient technologies. She highlighted pilot programs in various Mexican cities and the importance of tailored financial tools and end-user engagement. Liliana emphasised the role of end-user needs in designing effective renovation projects.

Closing Remarks

Tudor Constantinescu reiterated the need for prioritising funding for building renovations and mobilising private finance. He emphasised the importance of collaboration and human capital development to achieve climate goals. The session concluded with a call to action and a celebration of the ongoing efforts in building renovation.

4.4.3 High-Level Dialogue: Renovation

March 8. High-Level Dialogue Theme #1. Renovation https://youtu.be/yjX1vrA8xqs

The high-level dialogue event brought together ministers, city leaders, and leading industry stakeholders to delve into strategies for scaling renovation. Speakers explored how to unlock the business case for renovation and maximize the lifespan of existing built assets.

Opening Remarks

Matthew Baldwin, Deputy Director General for Energy, European Commission was the moderator of the session. He set the tone of the event and referenced his involvement in the "100 Cities Air-Conditioned by 2030" initiative, which focused on building renovation and energy efficiency. He highlighted the importance of renovating Europe's aging building stock—85% of which was built before 2001 and will remain in use until 2050. Baldwin noted the slow progress in renovation rates and the various challenges, including financing, skilled labor shortages, and technical solutions. He mentioned the EU's efforts, such as the Reconciliation and Resilience Fund, which has allocated significant funds to support energy efficiency schemes. He concluded by introducing the panelists and urging concise responses to allow more time for discussion.

Panel 1

The first panel aimed to address the challenge of renovating buildings while preserving their historical and architectural value, exploring how architects and engineers can balance modernization with preservation, navigate technical and regulatory complexities, and overcome unique national challenges to accelerate renovation efforts.

M. Simonas Gentvilas, Minister of Environment of the Republic of Lithuania highlighted that Lithuania's housing stock mainly consists of buildings constructed before 1993, with many multi-storey homes following standard designs. To meet climate goals by 2050, the country plans to upgrade all buildings to Class B energy performance. Key challenges include rising labor costs and the need for industrialized retrofitting processes. The use of prefabricated models funded by the European Resilience and Repair Funds aims to address these issues and incorporate organic materials into renovations. Additionally, a district heating system is being developed to centralize decarbonization efforts, with a target to reduce fossil fuel use in multi-storey homes to 10% by 2030. Private housing faces more complex challenges, such as the need for heat pump subsidies and chimney enforcement. The minister emphasized the importance of industrialized solutions to accelerate renovation rates.

Mr. Mustafa Akdemir from Konya Metropolitan Municipality, Turkey emphasized the importance of preserving the historical and architectural character of cities during renovation. As Turkey's largest province, Konya strives to protect its cultural and aesthetic heritage. Renovations are conducted according to regulations that safeguard historical values, involving local community input to maintain the city's character. The municipality faces financial and technical challenges but is addressing these through significant projects with a budget of approximately €6.77 billion. Konya is one of four global pilot cities for these efforts, which include transforming natural gas systems and removing outdated

industrial sites to preserve the historic texture. The goal is to achieve zero carbon techniques while maintaining the city's historical integrity.

Anica Landreneau, Global director of Sustainability, HOK emphasized the critical importance of renovating existing buildings, which are integral to the fabric of our cities and represent substantial financial and carbon investments. A major challenge is generating demand for renovation investments. Anica advocates for the adoption of performance standards that set carbon or energy intensity limits for buildings, which should become more stringent over time. She has actively supported such policies, including serving as co-chair of a performance standards task force in Washington, D.C., and promoting a retrofit accelerator for affordable housing to prioritize low-income families. Anica also highlighted the need to focus on passive solutions, such as improving building envelopes and air quality, before resorting to technical solutions. She pointed out the challenge of anticipating future changes in policies related to decarbonization and energy harmonization. Despite the absence of specific policies, she noted the strong business case for deep green retrofits, which can be more cost-effective and sustainable compared to new construction. Anica called for policies that recognize and incentivize the carbon savings from renovation and stressed the need to support vulnerable and low-income communities in meeting renovation needs.

Gaspar Sainz de Aja, Sustainability, Director at Grupo Construcía emphasized three key solutions for advancing construction practices. First, he advocated for circular construction, which enhances the role of construction workers throughout all phases—construction, maintenance, and deconstruction—making them custodians of the construction value chain. Second, he stressed the importance of digitalization, proposing that buildings be treated as material banks with comprehensive data to aid decision-making, reduce waste, and minimize carbon footprints. Finally, he highlighted the need for a balance between pre-industrialized solutions and traditional practices, advocating for the training of workers in these methods. Sainz also noted that construction equipment contributes significantly to global carbon emissions, and he underscored the value of buildings as repositories of materials.

Oliver Rapf, Executive Director of Buildings Performance Institute Europe (BPIE) discussed the progress and challenges related to the European renovation wave. He acknowledged that while the EU has established a strong legislative framework to drive renovation demand, including directives on energy efficiency and building performance, effective implementation depends on detailed national transpositions. A key issue is whether sufficient renovation services are available, particularly for private individuals who may struggle with coordination and affordability. Rapf emphasized the need for innovative policies that foster industrial innovation in renovation services. He proposed that public policies combined with performance guarantees could stimulate a dynamic and comprehensive renovation market, enhancing both business models and technological solutions in the construction industry.

Panel 2

The second panel focused on how policy frameworks can enhance the role of companies in delivering products and solutions to their clients, identified specific challenges in accelerating renovation, and explored ways in which governments can support and facilitate energy efficiency measures to improve building performance.


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Eduard Levy, Deputy Minister of Environment, Czechia, discussed the Czech Republic's extensive building stock, emphasizing the need for quality renovation to improve environmental outcomes. He highlighted key initiatives like the "New Warming of Green Energy" and "Repair of the Grenoble Building," supported by European funds, aimed at increasing renovation rates through financial incentives, legislative updates, public awareness, and smart technologies.

Robert Dijksterhuis, Sustainable Buildings Envoy, Dutch Ministry of Housing and Spatial Planning outlined the Netherlands' strategy for accelerating building renovations to combat high gas prices and reduce carbon emissions. He detailed a comprehensive approach that includes financial incentives for homeowners, support for municipalities, and collaboration with sectors like healthcare and education. The goal is to achieve significant renovation milestones, including 1.5 million homes by 2030.

Jyoti Hosagrahar, Deputy Director, World Heritage Centre at UNESCO emphasized the importance of preserving the character of historic urban areas through international guidelines and agreements. She highlighted tools like the UNESCO Urban Heritage Atlas and stressed integrating traditional materials and practices in building renovations to maintain historical integrity while adapting to modern needs.

Christophe Rodriguez, General Manager, Institut Français pour la Performance du Batiment, presented France's approach to improving building performance, focusing on energy labeling systems, financial incentives, and market-driven measures. He emphasized the importance of accurate performance measurement, progressive regulations, and innovation to drive renovations, particularly in poorly performing buildings.

Quentin Galland, Public & Regulatory Affairs Director, Knauf Insulation stressed the need for clear, predictable regulatory frameworks and effective funding mechanisms to support building renovations. He advocated for performance-based approaches, the use of technology and data, and addressing workforce shortages through automation. Galland also called for the integration of circular economy principles and ongoing commitment to gender equality in the sector.

Questions & Answers

During the Q&A session, participants raised key concerns, including how to ensure that no one is left behind in renovation efforts, the role of government levels in implementing renovation plans, and the timing of policy interventions to maximize impact. Panelists responded by emphasizing the importance of inclusive, diverse approaches that recognize the unique needs of different communities, and the necessity of collaboration across all levels of government to ensure effective implementation.

Closing Remarks

Matthew Baldwin wrapped up the event by acknowledging the vast decarbonization potential in building renovations and the challenges still ahead. He stressed the need for financial accessibility, clear legal frameworks, and the integration of digital tools and local context in renovation strategies. Matthew Baldwin emphasized that while finance is crucial, successful renovation efforts require a multifaceted approach that includes public policy, market practices, and close collaboration across all levels of government. He concluded by reiterating the importance of leaving no one behind, being adaptable, and thinking globally while acting locally, urging continued efforts to meet climate goals through sustainable renovation.

4.5 Theme 5: Decent jobs, capacity building, education, professional training

March 7. Round #4. Track #1. https://youtu.be/4JKg3tVkHY0

This session was a two-part panel focusing on skills for a just transition in the building sector.

Opening Remarks

Jane Cohen, from the International Energy Agency (IEA), emphasized the importance of a people-centered approach in the clean energy transition, highlighting inclusivity for marginalized populations and the need for retraining workers in the energy sector. She stressed the critical role of the building sector in reducing emissions and creating jobs, underscoring the complexity of implementing policies that achieve these goals.

Keynote Speech

Patrick Daru, Skills Delivery Team Lead from the International Labour Organization (ILO), echoed the importance of a people-focused transition, stressing the need for social dialogue and the inclusion of workers and communities in climate action. He highlighted the significant role of skills development in the green transition, emphasizing the necessity for coordinated efforts to meet the demands of emerging green jobs.

Panel 1: Addressing the skills shortage gap for the just transition

The first panel addressed the industry's skills gap and effective ways to re-skill and up-skill the current workforce to meet market demand for green jobs.

Nasra Nanda, CEO & ESG Lead, Kenya Green Building Society, emphasized the importance of a broader, inclusive perspective on sustainability, particularly in informal settlements. She advocated for recognizing diverse green jobs, such as community roles in waste management, and called for proactive, locally driven solutions that address sustainability and job creation in the Global South.

Julie Beaufils, Secretary General, EuropeOn, Co-chair of the Electrification Alliance discussed the need for clear, consistent policies to guide the training and recruitment necessary for the clean energy transition. She highlighted the evolving roles of electrical contractors and the dual challenge of finding skilled workers, stressing the importance of stable governmental directives to support these efforts.

Mohamadou Sow, Ministry of Environment, Mauritania outlined Mauritania's strategies for promoting green construction and job creation, emphasizing the integration of environmental considerations into national policies. He discussed the country's action plan for green employment, which targets sectors like eco-construction and agroecology, and highlighted the importance of institutional arrangements and international cooperation in driving these initiatives.

Panel 2: Collaboration for fair and inclusive approaches to skills development for the just transition

The second panel addressed the crucial role of social dialogue, collective bargaining, and involvement of workers in ensuring a fair and inclusive approach to skills development for a just transition, as well as the cross-sector collaboration among representatives of the industry, civil society, and supply chain.

Paola Cammilli, Global Director for Campaigns, BWI stressed the need for an inclusive approach to the net-zero transition in the construction sector, focusing on fairness for workers and communities. She emphasized the importance of integrating workers into the transition process and aligning the efforts with international labor standards through social dialogue. She also highlighted the need for gender inclusivity in job creation and skill development.

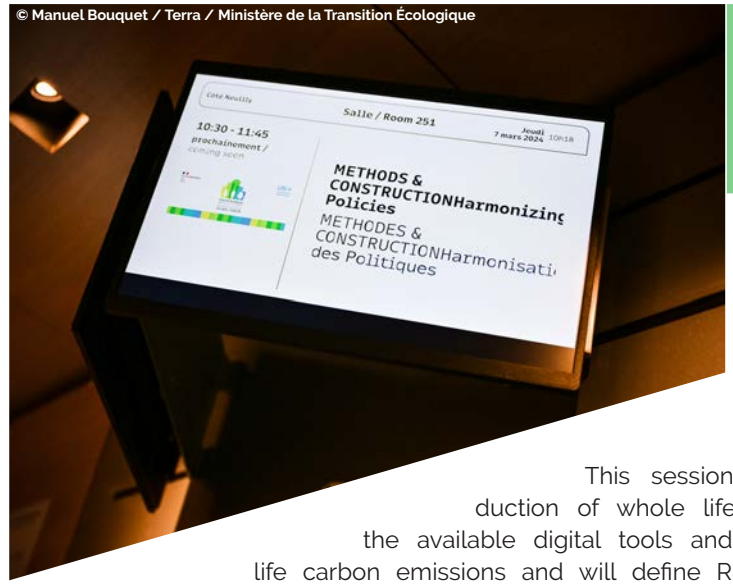
Geert Aelbrecht, Chief People Officer at Besix Group discussed Besix Group's commitment to social dialogue and worker relations, highlighting the importance of partnerships with unions to improve working conditions and ensure quality in construction. He emphasized the role of private sector involvement in public-private partnerships, stressing that active participation is essential to address industry challenges.

Mugure Njendu, Africa Programs Expert Consultant, Global Buildings Performance Network (GBPN) underscored the importance of collaboration between the public and private sectors, as well as academic institutions, to address skills gaps in the construction industry. She highlighted successful programs like BuildHer in Kenya, which promote gender inclusivity, and stressed the need for frameworks to recognize non-formal business skills in the Global South.

Giulio Ferrini, Head of Built Environment, IHRB focused on integrating human rights and labor protections into the construction sector's transition, emphasizing the social impacts of climate action. He cited successful examples of collective bargaining and worker empowerment in various countries, showcasing how effective partnerships can secure sustainable employment and protect vulnerable communities.

Closing Remarks

In his *Closing Remarks*, Patrick Daru, Skills Delivery Team Lead highlighted the contrast between regulatory-driven approaches in the North and community-focused strategies in the South. He emphasized the transformative potential of involving women in climate adaptation and the need for responsive skills development systems, underscoring the importance of social dialogue and decent working conditions.



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4.6 Theme 6: Digital innovation and Life Cycle Analysis

March 7. Round #4. Track #5. https://youtu.be/8UxVVhWVujY

4.6.1 Digital innovation to drive the reduction of whole life carbon emissions

This session "Digital innovation to drive the reduction of whole life carbon emissions" aimed to discuss the available digital tools and technologies that account for whole life carbon emissions and will define R&I needs and objectives to accelerate and mainstream the respective solutions.

Opening Remarks

Caroline Milne from BPIE welcomed participants to the session on solutions and challenges in sustainable building. She emphasized the session's aim to synthesize discussions from previous panels, focusing on regulatory frameworks and real-world solutions to track and measure carbon emissions throughout a building's life cycle.

Keynote Speech

Zsolt Toth from BPIE highlighted the importance of innovation, research, and digital tools in addressing carbon emissions. He emphasized the need for clear direction in reducing carbon emissions, particularly in the context of new construction. Zsolt discussed the potential for reducing material emissions and the importance of managing sufficiency measures to lower carbon footprints.

Panel 1: Perspectives on Practical Solutions

Marta Bouchard from Autodesk discussed the role of digital tools and building information models (BIM) in reducing carbon emissions in the built environment. She highlighted Autodesk's efforts in promoting sustainability through technology and the importance of integrating data and decision-making tools to manage carbon throughout a building's lifecycle. Marta shared examples of successful projects using BIM to achieve significant carbon reductions.

Moses Itanola from BIM Africa emphasized the adoption of digital technologies across Africa to drive sustainable building practices. He shared stories of innovative projects, such as the development of sustainable office spaces in Mauritius and a blockchain-financed affordable housing project

in Mozambique. Moses highlighted the importance of local context and government support in promoting low-carbon construction in Africa.

Kelly Alvarez Doran from Ha/F Climate Design shared insights from his work on the first climate-positive project in Rwanda. He discussed the challenges of carbon accounting in regions with limited data and the importance of creating environmental product declarations (EPDs) for local materials. Kelly emphasized the need for tools and data to support carbon reduction in construction and shared her experiences in promoting carbon literacy among architects in Canada.

Closing Remarks

Caroline Milne summarized the session, emphasizing the need for collaboration, quality data, and strong political frameworks to achieve sustainability goals in the built environment. She highlighted the importance of addressing the informal construction sector and promoting radical collaboration between academia, industry, and policymakers. The session concluded with a call to action for continued efforts and collaboration to drive sustainable building practices.

4.6.2 Data and Whole Life Cycle

March 7. Round #3. Track #4. https://youtu.be/ue7Z67BWrTo

This event addressed the need for consistent and robust, transparent, and comparable data to inform whole life carbon calculations as a basis for activating green finance for the construction sector. The session also launched the 10 Whole Life Cycle Recommendations for the Buildings Breakthrough, where six out of the ten action recommendations for transforming the construction sector address the need to build up robust and credible data sources and align standards.
Mona Abdulghani Naji Mohammed, Programme Management Officer at UNEP moderated the session, introducing the theme of data and the entire life cycle in the built environment. She emphasized the importance of understanding and utilizing data throughout the session, which included interviews, Panel Discussions, and announcements.

Opening Remarks

York Ostermeyer, CEO of CUES Foundation began by addressing the challenges and significance of data in the building sector. He highlighted the complexities of data collection and the need for specific data related to climate buildings, emphasizing the evolving demand for carbon data driven by financial and engineering sectors.

Panel Discussion on Circular Solutions for Buildings and Construction Sector - Priorities and Solutions

Moderated by **Antonia Mattos from the UK Department for Energy Security and Net Zero**, the panel explored data requirements and challenges across different regions and sectors.

Helle Redder Momsen - Secretary General of Nordic Sustainable Construction discussed the Nordic approach to using data for developing policies aimed at reducing carbon emissions in the construction sector. She highlighted the importance of data in setting and revising regulatory limits, monitoring developments, and sharing information across Nordic countries.

Dr. Sunita Purushottam – Head of Sustainability at Mahindra Lifespace Developers emphasized the critical role of data in decision-making for developers. She provided examples of how data helped in choosing low-carbon materials and stressed the need for comprehensive data to improve construction decisions and communicate benefits to customers.

Robbie Epsom, CBRE discussed the investment community's perspective, highlighting the lack of consistent data as a barrier to sustainability in the built environment. He emphasized the need for standardized data to enable better investment decisions and support ESG reporting.

Panu Pasanen - Founder and CEO of One Click LCA discussed the importance of reducing costs and improving data availability for sustainability assessments. He highlighted the need for regulatory and market-driven incentives to promote the use of sustainable materials.

Pamela Castellan, CEO of the Guatemala Green Building Council (GBC), highlighted the challenges and opportunities in Latin America. She emphasized the importance of policies to promote data availability and the role of organizations like the GBC in accelerating the adoption of sustainable practices.

Questions and Answers

During the Q&A session, audience members raised questions about data accessibility, the impact of innovative materials on carbon reduction, and the need for standardized data across regions. Panelists provided insights into the importance of localized data, the role of data in driving sustainable investment, and the necessity of clear definitions and metrics for sustainability.

Calls to Action and Closing Remarks

Mélanie Jean-Singh, Energy Security and NetZero Department of the British Government, shared the 10 recommendations on the building life cycle, emphasizing the importance of collaboration and data in decarbonizing buildings. She highlighted the need for standardized and accessible data to support financial investments, policy decisions, and capacity building.


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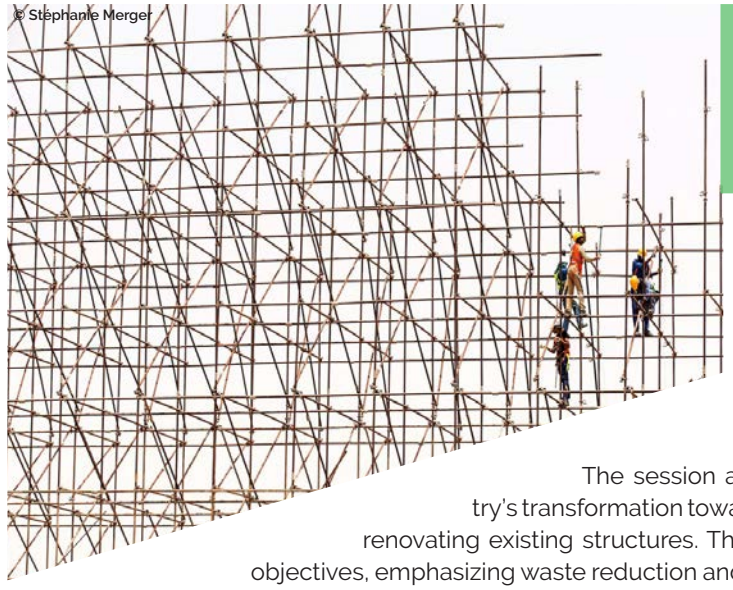
Robert Spencer, FIDIC discussed FIDIC's efforts to support sustainable infrastructure through updated contracts and practical guidance for consulting engineers. He emphasized the importance of clear data to unlock investment in sustainable infrastructure.

Stacy Smedley, Executive Director of Transparency, announced the Open Data for Climate Initiative and the Global Building Data Initiative, aiming to provide accessible, standardized data for the construction sector. She highlighted the importance of global collaboration to ensure data harmonization and comparability.

Ursula Hartenberger, Secretary General, Climatic Europe Alliance, introduced the new construction data hub within the GlobalABC, focusing on collecting and processing life cycle data to support strategic decisions. She emphasized the importance of local context in data collection and the need for practical guidelines to develop building passports.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4.7 Theme 7: Sufficiency, sobriety and frugality

March 7. Round #1. Track #2:
Sufficiency and the built environment:
Reducing demand for materials,
energy and land as a critical addition to
efficiency and renewables.
https://youtu.be/epaymHjlv2o

The session addressed the global construction industry's transformation towards enhancing the quality of materials and renovating existing structures. This shift aligns with the Paris Agreement's objectives, emphasizing waste reduction and addressing genuine urban development needs. Experts discussed how sufficiency can help meet carbon mitigation goals while increasing the availability of affordable, comfortable, and healthy housing. The session also raised awareness about the climate justice implications of current energy and materials consumption patterns and introduced a new report on sufficiency policies and tools, which can be integrated into the Buildings Breakthrough initiative.

Yamina Saheb emphasized the urgent need for substantial emissions reductions to meet the Paris Agreement's targets. She recommended focusing on revising policies and daily practices, reducing natural resource demand, and ensuring that policies are equitable and adhere to the Earth's environmental limits beyond just carbon emissions. Yamina Saheb stressed that a comprehensive approach, integrating sustainability into all aspects of policy and practice, is essential for achieving climate goals. Without significant changes, she warned that these goals will remain out of reach.

Cédric Borel, CEO of A4MT, highlighted the critical role of sufficiency in the energy transition for businesses, based on insights from 3,000 buildings. He advocated for a combined approach of efficiency and sufficiency, stressing the need for collaboration and effective management between users and operators. He noted that sufficiency has already led to significant reductions in countries like France and Spain and called for global political action on sufficiency to meet climate goals effectively. He called for global political action to integrate sufficiency into climate strategies, arguing that it is essential for meeting international climate targets.

Panel Discussions

The session featured two panels of experts who provided insights into various aspects of sufficiency and the built environment.

Panel 1

Julia Okatz, from Systemiq Earth discussed the potential for optimizing space usage to significantly reduce construction emissions and improve living conditions. She suggested that better metrics are needed to measure the impact of sufficiency effectively and noted that while progress has been made in some European cities, international support is necessary to advance integrated urban projects and sufficiency practices.

Albane Gaspard, from ADEME projected that sufficiency measures could significantly reduce the need for new apartments by 2050. She emphasized that policies like repurposing vacant homes in France have shown promise but require more robust implementation. Albane Gaspard advocated for a shift in policy focus to maximize the potential of existing housing stock, leading to substantial reductions in resource use and emissions.

Maria Fernanda Aguirre from Chile GBC highlighted Chile's unique challenges, such as high CO2 emissions and frequent earthquakes, stressing the need to adapt building practices to local conditions. She emphasized the importance of designing buildings that are both energy-efficient and resilient to natural disasters, advocating for sufficiency measures tailored to Chile's specific environmental and social context.

Dr. Mai Abdel Hamed, CEO of the Social Housing Fund of Egypt discussed Egypt's efforts to balance affordable housing with environmental sustainability amid rapid population growth and high inflation. She noted recent improvements in building designs that aim to achieve this balance, emphasizing the need for innovative solutions that provide affordable yet sustainable housing options.

Panel 2

The final panel discussed public policy incentives necessary to encourage sector-wide engagement with sufficiency models.

Robin van Leijen, Housing Europe shared a project in Dublin where retrofitting old buildings significantly reduced carbon emissions compared to new construction, highlighting the potential of retrofitting as a key sufficiency measure. He advocated for policies and incentives that support retrofitting projects, arguing that retrofits can be more resource-efficient and quicker to implement than new builds.

Lloyd Alter argued for prioritizing the reuse of existing structures to manage resources and reduce emissions, criticizing current standards for promoting unnecessarily large buildings. He called for a shift in standards to prioritize smaller, more efficient buildings that better meet actual needs, thus reducing the overall environmental impact.

Véronique Richaet emphasized that sufficiency involves reducing actual energy needs, not just improving efficiency, and highlighted the importance of involving building occupants in energy management. She argued that effective sufficiency measures require a holistic approach to energy management, integrating user engagement and sustainable design.

Closing Remarks

Lorenzo Pagliano concluded the discussion by emphasizing the importance of clear vocabulary in shaping sufficiency concepts, using Japan's Cool Beats program as an example. He underscored the critical role of sufficiency in the built environment, emphasizing the need for integrated approaches and international cooperation to achieve long-term environmental and social goals. Each speaker provided valuable insights into how sufficiency can be effectively implemented and the importance of collaborative efforts in driving this transformation.


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4.8 Theme 8: Energy, energy mix, renewable energies, heating, cooling

March 7. Round #2. Track #2. https://youtu.be/eP-C4cVpF2Y

4.8.1 Efficient buildings as key players in the energy system

The session delved into the critical role of buildings in enhancing energy efficiency and their integration into smart, low-carbon energy systems. Key discussions focused on the electrification of buildings and the interaction between end-users and renewable energy sources. Emphasis was placed on addressing both sides of the meter: reducing energy demand at the building level and decarbonizing the remaining energy supply. This approach aligns with the International Energy Agency's (IEA) Net Zero Emission scenario and the global goal of limiting temperature rise to 1.5°C.

Opening Remarks

Brian Motherway, Head of the Office of Energy Efficiency and Inclusive Transitions at the IEA, opened the session by reflecting on the significant role of COP28 in advancing global commitments to energy efficiency and renewable energy. He highlighted energy efficiency as a key factor in reducing emissions and making energy systems more affordable and reliable. Brian stressed the urgent need for substantial improvements in buildings to meet global climate goals. His remarks underscored the necessity of enhancing energy performance in buildings to align with international climate targets and to achieve broader sustainability objectives.

Michael Taylor, Head of Renewable Cost Status and Outlook at IRENA, focused on the decarbonization of end-use sectors, with a particular emphasis on buildings. He acknowledged that while the necessary tools and technologies for decarbonization are available, challenges remain in accelerating progress. Michael emphasized the need for robust policies and regulations, alongside the role of data and digitalization in optimizing building energy use and achieving flexibility within the energy system. His comments highlighted the critical intersection of technology, policy, and data in driving forward the energy transition.

Panel Discussion

Paula Pinho, Director at DG Energy, European Commission, emphasized the importance of integrating regulatory measures with financial support for renovations, ongoing research, and innovation. She advocated for transforming buildings into dynamic, energy-generating assets through a combination of effective communication and strategic interventions.

Paula's remarks highlighted the need for a comprehensive approach that includes regulatory frameworks and financial incentives to drive building performance improvements.

Meredydd Evans, Senior Staff Scientist at Pacific Northwest National Laboratory (PNNL), discussed the potential for buildings to act as decarbonization hubs. By integrating renewable energy, storage solutions, and demand response, buildings can contribute significantly to energy system flexibility. Meredydd stressed the necessity for improved grid connectivity, technology interoperability, and a holistic approach to energy management. His insights emphasized the need for systemic changes to support buildings' roles in energy transformation.

Aurélie Beauvais, Managing Director at EuroHeat and Power, articulated the need for defining efficient buildings not only by their reduced energy consumption but also by their contribution to optimizing energy use at the system level. She highlighted the importance of integrating renewable energy sources and connecting buildings to broader urban energy infrastructures to enhance overall efficiency. Aurélie's comments reflected the role of buildings in contributing to larger energy system goals and the integration of diverse energy solutions.

Guglielmo Cioni, Vice President of Business Development at TVP Solar, highlighted the significant potential of solar thermal energy for large-scale deployment. Despite this potential, he noted that growth has been hampered by market conditions and limited awareness. Guglielmo Cioni called for supportive policies and strategic decisions to accelerate the adoption of solar thermal technologies. His remarks emphasized the need for targeted interventions to overcome barriers to the deployment of renewable energy technologies.

Gilles Vermot Desroches, Chief Corporate Citizenship Officer and Senior Vice President at Schneider Electric, stressed that achieving energy efficiency requires both advanced technology and the active engagement and education of users. He advocated for a circular economy approach to energy, which integrates renewable energy with smart systems and fosters innovation to adapt to evolving energy landscapes. Gilles Vermot's comments underscored the importance of user involvement and system-wide integration in advancing energy efficiency.

Closing Remarks

Jonathan Duwyn, Programme Officer, Team lead, Buildings and Construction, Cities Unit, from UNEP concluded the session by emphasizing the critical role of buildings in the broader energy transformation. He advocated for viewing buildings within a holistic system that incorporates smart solutions and energy management. Jonathan highlighted the importance of collaboration, affordability, and a comprehensive approach to achieving energy efficiency and meeting climate goals. His remarks underscored the need for collaborative efforts to scale solutions, drive technological advancements, and influence behavioural changes to support the energy transition.

4.8.2 Passive design for cooling and heating: Resilient buildings

March 7. Round #3. Track #2. https://youtu.be/DTXTdf-J_Eo

The session provided examples of passive design approaches to reduce cooling and heating demand. Ranging from low cost and easy to implement passive techniques to highly efficient building concepts and standards. It also discussed successful mechanisms to support uptake and scale of passive design, such as capacity building, policy tool and financial mechanisms.

Opening Remarks

The session was moderated by **Karl Halbach, International Communications Manager at the International Passive House Association.** He introduced the session's focus on passive design solutions for cooling and heating, emphasizing the importance of resilient buildings in the context of climate change. The session aimed to explore multiple approaches to passive design and its role in promoting energy efficiency

Setting the Scene

Jessica Grove-Smith, Senior Scientist and Joint Managing Director of the Passive House Institute, set the stage by discussing the critical role of passive design in reducing energy needs for heating and cooling. She presented global statistics on energy consumption and emphasized the potential of passive design to significantly reduce the energy footprint of buildings. Jessica highlighted that passive design involves tailoring buildings to their local climate to maintain comfortable conditions with minimal energy input, stressing the importance of energy efficiency in achieving decarbonization and resilience.

Keynote Speech

Chann Sorphal, Director General of Construction at the Ministry of Land Management, Urban Planning, and Construction in Cambodia, discussed Cambodia's National Cooling Action Plan, which aims to promote sustainable, green, and low-carbon development. He presented the challenges faced in implementing passive cooling strategies in Cambodia, including political, financial, and public perception issues. He also highlighted Cambodia's commitment to reducing greenhouse gas emissions and its participation in the Global Cooling Pledge.

Keynote Speech

Dr. Tie Yro Hyacinthe, Director of the Environment and Risk Prevention at the Ministry of Environment in Côte d'Ivoire, presented a project, the Ecler Project aimed at improving the energy efficiency of the Sogefia building. The project involved retrofitting the building to reduce energy consumption, improve thermal comfort, and reduce greenhouse gas emissions. The actions taken included installing LED lighting, upgrading the air conditioning system, and adding photovoltaic panels, resulting in significant energy savings and a reduction in CO2 emissions.

Panel Discussion

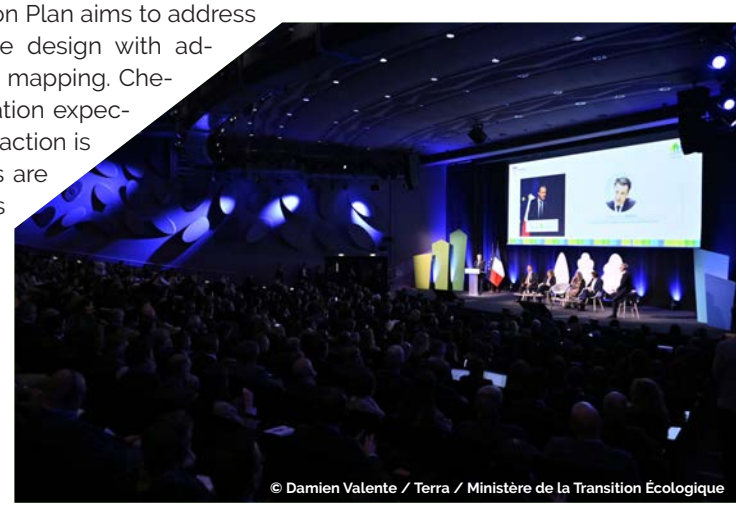
After the country case studies, different value chain stakeholders represented their initiatives and insights in a panel discussion. The discussion was rich with perspectives from Bulgaria, the UK, Spain, Kenya, and Japan, highlighting the global relevance and adaptability of passive design principles.

Dragomir Tsanev, **Executive Director of EnEffect, Center of Energy Efficiency in Bulgaria**, discussed the evolution of energy codes in his region. He noted that while progress has been made, there is still a significant gap in achieving passive house standards. Dragomir Tsanev emphasized that the first Energy Performance of Buildings Directive (EPBD) in 2002 aimed for passive house levels, yet more than 20 years later, most regions, including Bulgaria, are not fully compliant. He stressed the importance of aligning policies and financial incentives to close this gap.

Jenny Russell, Director of Education and Learning at the Royal Institute of British Architects (RIBA) highlighted the urgent need for climate literacy among architecture students. In collaboration with UK architecture schools, RIBA has developed foundational climate training modules. These modules are designed to ensure that the approximately 3,000 students graduating each year are equipped to design high-performance buildings. The goal is to integrate this training across both undergraduate and postgraduate levels, making it a standard part of architectural education.

Luis Lastre, representing Juan Carlos Bandrés, CEO, Grupo Lobe Spain, shared how his company has integrated passive house standards into social housing projects. Despite initial challenges, Grupo Lobo has managed to achieve energy efficiency in 50% of their developments, which are social housing, without increasing costs. The adoption of passive house principles has resulted in significant reductions in energy consumption, providing affordable and sustainable housing solutions.

Elizabeth Chege, Head of Energy Efficiency and Cooling at Sustainable Energy for All (SEforALL), discussed the impact of rising heat stress in Kenya, where temperatures are steadily increasing. She noted that Kenya's National Cooling Action Plan aims to address these challenges by integrating passive design with advanced technologies like AI and satellite mapping. Chege emphasized that with Kenya's population expected to grow by 50% by 2050, immediate action is required to ensure that all new buildings are designed with passive cooling strategies to protect vulnerable populations.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Tadao Kamei, Chairman of Nikken Sekkei, Japan, discussed the application of traditional Japanese architectural techniques in modern buildings to improve energy efficiency. One project, the YKK headquarters in Tokyo, features a facade with aluminium louvers that reduce


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cooling loads, and a rooftop garden that lowers surrounding air temperature by 5-10 degrees Celsius. This project is part of Nikken Sekkei's broader strategy to achieve net-zero emissions by 2050.

Questions and Answers Session

During the Q&A session, audience members engaged with the panel on various topics, including the application of passive design in high-humidity climates. The panelists discussed strategies such as natural ventilation, biophilic design, and nature-based solutions to address humidity challenges while maintaining energy efficiency. Another key discussion point was the urgency of implementing passive house standards now, rather than waiting until 2030, to meet global climate goals.

Exhibition Pitch

Kira Lamont, a researcher from Simon Fraser University, presented an innovative augmented reality (AR) application designed to visualize passive cooling strategies. The application allows users to interact with 3D models of buildings and explore how passive design measures can impact building comfort. The project, developed in collaboration with a pilot program in Cambodia, aims to raise awareness about the benefits of passive cooling by making complex design concepts accessible and engaging through AR technology.

Wrap-up and Closing Remarks

Gennai Kamata, Technical Expert at UNEP Cool Coalition, wrapped up the session by emphasizing the importance of passive design as an ancient wisdom that needs to be re-embraced to reduce operational carbon emissions from buildings. He highlighted the need for continued collaboration and knowledge sharing to accelerate the adoption of passive cooling strategies globally, aligning with the Buildings Breakthrough Agenda and the Global Cooling Pledge launched at COP28.

4.8.3 Equipment for sustainable heating and cooling: how to accelerate deployment?

March 7. Round #4. Track #2. https://youtu.be/-EAUFwB2aXE

The session aimed to advance global knowledge on available equipment for clean and efficient heating and cooling in buildings. It highlighted the mismatch between available solutions and deployment.

Opening Remarks

Thomas Nowak from the European Heat Pump Association (EHPA) welcomed participants to the thematic session on sustainable heating and cooling, focusing on accelerating the deployment of efficient technologies. He emphasised the importance of increasing the adoption rate of sustainable heating solutions to meet the EU's climate goals. Thomas highlighted the need for better information dissemination, sufficient installers, and supportive policies to facilitate the transition.

Keynote Speech

Timur Guel, Head of Energy Technology at the International Energy Agency (IEA), provided an overview of the global market and policy developments in the heating and cooling sector. He highlighted the importance of heat pumps in reducing CO2 emissions and the need for a significant increase in their deployment. Timur discussed the challenges posed by inflation, high interest rates, and market uncertainties, which have slowed the adoption of heat pumps. He stressed the need for clear long-term policy frameworks, improved awareness, and international collaboration to accelerate the deployment of clean heating technologies.

Panel: Perspectives on Accelerating Deployment of Sustainable Heating and Cooling

Roland Roesch, Director of the IRENA Technology Centre in Bonn, emphasised the critical role of renewable energies and energy efficiency in decarbonising the building sector. He discussed the technological readiness of heat pumps and the need for stronger integration of buildings with the energy system. Roland highlighted the challenges of decarbonising building materials and the importance of efficient appliances and heat pumps in achieving climate goals.

Paula Pinho, Director General for Energy at the European Commission, outlined the regulatory measures and policy frameworks established by the EU to support the transition to sustainable heating and cooling. She highlighted the importance of the Renovation Wave, the Energy Efficiency Directive, and the upcoming European Building Performance Directive. Paula emphasised the need for clear signals to phase out fossil fuels, the importance of financial support, and the role of public and private sector collaboration.

Enrique Vilamitjana from Panasonic, General Manager of Panasonic Heating Ventilation and Air Conditioning Europe, discussed the diverse heating solutions provided by Panasonic and the importance of considering regional differences in heating needs. He highlighted the technological advancements in heat pumps and the need for integrated solutions to improve efficiency. Enrique stressed the importance of clear policies and infrastructure to support the widespread adoption of sustainable heating technologies.

Andrea Voigt from Danfoss, Vice President of the Global Agency for Public Affairs and Climate Solutions at Danfoss, discussed the synergies between heating and cooling and the importance of recovering waste heat. She highlighted the potential of district heating and cooling systems and the need for better planning and incentives to utilise waste heat effectively. Andrea emphasised

the importance of collaboration between public and private sectors to achieve energy efficiency and sustainability goals.

Marcia Poletti from Octopus Energy, Head of European Union System Change at Octopus Energy, discussed the company's approach to reducing the cost and improving the efficiency of heat pumps. She highlighted the importance of integrating heating and electricity markets to provide consumers with flexible and affordable energy solutions. Marsha emphasised the need for private sector innovation and consumer engagement to drive the adoption of sustainable heating technologies.

Zhigao Wang from Energy Foundation China discussed China's efforts to electrify heating systems and the development of a zero-carbon construction technical code. He highlighted the innovative solutions being deployed in China, such as community-level heat pump systems and the integration of solar PV with heat pumps. Zhigao stressed the need for international collaboration and the implementation of policies to support the transition to sustainable heating.

Hubert Zan from the Ghana Energy Committee, Assistant Manager in charge of regulating energy efficiency in Ghana, discussed the challenges and opportunities in decarbonising heating and cooling in Africa. He highlighted the need for effective building codes, institutional collaboration, and the regulation of equipment standards to ensure energy efficiency. Hubert emphasised the importance of addressing the influx of sub-standard appliances and promoting the use of efficient technologies.

Closing Remarks

Paul Kellett from the UN Global Environmental Effectiveness Program summarised the session, highlighting the need for international cooperation and strategic national programs to support the global transition to sustainable heating and cooling. He stressed the importance of public and institutional procurement, technological solutions, and multilateral approaches to achieve climate goals. The session concluded with a call to action for continued collaboration and innovation in the heating and cooling sector.

4.8.4 Passive design heating and cooling

March 8. High-Level Dialogue. Theme #4. https://youtu.be/i1GB5Y72BO0

Buildings account for over 34% of energy demand and around 37% of energy-related CO2 emissions. The IEA has shown that buildings offer 40% of the solutions needed to double energy intensity improvements by 2030, as countries have agreed to in the UAE consensus. This session aimed to explore the key opportunities for reducing the increasing energy demand of the buildings sector.

Opening Remarks

Jo Da Silva from Arup welcomed participants to the session addressing building energy efficiency, with a focus on heating, warming, and passive design. She highlighted the significant role buildings play in energy demand and emissions, noting the importance of energy efficiency improvements alongside renewable energy integration. Jo set the stage for the discussion by outlining the need for passive design principles, smart systems, and decarbonised energy sources to achieve energy savings and sustainability goals.

Panel 1: National and Regional Perspectives on Energy Efficiency Policies

Joel Aryumoyang, Principal Secretary, State Department for Public Works in the Ministry of Lands, Public Works, Housing and Urban Development Kenya discussed Kenya's efforts to promote energy efficiency in buildings through strategic partnerships, national warming action plans, and the development of green building codes. He highlighted Kenya's National Energy Conservation and Efficiency Strategy and the importance of integrating energy efficiency into the country's housing agenda, with a goal of developing 200,000 housing units per year.

Nasra Nanda, CEO of Kenya Green Building Society, emphasised the role of cities in driving the climate and development agenda. She discussed Nairobi's efforts to implement green building principles, promote climate resilience for the urban poor, and support the Affordable Housing Agenda. Nanda highlighted the importance of local governance and partnerships in translating national commitments into city-level actions.

Jessica Grove-Smith, Passive House Institute explained the principles of passive design, focusing on creating comfortable indoor environments with minimal energy input. She highlighted the importance of optimizing building fabrics and strategies based on local climate conditions. Jessica emphasised that passive design reduces energy demand, supports resilience, and addresses energy poverty, making it a crucial approach for sustainable buildings globally.

Tadao Kamei, President of NIKKEN Sekkei, Japan shared examples of how NIKKEN Sekkei designs buildings to address urban heat islands and climate conditions. He discussed innovative solutions such as green screens and bioscreens for building facades, which reduce surface temperatures and promote biophilic design. Kamei also highlighted Japan's Building Energy Index and government policies promoting energy efficiency.

Karan Mangotra, International Solar Alliance discussed the importance of accessibility and affordability in the energy transition. He highlighted the role of innovative design and business models in making sustainable energy solutions more affordable and accessible. Karan Mangotra emphasised the need for


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partnerships and customized solutions to address local needs and promote energy efficiency in the global south.

Panel 2: Scaling Up Energy Efficiency in Existing Buildings

Lord Martin Callanan, Minister for Efficient Energy and Finance, United Kingdom discussed the UK's challenges with retrofitting its old building stock and the measures taken to support energy efficiency improvements. He highlighted public support schemes, the role of energy suppliers, and local authorities in driving retrofit efforts. Callanan emphasised the importance of long-term financing commitments and public awareness campaigns to encourage energy efficiency.

Nune Petrosyan, Deputy Chairman of the Urban Development Committee, Armenia outlined Armenia's energy efficiency policies, including state support programs for energy-efficient renovations and the liberalization of the electricity market. She discussed the harmonization of international energy standards and the importance of incorporating energy efficiency into educational courses to promote sustainable building practices from the design phase.

Paula Pinho, European Commission described the European Union's Building Performance Legislation, which sets clear targets for energy efficiency improvements in buildings. She discussed the importance of financial support, building passports, and private sector engagement to achieve energy efficiency goals. Paula Pinho also highlighted the need for education and skills development to support the implementation of energy-efficient measures.

Vincent Minier, Vice President of Energy Transition Research, Schneider Electric emphasised the role of buildings in the energy transition, highlighting the need for energy efficiency, smart systems, and integrated solutions. He discussed the importance of political support and city-level initiatives in creating conditions for transformative change. Vincent Meunier called for innovative financial models and international collaboration to scale up energy efficiency efforts.

Closing Remarks

Jo Da Silva concluded the session by summarising key points, including the importance of passive design, energy efficiency, and international collaboration. She emphasised the need for holistic approaches that consider buildings' roles in energy transition, urban resilience, and social equity. The session ended with a call to action for continued efforts and partnerships to achieve sustainable building practices globally.


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4.9 Theme 9: Sustainable design and architecture for low carbon, sustainable and resilient buildings

This comprehensive theme covers the following sessions of the Global Forum:

March 7.

- Round #1, Track #3: Adequate housing for all. Strategies, commitments and innovations for fair and sustainable housing systems
- Round #3: Amphitheater. Sustainable buildings talks: inspired by architecture
- Round #4, Track #4: Achieving climate-resilient buildings

March 8.

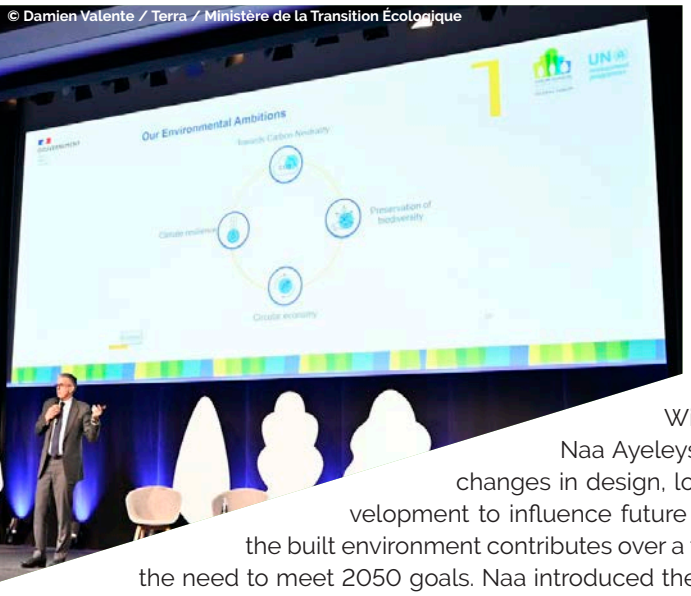
- High-Level Dialogue: New buildings
- High-Level Dialogue: Housing

4.9.1 Adequate housing for all. Strategies, commitments and innovations for fair and sustainable housing systems

March 7. Round #1. Track #3. https://youtu.be/QIxmeuRtoTo

This session focused on the challenge of ensuring fair and inclusive retrofit, renovation and decarbonization waves for existing housing which leads to increased affordability and adequacy, as well as ensuring that new construction projects, especially in emerging markets, are sustainable, affordable and resilient, particularly for the urban poor and marginalized communities. As part of the Buildings Breakthrough initiative, the discussion shaped the refinement of priority actions for international collaboration, bringing us closer to the goal of near-zero emission and resilient buildings as the new normal by 2030.

Christophe Lalande, Programme Management Officer, UN Habitat opened the session by welcoming participants and expressing gratitude to the organizers and attendees. He emphasized the session's importance on housing and outlined its focus on climate change, green buildings, and the right to adequate housing. Lalande highlighted the need to address the barriers to sustainable housing and invited participants to share their insights via an app. He stressed the urgency of acting now to create sustainable housing stock and discussed the dual focus of the panel on new constructions and retrofitting existing buildings.



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Panel 1: Access to sustainable, affordable, and resilient housing for urban poor and marginalized communities

Naa Ayeleysa Quaynor-Mettle, Programme Lead Climate Advocacy & Green Buildings, REALL welcomed the panel and audience, highlighting the urgency of addressing the housing crisis. She noted that by 2030, 40% of the world's population will live in inadequate housing, impacting health and dignity. With construction expected to double by 2050, Naa Ayeleysa Quaynor-Mettle emphasized the need for changes in design, localization, building practices, and urban development to influence future generations positively. She pointed out that the built environment contributes over a third of global energy emissions and stressed the need to meet 2050 goals. Naa introduced the panelists, before posing a question to Greg Munro about the role of long-term strategies in ensuring sustainability, affordability, and resilience in fast-growing regions.

Greg Munro, Director, Cities Alliance emphasized the necessity of having sustainable strategies for rapidly growing regions, particularly in Africa where some countries are experiencing significant population growth. He highlighted the consequences of unplanned urban expansion, such as inadequate infrastructure and outbreaks of diseases like cholera. Greg Munro underscored the importance of involving residents in slum improvements, noting that 80% of such initiatives are led by the residents themselves. He identified three priorities for improving slum conditions: agriculture, sustainable and affordable building materials, and comprehensive urban expansion plans. Greg Munro stressed that infrastructure projects must consider their impact on urban growth to avoid creating unsustainable and informal settlements.

Naa Ayeleysa Quaynor-Mettle asked Roland Pearson to identify key barriers preventing the development of sustainable, affordable, and resilient housing for urban poor and marginalized communities.

Roland Pearson, Vice President & Executive Director, Habitat for Humanity, highlighted two critical barriers: inequitable market structures and lack of access to finance. Habitat for Humanity addresses these issues through a market system development approach and human-centered design, which helps facilitate sustainable transitions. They support climate-related businesses, especially startups and scale-ups, that bring affordable housing solutions to the market. Roland emphasized the importance of understanding the motivations and needs of low-income communities to determine which technologies will be successful. He shared Habitat's goal to support 100 climate-resilient businesses over the next three to five years, aiming to positively impact up to 15 million people through their Homes Equals campaign. On the financial side, they are scaling initiatives like the Microbuild fund to provide access to finance for sustainable housing solutions. Roland concluded by emphasizing the need for green and sustainable building practices tailored to the needs of these communities.

Naa transitioned to Nasra Nanda, asking about the actions the government and private sector can take to ensure the success of the housing agenda in terms of affordability, sustainability, and inclusiveness.

Nasra Nanda, CEO of the Kenya Green Building Society (GBC), emphasized the importance of focusing on the built environment as an ecosystem of opportunities and challenges. She highlighted the government's mandate to build resilience for the urban poor and ensure green and resilient cities, aligned with the AEU agenda. Affordable housing is a key priority for the government. Nasra explained that the Kenya GBC aims to facilitate market transformation and collaboration. They recently conducted a workshop with partners to address housing sustainability and affordability, bringing together various market players to highlight opportunities and challenges. She stressed the importance of the private sector presenting clear, specific proposals to the government, rather than just complaints, to enable effective collaboration and progress. She highlighted that the private sector should align its efforts with the government's priorities, such as creating green and resilient cities, building climate resilience for the urban poor, and supporting affordable housing through innovative financing opportunities like collateral financing. By addressing these areas, policies can be developed to foster public and private sector growth.

Naa introduced Noll Tufani, asking for insights on establishing inclusive financing mechanisms for sustainable, affordable, and resilient buildings in emerging markets, particularly for urban poor and marginalized communities.

Noll Tufani, Housing Resilience Expert, VP Programs Africa & Middle East at Build Change emphasized that solutions must be systemic and affect the entire value chain to avoid unforeseen roadblocks. He highlighted the necessity of implementing innovations within a framework that impacts the entire value chain and provides incentives for different actors. Noll Tufani pointed out that the government plays a crucial role in offering these incentives and looking at the whole value chain but acknowledged that this is often challenging. Noll Tufani noted that people in informal settlements are motivated by the desire to improve their conditions, not because they chose to live there. He emphasized the need for scalable technology and innovations that can reduce costs and become mainstream. When these innovations are widely adopted, they can inspire informal communities to aspire for better conditions. He warned against creating innovations specifically for informal settlements as this can lead to stigmatization and lack of traction, advocating instead for solutions that integrate into the broader market and appeal to all communities.

Naa facilitated the final discussion of the first panel on attracting investment for sustainable and affordable housing projects. Greg Munro highlighted the importance of partnerships among sectors to combine knowledge and achieve scalability. Roland Pearson emphasized starting with financial investments and addressing other necessary components. Noll Tufani stressed the need for comprehensive data collection to support bankability for communities. Finally, Nasra Nanda suggested

focusing on resilience as a metric to unlock financing for low-income and informal settlements, advocating for accessible and inclusive financing.

Naa concluded by emphasizing the key takeaways: the need for deeper collaboration and partnerships, the importance of starting with funding and addressing subsequent needs, ensuring data collection for bankability, and prioritizing resilience to make financing accessible. She thanked the panelists and audience for their participation.

Panel 2: Effective and inclusive decarbonization of existing housing systems

Christophe Lalande thanked Naa, and the speakers for the insightful first panel session. He then introduced Ben Madsen from UNHABITAT Housing Europe, who led the second panel on the effective and inclusive decarbonization of existing housing systems.

Ben Madsen, President of Housing Europe welcomed the participants and emphasized the importance of housing in today's discussions. He noted the focus on people and resilience from the first panel and reiterated that these themes would continue in the second panel, which would now shift its attention to the existing housing stock. Bend Madsen highlighted the challenge of decarbonizing existing housing and the importance of considering the entire value chain, from refurbishment to farming and manufacturing. He then introduced Jeffrey with the critical question: "*How can an inclusive and long-term government framework be designed to promote renovation and decarbonization in an equitable way without increasing inequalities?*"

Jeffrey Little from the U.S. Department of Housing and Urban Development (HUD) discussed the Biden-Harris administration's commitment to reducing greenhouse gas emissions by over 50% by 2030 and making zero-emission retrofits common practice. He highlighted the Inflation Reduction Act's allocation of funds for building efficiency, clean energy, and green job training. Jeff emphasized HUD's focus on inclusivity, particularly for low-income families, through the Green and Resilient Retrofit Program (GRRP). This program aims to improve energy efficiency and climate resilience in affordable housing. He underscored the importance of community engagement, robust resident protections, and creating sustainable, replicable investment models to foster long-term private investment in decarbonization and resilience.

Ben Madsen thanked Jeffrey Little for his insights on transforming investments and attracting private capital for long-term community benefits, including health and employment. He then posed a similar question to Prudence, focusing on the renewal of cooperatives and social and public housing. Ben Madsen asked how these housing types can be made greener while maintaining affordability.

Prudence Adjanohoun, Secretary General of the Habitat and Francophonie Network, shared key points about the social housing sector in France. He highlighted that 1 in 2 people in France live in social housing, amounting to 10.2 million residents and 4.8 million social housing units. He noted that 6-8% of social housing funds are state-classified. Prudence discussed their commitment to incorporating RE 2020 criteria into new social housing programs, despite some uncertainties regarding carbon assessment. He mentioned the government's announcement to invest 1.2 billion euros in grants

over three years for social housing renewal, though a budget of 400 million euros for 2024 was canceled. He introduced PrioReno, an innovative decision support service to help social housing organizations develop procurement management strategies, focusing on greener projects. Prudence emphasized that foresight, innovation, and financing are crucial to eradicating energy inefficiency and ensuring affordable housing.


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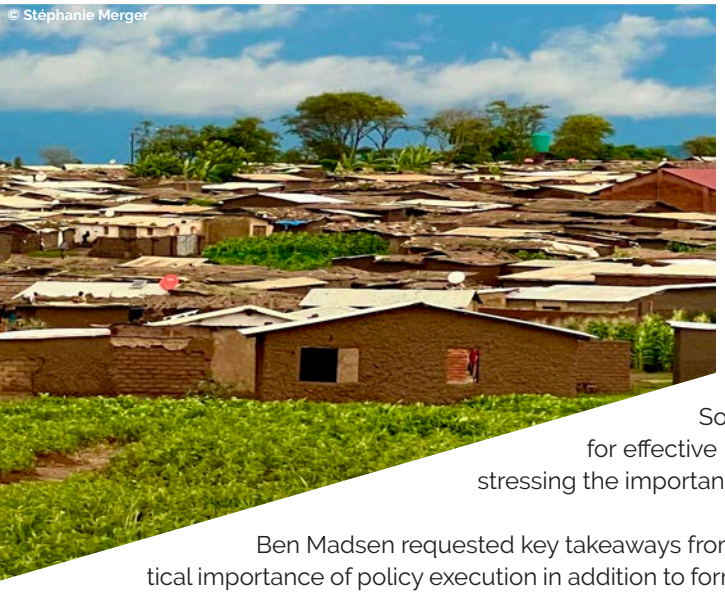
Ben Madsen thanked Prudence and discussed the inclusion of innovation and finance in housing systems. He posed a question to Grzegorz Gajda about effective financing for retrofitting and renovating institutional housing while ensuring equality.

Grzegorz Gajda, Senior Urban Specialists at the European Investment Bank shared an anecdote from a 2010 renovation project in Ukraine, where initially skeptical banks funded renovations for low-income residents, leading to successful renovations of over 5,000 buildings. He emphasized that finance needs to be available when the institutional system is ready. He highlighted differences in institutional systems across Europe, such as ownership structures and heating systems, and stressed the importance of decision-making capacity and motivation in achieving residential efficiency and decarbonization.

Ben Madsen then transitioned the discussion to Soo-Jin Kim, focusing on the housing crisis in cities, particularly in Europe, and how to create inclusive urban environments through renovations and refurbishments.

Soo-Jin Kim from OECD highlighted the urban nature of the housing and climate crises, noting higher urban housing costs and increased social housing waiting lists. She pointed out that two-thirds of OECD cities exceed recommended particulate matter levels. Cities like Seoul, Milan, and others are leading efforts in retrofits and zero-carbon housing, often surpassing national standards. National governments also support these initiatives, as seen in the Netherlands. Soo-Jin Kim emphasized the benefits of renovations, such as reducing energy costs, improving health, and creating jobs. She cited examples from Paris, Japan, and the U.S., and encouraged attendees to explore OECD's research on global government actions.

Ben Madsen highlighted global examples of successful housing initiatives and asked **Jeffrey Little** for U.S. examples of community improvements. Jeffrey Little discussed HUD's focus on creating job opportunities for low-income residents through its investments, ensuring direct economic benefits for communities.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Ben Madsen inquired about overcoming institutional hurdles and effective financing strategies. Gregor emphasized that strong policies are essential alongside financial tools, sharing a successful renovation project from Ukraine as an example.

Prudence suggested the need for a comprehensive European market plan for thermal renovations and simplified long-term investment support schemes. Soo-Jin cited Helsinki and Italy as models for effective local and national decarbonization efforts, stressing the importance of tailored, step-by-step approaches.

Ben Madsen requested key takeaways from the panelists. Jeffrey highlighted the critical importance of policy execution in addition to formulation. Prudence stressed the necessity of coordinated immediate action plans. Soo-Jin underlined the interconnectedness of housing and climate crises, advocating for a holistic approach. Gregor pointed out that energy consumption is ultimately driven by people, not buildings.

Closing Remarks

Audrey Girald-Napoles, AFD highlighted AFD's commitment to aligning with the Paris Agreement and focusing on sustainable housing. She emphasized the importance of listening to local needs, involving public decision-makers, and fostering strong public policies. She stressed the need for a comprehensive financial framework and the involvement of the private sector. Audrey introduced AFD's Sustainable Housing Initiative, aimed at supporting national policies and investments, and highlighted the importance of mobilization, partnerships, and data sharing, mentioning AFD's partnership with UN Habitat.
Christophe Lalande thanked Ms. Girald-Napoles and all participants, noting the necessity of collaboration. He highlighted the MOU between Habitat and AFD and the adoption of a new resolution on housing for all, supported by multiple countries. The session concluded with acknowledgments and a call for continued collaboration.

Closing Remarks

Yves Laurent Sapoval from the French Ministry of Ecological Transition thanked everyone, emphasizing the importance of their participation and interactions. He highlighted three priorities in his work: energy efficiency, sustainable cities, and housing. Yves- Laurent noted the disconnect between discussions on buildings and cities, stressing the importance of integrating housing and buildings in discussions for effective solutions. He acknowledged the support for the UN-HABITAT resolution from various countries, including the United States and Kenya. Yves-Laurent thanked

Christophe Lalande and all participants for their contributions and emphasized the need for continued collaboration to address these interconnected issues.

4.9.2 Sustainable buildings talks: inspired by architecture –

March 7. Amphitheater. Sustainable Building Talks. Consultable on: https://youtu.be/6vf-YiixL_E

Each speaker in the session provided valuable insights and examples of sustainable architecture that can inspire decarbonization efforts. The session offered a rich discussion on the future of sustainable architecture, emphasizing the importance of context, collaboration, and a holistic approach to design. The speakers highlighted the need to move beyond purely technical solutions and focus on creating architecture that is sustainable, livable, and responsive to the specific needs of its environment and society.

Christine Lemaitre, President of the German Sustainable Building Council (DGNB) opened the session by welcoming the attendees and emphasizing the need for a discussion on what constitutes sustainable and good architecture. She pointed out that while there is often a focus on methodologies and technical solutions, the core of the discussion should be about the quality and vision of architecture for the future. Christophe Lemaitre highlighted the responsibility of architects, especially considering that a significant portion of the built environment for 2050 is yet to be constructed. She questioned the current architectural models and urged the panel to reflect on whether they promote a vision of architecture that is truly sustainable.

Keynote Speech

Stephen Behnisch Architect, Principal of Behnisch Architekten delved into the complexities of sustainability in architecture. He advocated for a nuanced approach that recognizes the uniqueness of each project, exploring how architecture can play a pivotal role in decarbonization. Stephen Behnisch critiqued the building sector for often being a barrier to sustainability and called for a shift towards practices that harmonize with the natural environment. He shared examples such as the IBM Institute in Wageningen, an early low-tech, environmentally conscious design that integrated natural processes into the building's operation. This project served as an inspiration for today's decarbonization strategies. Another example was the UN Conference Room in Geneva, where sustainable materials like wood were used in large-scale projects, demonstrating the potential to reduce carbon-intensive materials. Stephen Behnisch also discussed energy-efficient buildings that utilized waste heat and adaptive reuse, showcasing practical ways to achieve zero CO2 emissions and significantly reduce the carbon footprint of buildings.

Panel Discussion

The panel featured a distinguished group of experts, each bringing a wealth of experience and unique perspectives to the discussion on sustainable architecture. **Christine Lemaitre, the President of the German Sustainable Building Council (DGNB)**, set the stage with a call for visionary approaches in shaping a sustainable future.

Ruth Schagemann, President of the Architects' Council of Europe (ACE-CAE) focused on the affordability of sustainable architecture, particularly in the context of renovations. She argued that sustainable architecture must be accessible to all, both in terms of cost and in its ability to meet the specific needs of the community. Ruth Schagemann's examples demonstrated how decarbonization could be achieved without compromising on livability or affordability. She cited a French renovation project where a 1960s building was renovated instead of demolished, reducing waste and conserving resources—key aspects of a decarbonization strategy. She also highlighted an urban public space installation in Temeshua, which emphasized the role of green public spaces in urban environments to offset carbon emissions and improve air quality.

Carl Backstrand, Vice President of the Architects' Council of Europe (ACE), emphasized the importance of using local materials and low-tech solutions, which can significantly contribute to decarbonization. He stressed the value of learning from traditional architectural practices, particularly in using wood, which has a lower carbon footprint compared to conventional materials like concrete and steel. Backstrand highlighted the work of Hassan Fathy in Egypt, where local materials and community collaboration were central to a project that minimized environmental impact. He also discussed a cultural center in Skellefteå, Sweden, which showcased the potential of wood in construction—a renewable resource that can greatly reduce a building's carbon footprint.

Philippe Madec, President of APM Associates advocated for architecture that is deeply rooted in its local context, utilizing local resources and knowledge to minimize the carbon footprint. He promoted the idea of reducing technological complexity and focusing on sustainable, low-carbon building methods. Phillippe Madec provided examples such as the Mayenne Archaeological Museum, which used local materials and a design that allowed for easy deconstruction, contributing to decarbonization. Another example was a cultural hub near Toulouse, which employed natural ventilation and locally sourced materials, reducing the need for energy-intensive systems and contributing to lower carbon emissions. Additionally, he discussed a social housing project in Brittany that eliminated the need for heating systems by relying on passive climate control, significantly reducing energy use and associated carbon emissions. Finally, he mentioned a cellar in Bordeaux built using mud and stone, highlighting the use of traditional, low-carbon materials and natural ventilation—an effective approach to decarbonization.

Hervé Dubios, Chairman, Corps des Architectes Conseils de l'État, emphasized context-specific architecture and the architect's role in implementing public policies that support decarbonization. He highlighted the importance of working closely with local communities and authorities to create buildings that are both environmentally sustainable and socially responsive. Herve Dubios mentioned the work of Simon Tessou, known for his sensitivity to local contexts and integration of environmental considerations into urban planning, contributing to decarbonization efforts. He also discussed the Mediatek library project, designed to be environmentally integrated and community-oriented, showcasing how architecture can reduce its carbon footprint while enhancing local culture.

Closing Remarks

The session underscored the importance of context, collaboration, and a holistic approach in sustainable architecture. The speakers collectively argued that decarbonization requires more than just technical fixes; it demands a fundamental rethinking of architectural practices to ensure that buildings are not only energy-efficient but also enhance the quality of life and are responsive to their specific environments and societies. These examples provide a rich source of inspiration for architects and policymakers aiming to decarbonize the built environment while maintaining or even enhancing the livability and cultural significance of spaces.

4.9.3 Achieving climate-resilient buildings

March 7. Round #4. Track #4 https://youtu.be/-i58DhKf_vQ

As climate change-related hazards become more frequent and intense, resilient buildings are essential. This session examined the current approaches to delivering climate resilient buildings, identified current gaps in tools and deployment drivers and determines the actions necessary to make climate resilient buildings the new normal. There is a focus on building codes and resilience benchmarking as fundamental tools and the mechanisms needed to support their effective deployment. The session focused on common principles to drive progress, metrics to help measure and track success, and highlighted the steps needed to meet the resilience recommendations identified in the Buildings Breakthrough.

The session, organized by the Adaptation Working Group and ICC, was moderated by **Stéphane Pouffary, CEO of Energies 2050**. He highlighted the economic impact of not adapting to climate change and the inconsistency in global priorities, comparing subsidies for fossil fuels with funding for climate adaptation.

Call to Action – Opening Remarks

Natalia Alonso Cano, Chief in the UNDRR Regional Office for Europe and Central Asia (ROECA) emphasized the importance of investing in resilient infrastructure and presented key figures on the low cost and high benefit of building resilience. She stressed the need for risk-informed infrastructure decisions, comprehensive risk assessments, and the identification of vulnerabilities.


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Natalia introduced UNDRR's principles for resilient infrastructure and tools developed to assist governments in prioritizing investments.

Stéphane Pouffary, presented data illustrating the economic impact of not adapting to climate change and the insufficient funding for climate adaptation, particularly in Africa. He emphasized the importance of adaptation and resilience in construction and the need for a strategic approach.

Natalia Alonso Cano discussed the importance of understanding and assessing risks, including non-climate-related vulnerabilities such as cyber-attacks, and the need to account for cascading effects in infrastructure planning. Natalia outlined the need for national resilience ambitions and action plans. She mentioned that UNDRR has developed a global methodology for resilience reviews, applicable at both national and local levels, and highlighted the "Making Cities Resilient" network

Panel Discussion: Setting the Scene – What we know about

Judy Zakreski, Senior Vice President, Global Operations Executive Director, ICC, emphasized the need for immediate action to address building resilience in response to climate change and natural hazards. She introduced the ICC's building taxonomy and regulatory approaches for different building types, emphasizing the importance of tailored solutions for engineering, vernacular, and informal settlements.

Dominic Sims, CEO of ICC highlighted the role of building codes in ensuring safety and resilience in the built environment. He discussed how codes are adapted to local contexts and stressed the importance of global standards that can be modified to meet specific regional needs. Dominic advocated for the exchange of knowledge between jurisdictions to enhance the effectiveness of building codes worldwide.

Karim Selouane, CEO of Resallience introduced the Global ABC's 10 principles for effective climate adaptation in the building sector, emphasizing the need for a common international framework to accelerate adaptation efforts. He called for tangible projects that demonstrate these principles in action and stressed the importance of inclusive approaches involving all stakeholders in the construction industry.

Ryan Colker, Vice President of Innovation for ICC discussed the development of global resilience rules designed to incorporate climate risks into building codes and standards. He emphasized the need to consider future climate scenarios in building design to ensure long-term resilience. Ryan highlighted the importance of a strong regulatory foundation to guide jurisdictions in adapting their building practices to changing climate risks.

Cécile Ferraud, Head of Clean Construction - C40 Cities focused on the critical role of cities in addressing climate risks and enhancing resilience. She presented the C40 Framework, which provides guidelines for cities to integrate decarbonization and resilience into urban planning and construction. Cécile emphasized the need for collaboration among city departments and stakeholders to implement effective climate action.

Anna Campos-Garcia, Regional Coordinator for disaster risk management in Africa, World Bank outlined the World Bank's efforts to strengthen regulatory frameworks and promote resilience in infrastructure. She highlighted the Bank's commitment to funding climate-related investments and the development of tools to assess and improve regulatory systems. Anna stressed the importance of capacity building and technical assistance to enhance the resilience of built environments globally.

Jan Mumenthaler, Regional Insurance Lead, Asia, IFC discussed the Building Resilience Index (BRI), a tool designed to help building owners improve resilience and access better financing terms. He emphasized the importance of collaboration with the insurance sector to ensure widespread adoption of resilience measures. Jan highlighted that the BRI provides actionable insights tailored to specific geographic risks and supports climate adaptation across the building value chain.

Panel 2: Enhancing Resilience in Action

Marianne Armstrong, Director Climate Resilient Building Initiative, shared insights on Canada's Climate Resilience Initiative, which develops guidelines and standards to improve the resilience of infrastructure against climate impacts. She highlighted Canada's progress in integrating climate data into building codes to ensure future constructions are prepared for anticipated climate conditions, thereby safeguarding communities.

Imane Gawad, Co-director of the SDG Commission, UIA discussed the UIA's initiatives to promote resilience through design competitions and awards, emphasizing the importance of integrating resilience and sustainability from the early stages of architectural design. She highlighted the success of these initiatives in raising awareness and encouraging innovative solutions among students, young architects, and professionals worldwide.

Eng. Mohammad Najeeb Haroon – Chairman – Pakistan Engineering Council highlighted Pakistan's efforts to enhance resilience and sustainability in its construction sector, including the development of the Green Building Code and rainwater harvesting provisions. He stressed the importance of international financial support to implement these measures effectively, especially in regions that are highly vulnerable to climate change impacts.
Arianna Karamallis, Global Advocacy & Development Associate Build Change highlighted Build Change's retrofit projects, which enhance the resilience of existing homes in disaster-prone areas,

making them safer against extreme weather and seismic events. She emphasized that retrofitting is not only cost-effective but also crucial for improving community resilience, reducing carbon emissions, and ensuring long-term stability for vulnerable populations.

Kazi Amdadul Hoque, Senior Director of Strategic Planning & Head of Climate Action Friendship NGO shared the success of the Coastal Stronghold Project in Bangladesh, which enhances resilience in coastal communities through sustainable building practices and innovative materials like low-emission bricks. He emphasized the importance of community involvement and technology transfer in empowering local populations to build and maintain resilient structures.

Andrew Minson, Director of GCCA discussed the role of concrete in enhancing resilience, citing its inherent properties like durability, non-combustibility, and adaptability to various construction needs. He also highlighted the industry's efforts in decarbonization, demonstrating how concrete can contribute to both mitigation and adaptation strategies in building a more resilient future.

Anna Campos Garcia, Regional Coordinator for disaster risk management in Africa, World Bank outlined the World Bank's financial strategies to support resilience projects globally, focusing on the integration of resilience and climate mitigation elements into all investments. She stressed the need for innovative approaches and partnerships to effectively mobilize resources and ensure the resilience of global communities, especially in developing regions.

Closing Remarks

Stéphane Pouffary concluded the session by emphasizing the need for a unified approach to adaptation and resilience, calling for shared language, tools, and frameworks. He highlighted the importance of multi-stakeholder collaboration and the necessity for clear commitments from all parties to achieve meaningful progress in building resilience against climate change.

4.9.4 High-Level Dialogue: New buildings - March 8. High-Level Dialogue. Theme #2. New buildings

Consultable on: https://youtu.be/8V2lq4pEjAA

With 80% of the growth in building floor area through 2030 set to occur in emerging and developing economies (IEA, 2023), this dialogue explored the role new buildings play in supporting low-carbon and resilient development. The session profiled the context of emerging and developing countries, delved into strategies for achieving zero-emissions, resilient buildings, and how public and private procurement can drive this change. It also discussed the business case for near-zero, resilient buildings, their social benefits, and ways to lower costs using low-tech solutions.

Sarah El Battouti, Global Ambassador UNFCCC High Level Climate Champions, began the session by highlighting its dual focus: the role of governments and police officers in the first part, and the contributions of various partners, including the private sector and activists, in the second part. She emphasized the importance of discussing decarbonization in building design and operation, particularly in the context of developing resilience and achieving zero emissions.

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Panel 1: Government Perspectives

Lothar Fehn Krestas, Deputy Director General – German Ministry of Environment, discussed the country's efforts to combat climate change in the building sector. He outlined the Building Energy Act, which mandates energy efficiency and the use of renewable energy in buildings. The current demands for new buildings in Germany aim to reduce standard energy consumption to 55% of what it was 20 years ago. A minimum of 65% renewable energy is required for heating, hot water, and heating. In 2023, around 50,000 homes were built with high-efficiency standards, with a similar target for 2024. Krestas emphasized the importance of life cycle assessment and performance-based approaches, complemented by financial support through grants to encourage innovation and high standards in construction.

Koala Celestin, Chief of Urban Planning Sector - Cote d'Ivoire addressed the **need to build 150,000 houses in the next five years**, noting the significant impact on climate due to construction. The country is implementing several strategies to mitigate this impact. These include reserving 5% of the territory of housing programs for green space, with plans to increase this to 10-15%. Environmental studies are conducted before construction begins, ensuring that developers adhere to recommendations to reduce environmental impact. Celestin emphasized the importance of building within cities to reduce environmental impact and increase density, as well as the need for government support to make sustainable housing affordable for people.

Ibrahim Abdelkhalek, Assistant Minister for Technical Affairs, Egypt discussed the challenge of meeting the housing demand in Egypt, with a growing population requiring 400,000 new units annually. The government has taken several actions to address this challenge. Passive energy consumption measures, which reduce consumption by 10-20% at no cost, are being implemented. Incentives are provided to the private sector, such as regulatory incentives and public-private partnerships, to encourage the development of green and sustainable buildings. Capacity building is also a key focus, aiming to change the mindset of decision-makers and support the implementation of sustainable practices.

Emmanuel de Lanversin, Deputy Director for Directorate for Housing Urban Development and Landscapes, France, focused on the role of public procurement in accelerating innovation in the construction sector. He emphasized the importance of using experiments to improve rules and standards, such as the RE2020 regulation. These experiments allow for the testing of new materials and methods, leading to continuous improvement and adaptation of rules to ensure sustainability in

construction. An example of this approach is the use of wood construction, which required specific laws to enable experimentation.

Matheus Simoes, Vice Governor of Minas Geras, Brazil discussed Minas Gerais' strategy to reduce emissions in the construction sector. The state is using renewable energy, recycling materials, and collaborating with industry partners to achieve this goal. Simoes highlighted the importance of collective efforts involving government, private sector, and industry associations. For example, Minas Gerais is producing over 50% of all iron from waste and investing in research to substitute clinker in cement production.

Questions and Answers Session

Sarah El Battouti opened the Q&A session, inviting participants to ask questions specifically addressed to the panelists. Someone asked about the experience with localizing the SDGs and strategic actions. Ibrahim Abdelkhalek responded by highlighting the need for a balance between top-down strategies and bottom-up practices, emphasizing successful models that can be scaled up.

Another participant inquired about the time required to generalize an innovation in the construction sector. Matheus Simoes and Lothar Fehn Krestas discussed the importance of accelerating existing initiatives and the need for a step-by-step approach, with emphasis on performance measurement and regulatory support.

Koala Celestin pointed out the economic impacts of changing construction practices to address climate issues, stressing the need for governments to support affordable and sustainable housing solutions. Ommid Saberi shared insights on blending finance and tailored solutions that can be adapted to different contexts, highlighting the importance of capacity building and public-private partnerships.

Panel 2: Private Sector and Partner Contributions

Cédric Demeus, Vice President, Holcim (Holcim), discussed Holcim's commitment to decarbonization, including the use of low-carbon materials, recycling, and innovative construction techniques. He provided key examples such as producing cement with 50% less carbon intensity using calcined clay, launching a 220-unit social housing project in France using 100% recycled concrete, and using a thermal battery in building design to maintain consistent temperatures with zero fossil energy. These initiatives demonstrate the potential for significant environmental and social benefits, with energy costs as low as 5-7 euros per square meter per year.

Guillaume Poitrinal, Founder, W02 emphasized the developer's role in choosing low-carbon options and the importance of accurate carbon footprint calculations for building materials. He discussed the use of wood as a primary building material, the need for regulatory adaptations to accommodate new building materials, and the importance of funding to support innovation in the construction industry.

Carmen Vogt, Head of Section Cities, GIZ – PEEB discussed the business case for near-zero and resilient buildings, highlighting the long-term cost savings and increased efficiency. She provided evidence that an additional investment of 3-7% can achieve energy savings of up to 60% for new buildings and 40% for renovations. Financial and technical assistance is offered to support large-scale public and private projects, and the importance of improving building skills and capacity at all levels was emphasized.
Ommid Saberi, Green Buildings Specialist, IFC (World Bank Group) provided an example from Colombia, illustrating how green certification can benefit homeowners, developers, banks, and governments. In Colombia, **30% of all new buildings are now Edge certified, resulting in significant energy and water savings. T**his model has potential for replication in other countries, offering tailored solutions that benefit low-income families and support sustainable development.

Regina Gontier, President, the International Union of Architects, highlighted the social, ethical, and political responsibilities of architects in promoting sustainable construction practices. She emphasized the need for a holistic approach, incorporating culture, society, and biodiversity. Gontier called for public engagement and awareness to support sustainable and resilient built environments and advocated for quality in policy and investment decisions.

Conclusion

The session concluded with a Q&A segment where participants discussed the importance of localization, the role of innovation, and the challenges of measuring and verifying the carbon footprint of building materials. Panelists emphasized the need for common standards, regulatory support, and collaboration across sectors to achieve sustainable and affordable housing for all.

4.9.5 High-Level Dialogue: Housing.

March 8. High-Level Dialogue

Theme #3. https://youtu.be/9zQj4hwcaIY

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Climate change is highlighting the fundamental role housing plays in providing shelter for people. In recognition of this, the Sharm-El-Sheikh Adaptation Agenda has set the objective of "1 billion people benefiting from better designed construction and improved access to finance in order to live in decent, safe homes.". This session brought together ministries, city leaders and leading non-state

actors to explore the enablers needed to make resilient and low-carbon housing affordable and accessible to all.

Yves-Laurent, French Ministry of Ecological Transition introduced the session, emphasizing the importance of discussing housing within the context of ecological transition. He mentioned that the session would be divided into two panels: the first focusing on questions for governments and the second on solutions provided by various actors. Yves-Laurent welcomed Michal Mlynar, the Acting Executive Director of UN Habitat, to deliver the keynote address.

Michal Mlynar from UN Habitat thanked the organizers for facilitating the forum and highlighted the crucial role housing plays in urban and economic development. He emphasized the impact of housing on people's health, safety, and well-being. Michal Mlynar stressed that quality and sustainable housing are essential for combating climate change and reducing pollution. He pointed out that 2.8 billion people experience housing inadequacy, including insecurity, sub-standard conditions, and energy poverty. He called for innovative and inclusive solutions to meet the diverse and changing needs of the population while ensuring environmental, social, cultural, and economic sustainability. Michal Mlynar mentioned the UNHAB Assembly resolution on adequate housing, supported by many member states, which calls for improved access to sustainable and affordable housing. He invited participants to the first meeting of an intergovernmental working group on housing in Nairobi.

Panel 1: Government Perspectives

Jader Filho, Minister of Cities, Brazil discussed Brazil's "**My Home, My Life" program**, which aims to build over 2 million homes in the next four years. The program focuses on providing housing close to urban centers to improve access to jobs, schools, and healthcare. He emphasized the use of sustainable materials and solar energy to reduce environmental impact and carbon emissions. Filho highlighted efforts to improve existing homes rather than relocating families and mentioned the low-interest rates and subsidies provided to make housing more accessible.

Charles Milupi, Minister of Infrastructure, Housing, and Urban Development, Zambia, highlighted Zambia's housing deficit of around 2 million units, projected to increase to 3 million in 6-8 years. He discussed challenges such as financing, land acquisition, bureaucracy, and material costs. Milupi outlined government initiatives to provide land, reduce material costs, and partner with the private sector to build affordable, climate-resilient housing. He stressed the importance of planning and land management to address informal settlements and ensure the provision of basic services.

Jeffrey Little (USA) shared the U.S. commitment to achieving zero emissions in new constructions and retrofits by 2030. He emphasized the importance of reducing emissions from the housing sector, which accounts for a significant portion of greenhouse gas emissions. Little highlighted federal investments in reducing emissions and energy costs in buildings, including the Green and Resilient Retrofit Program. He mentioned efforts to improve disaster recovery and ensure that investments lead to resilient and energy-efficient housing.

Renaud Dantec, President, Climate Chance Association discussed the Yaoundé Roadmap on sustainable housing in Africa, supported by various African actors. He emphasized the need to strengthen the technical and financial capacities of local authorities and address urban planning and land management challenges. Dantec highlighted the importance of improving informal housing and using climate finance innovatively to support sustainable housing.

Panel 2: Solutions from Various Actors

Audrey Guiral-Naepels from the French Development Agency discussed the role of the French Development Agency (AFD) in supporting housing initiatives. She highlighted the Sustainable Housing Initiative, which provides technical assistance and financial tools to public decision-makers to develop strong national housing policies. Audrey Guiral-Naepels emphasized the importance of preparing projects and creating a framework of trust between public and private sectors.

Sorcha Edwards, Secretary General, Housing Europe emphasized the need for a new housing paradigm that focuses on affordability, sustainability, and security. She discussed the potential of replicating successful housing models from Europe in other regions. Edwards highlighted the importance of an integrated approach to housing and energy transition, maintaining affordability, and reducing emissions.

Mewahib Mohamed, Director of Program and Business Development, Reall highlighted the challenges and opportunities in delivering affordable green housing in emerging markets. She discussed the importance of providing scalable solutions for mass markets and integrating informal economies into housing strategies. Mohamed emphasized the need for innovative financing, government support, and collaboration to catalyse the market and provide affordable, sustainable housing.

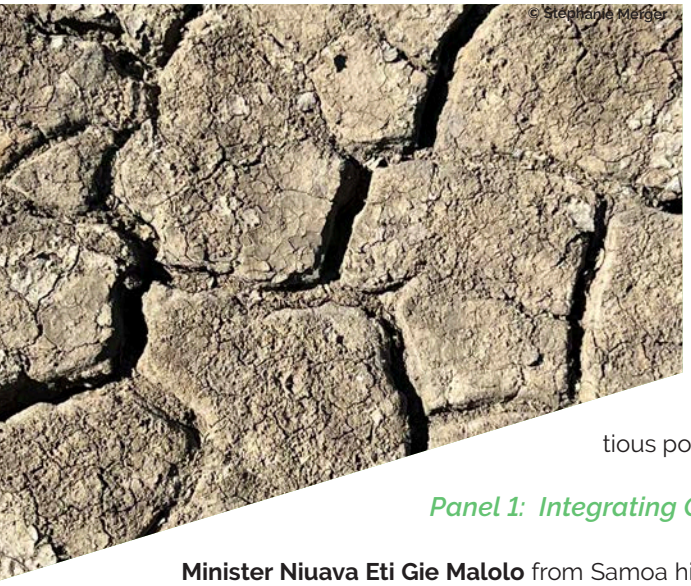
Conclusion

The session concluded with a Q&A segment where participants discussed the importance of financing, planning, and collaboration in addressing housing challenges. The panelists reiterated the need for innovative solutions, strong public policies, and partnerships to ensure sustainable and affordable housing for all.

4.9.6 High-Level Dialogue: Adaptation Resilience

March 8. High-Level Dialogue. Theme #5. https://youtu.be/TxdgvGePLcc

This high-level dialogue brought together ministers, city-leaders and non-state actors to explore key strategies for integrating adaptation and resilience into the design and planning of urban environments. The dialogue explored the integration of climate change's physical risks into urban planning and investment decision making.



Opening Remarks

Greg Munro from Cities Alliance welcomed participants to the High-Level Dialogue on Resilience Partnerships and Just Transition Investments. He emphasised the necessity of integrating climate change risks into urban planning, particularly for vulnerable and marginalised populations in informal settlements. Greg stressed the importance of gender inclusion in infrastructure and financing decisions and outlined the session's focus on building resilient cities through ambitious policies and investments.

Panel 1: Integrating Climate Change into Urban Planning

Minister Niuava Eti Gie Malolo from Samoa highlighted Samoa's proactive approach to integrating climate change risks into urban planning through legislative reforms, city spatial plans, and national urban policies. He discussed Samoa's efforts in developing resilient infrastructure and sustainable building practices, emphasising international collaborations and regional partnerships to enhance climate resilience.

Marianne Armstrong from the National Research Council, Canada shared Canada's comprehensive national adaptation strategy, which includes climate resilience in federal infrastructure funding programs, professional capacity building, and robust rules and standards for key public infrastructure systems. She highlighted the importance of long-term planning and community engagement in developing climate-resilient infrastructure.

Serhii KORENIEV from Ukraine, Deputy Mayor of Mykolaiv, discussed the city's efforts to rebuild with resilience amidst ongoing war. He emphasised the importance of climate risk assessments, integration of climate projections, nature-based solutions, energy efficiency improvements, and community participation in developing a new masterplan for Mykolaiv.

Obaidul Muktadir Chowdhury, Minister of Agriculture and Environment, Bangladesh outlined the country's climate adaptation strategies, including the development of climate-resilient housing and urban planning. He highlighted the need for financial support and international cooperation to implement these plans effectively.

Panel 2: Scaling Up Action on Adaptation and Resilience

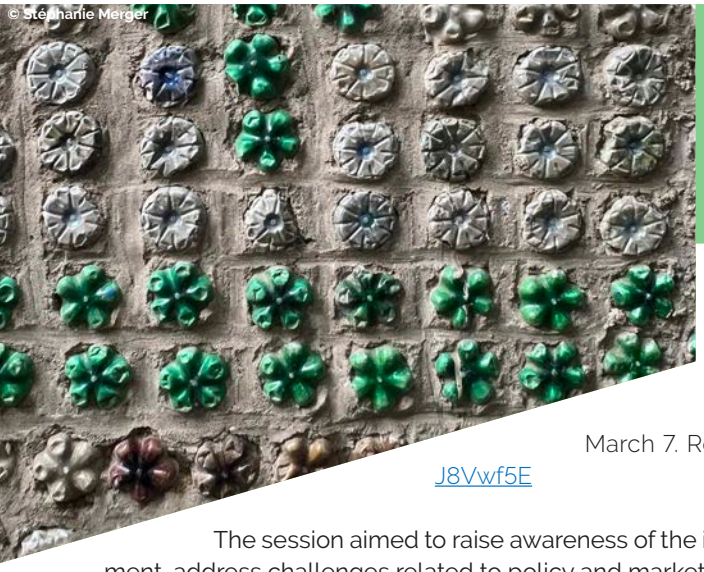
Linda van Gelder from the World Bank discussed the World Bank's commitment to increasing annual climate financing and emphasised the role of cities in building resilient and sustainable infrastructure. She highlighted the importance of partnerships and policy frameworks to support climate-resilient urban development, particularly in vulnerable regions.

Hugh Garnett from the Institutional Investors Group on Climate Change (IIGCC) addressed the need for private finance in adaptation and resilience investments. He identified barriers such as inadequate project pipelines, risks in emerging markets, and the need for better data integration. Hugh called for policy frameworks to support private finance and highlighted successful examples of private-public partnerships.

Karim Selouane, outlined the 10 principles for effective climate adaptation in the construction sector, emphasising urgency, systemic integration, data access, and financial mechanisms. He stressed the importance of partnerships across the value chain and innovative insurance mechanisms to support climate resilience.

Closing Remarks

The session concluded with a call to action for deeper partnerships and collaboration across all sectors to achieve climate resilience. Participants were encouraged to translate discussions into practical actions and continue building momentum for sustainable urban development.



4.10 Theme 10: Circular economy, Materials and products for sustainable construction

4.10.1. Circular economy in the built environment. A solution to the triple planetary crisis

March 7. Round #1 Track #5. https://youtu.be/ewgg-J8Vwf5E

The session aimed to raise awareness of the importance of circularity in the built environment, address challenges related to policy and market development and showcase scalable solutions to these challenges. The session introduced three key actions for the Buildings Breakthrough; tools and approaches to support governments and other stakeholders to take steps towards circularity.

Alessia Santoro from the World Business Council for Sustainable Development (WBCSD) served as the session moderator. She welcomed participants, introduced the objectives of the session, and emphasized the importance of exploring circularity in the built environment as a solution to global crises. Santoro guided the session, ensuring a seamless flow of discussions and presentations.

Opening Remarks

Robert Dijksterhuis from the Netherlands opened the session by highlighting the significant impact of the built environment on greenhouse gas emissions, energy use, and waste production. He stressed the urgency of shifting from a linear to a circular economy and presented key figures to illustrate the environmental challenges. Robert Dijksterhuis outlined three principles of circularity: reducing waste, keeping materials in use, and regenerating ecosystems, providing practical examples such as the Triodos Bank in Zeist and the Eiffel Tower.

Presentations on Circular Solutions for Buildings and Construction Sector

Usha Iyer-Raniga from RMIT University elaborated on the work of the Materials Hub – Circular Built Environment working group under the GlobalABC, the One Planet Network and the Life Cycle Initiative. She discussed the working group's efforts since 2017 in developing reports and case studies on circularity. Usha Iyer-Raniga emphasized the importance of raising awareness, building capacity, and transforming market practices. She called for a shift in thinking from waste to resources, highlighting the need for a comprehensive approach that includes water and renewable energy considerations.

Harri Hakaste from the Ministry of Environment in Finland presented three key recommendations for circularity in buildings. He stressed the importance of keeping existing buildings in use, promoting material circularity, and designing for longevity. Hakaste highlighted the significance of retrofitting existing structures and using high-quality recycled materials in new constructions. He emphasized the need for policy tools, market tools, and data transparency to achieve these goals.

Panel Discussion on Scalable Circular Solutions in the Built Environment - Priorities and Solutions

Moderated by **Mona Abdulghani Naji Mohamed from UNEP**, the panel discussion explored scalable circular solutions. Participants discussed the importance of translating high-level recommendations into national action plans and the need for effective partnerships.

Dr. Carolina Montano-Owen, the Resource and Circularity Lead at WorldGBC, provided a global overview of the circular economy in the built environment. She explained the different drivers and approaches in various regions, emphasizing the need for localized solutions and effective partnerships. Carolina Montano-Owen highlighted the role of the circular economy in managing climate change and stressed the importance of creating specific action plans tailored to regional needs.

Ryan Roberts, Head of Sustainable Construction and Circular Economy at Holcim, shared insights on a pioneering project in France that utilized 100% recycled concrete. He described the technical challenges and successes of the project, emphasizing the importance of collaboration across the value chain. Roberts highlighted the potential for scaling such projects globally and stressed the need for policy changes to support circular construction practices.

Carlos Cordero Vega, Director of the Planning Secretariat for the Environment and Energy Sector, Government of Costa Rica, outlined Costa Rica's public policy efforts toward the circular economy and sustainable construction. He discussed the development of a national circular economy strategy and the importance of intersectoral collaboration. Cordero Vega emphasized the need for metrics, monitoring, and political commitment to transform policies into actionable laws.

Questions and Answers

During the Q&A session, audience members raised questions about the cost of circular construction, water usage, and the metrics for measuring circularity. Ryan Roberts addressed the cost considerations of using 100% recycled materials in social housing projects, emphasizing the potential for cost efficiency at scale. Dr. Carolina Montano-Owen highlighted the need for clear indicators to measure circularity and stressed the importance of tracking water usage in the built environment. Carlos Cordero Vega discussed the necessity of integrating water management into public policy and urban planning to support circular practices.

Closing Remarks

Steven Crosskey from UNOPS delivered the ***Closing Remarks***, emphasizing the importance of measurement and accountability in achieving circular economy goals. He discussed the development of assessment frameworks to support national governments in implementing circular practices. Crosskey highlighted examples of successful circularity initiatives and called for increased collaboration and action to address the global environmental crisis.

4.10.2. Decarbonizing building materials: cement, steel, bricks, glazing, insulatio

March 7. Round #2. Track #5. https://youtu.be/xVwN2aF9Eqc

This session's purpose was to inform participants of the existing efforts and commitments to decarbonization, share insights of example of solutions needed (e.g. electricity and hydrogen) and raise awareness of the importance of the demand for materials manufactured with a low carbon footprint, taking a materials-neutral approach focused on the final carbon performance in buildings.

Keynote Speech

Alice Wahome, Minister of Public Works and Housing, discussed Kenya's efforts to decarbonize building materials amidst rapid urbanization. Kenya **aims to build 200,000 housing units per year to address a deficit of 2 million units.** Wahome highlighted the importance of partnerships and investment in green solutions, focusing on the creation of jobs and skills for women and youth. Kenya's roadmap to 2030 includes commitments **to low-carbon development and green growth opportunities.**

Stage Presentation

Chris Carroll, Director,at ARUP, summarized the levers to reduce the emissions of the sector as a whole, not only focusing on materials but also on design efficiency (22% of concrete emission reduction will be made by using less material in the GCCA roadmap), diversification and recycling. There is a need for hybridizing materials and improving building codes, as well as improving existing methods and materials.

Panel 1: Discussion on Supply

Karen Scrivener, professor at EPFL, emphasized the dominance of concrete in global material consumption and its significant CO2 emissions. Scrivener discussed the LC3 technology, an open-source solution suitable for regions like Africa, which could reduce reliance on imported cement. She highlighted the importance of partnerships and local technical resource centers to support sustainable construction.

Clare Broadbent outlined the challenges and opportunities in decarbonizing the steel industry. Steel production emits about 2 tons of CO2 per ton of steel, with over 50% used in construction.

Claire Broadbent emphasized the need for real development technologies, increased recycling, and the adoption of low-carbon electricity and hydrogen to reduce emissions. The industry faces a significant investment requirement, estimated between 3 and 5 trillion dollars, to achieve decarbonization.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Eunice Heath, from the concrete supplier CRH, discussed the concrete industry's global decarbonization strategy, with 40 producers representing 80% of global production committed to net zero by 2050. Key decarbonization levers include product formulation, advanced production, fuel use, and innovative technologies. Heath highlighted the importance of collaboration across the value chain to bring solutions to market.

Pascal Eveillard, from Saint Gobain, a global supplier of glass and mineral insulation, said that these materials are key enablers as they largely define the energy consumption of buildings. Even though there is no global roadmap for these industries, producers identified levers to make the products less polluting: e.g. lighter products, increased efficiency in production, the use of recycled materials and alternative fuels (hydrogen, biogas).

Panel 2: Demand on green products and the possible actions for public actors

Jessica Skilbeck, Department for Energy Security and Net Zero, UK representing the UK, discussed the UK government's role in managing demand for low-carbon building materials through the Industrial Decarbonization Initiative (IDDI). The UK is committed to creating demand for low-carbon products, with plans to require carbon disclosures and life-cycle assessments for public construction projects.

Andrew Forth, from the Climate Group, tackled the issue of collaboration between actors. There is a crucial lack of accessible data, both for the companies and the public sector. Public actors have to step up their regulations (as France and Scotland have done by introducing emission limits/m^2) and companies have to change their way of doing business. Globally, he insisted on the need for strong signals.

Rob Van Riet, World Economic Forum, discussed the First Movers Coalition, which commits companies to purchasing low-emission materials by 2030. Van Riet emphasized the importance of credible commitments, collaboration across the value chain, and innovation in procurement to support the development of decarbonization technologies.

Closing Remarks

Dean Haslip, Energy Efficiency, Natural Resources Canada, summarized the session, highlighting the importance of using low-carbon materials, technical innovations, and public-private initiatives to improve carbon performance in buildings. Haslip stressed the need for international collaboration, good data, supportive policies, and the development of new technologies. He reiterated Canada's commitment to international agreements and initiatives to accelerate the transition to near-zero emissions and resilient buildings. The session concluded with a call to continue collaborative efforts and engage in further discussions on decarbonizing building materials.

4.10.3. Accelerating the use of wood materials to decarbonize buildings

March 7. Round #3. Track#5. https://youtu.be/_1FrsaNXOvw

Mainstreaming the use of low-carbon materials to radically reduce the embodied carbon of buildings is an urgent priority. Wood and bio-based materials provide an important part of the solution for three reasons: carbon is sequestered as they grow; they can be substituted for more carbon intensive materials, and they can store carbon for long periods of time. Bio-based materials used in construction provide a proven, highly cost-effective, natural carbon capture and storage technology.

Paul King from Built by Nature welcomed attendees to the session on accelerating the use of wood and biobased materials for decarbonized buildings. He emphasized the urgent need to rethink building materials and practices to achieve sustainability goals. Paul highlighted the critical role of wood and biobased materials in capturing and storing carbon and their potential to transform the construction industry. He set the stage for discussions on integrating these materials into mainstream building practices while addressing environmental, social, and economic outcomes.

Opening Remarks

Mae-ling Lokko from Yale University discussed the importance of renewable materials in achieving a low-carbon future. She highlighted the triple capacity of materials like wood and biomass to sequester carbon, become carbon storage in buildings, and integrate into a global materials value chain. Mae-ling stressed the need for circular practices, quality building opportunities, and the integration of renewable materials with conventional building materials to achieve decarbonization goals. She also emphasized the role of partnerships, policy support, and capacity-building in promoting sustainable building practices.

Panel 1: Role of Timber and Biobased Construction Materials

Nadia Boschi from Lendlease Europe shared Lendlease's ambitious goal of achieving absolute zero carbon emissions. She discussed their journey towards electrification, collaboration with the supply chain, and the promotion of low-carbon and biobased materials. Nadia highlighted initiatives like ConcreteZero and ResponsibleSteel, as well as the Milan Innovation Institute project, which focuses on using wood in construction to decarbonize the industry. She emphasized the need for systemic change, improved workforce skills, and new perspectives on risk assessment and material costs.

Annika Landreneau from HOK explained HOK's efforts to reduce carbon emissions and promote the use of biobased materials in their global design portfolio. She emphasized the importance of influencing market practices, changing codes and standards, and advocating for hybrid solutions to accelerate the adoption of sustainable materials. Annika highlighted successful projects like Sea-Tac Airport, where biobased materials improved energy efficiency and reduced costs. She called for clear policy signals, market transformation, and public demonstration projects to scale up the use of these materials.

On Nakagawa from Sumitomo Forestry Group Europe discussed the benefits of using wood in construction to reduce greenhouse gas emissions and store carbon. He explained Sumitomo's long-standing commitment to sustainable forest management and the concept of the wood cycle, where trees absorb carbon dioxide and store it in wood products. On Nakagawa emphasized the need for cyclical forest management to ensure long-term carbon storage and the importance of promoting low-carbon buildings to support sustainable forests and communities.

Panel 2: Government Roles in Promoting Timber and Biobased Materials

Antoine Caron from the French Ministry of Energy and the Environment outlined France's ambitious climate goals and the role of the construction sector in achieving them. He introduced the 2020 Environmental Regulation, which sets performance targets for energy efficiency, summer comfort, and decarbonization. Antoine highlighted public policies, innovation funds, and government certification programs supporting the use of wood and biobased materials in construction. He also emphasized the role of public procurement in promoting sustainable building practices.

Simone Mangli from Carbon Neutral Cities Alliance (CNCA) discussed the CNCA's efforts to help cities achieve carbon neutrality. She highlighted the development of a policy framework with over 50 policy levers to reduce carbon emissions in the built environment. Simone emphasized the need for capacity building, awareness, and technical assistance to promote biobased materials in cities. She introduced the city manual for carbon neutral buildings, which provides information and policy recommendations for cities to adopt sustainable building practices.


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Kimberley Dowdell from the American Institute of Architects emphasized the critical role of architects in promoting climate action and sustai-

nable building practices. She discussed the AIA's initiatives to encourage the use of biobased materials and the importance of translating technical information into actionable policies. Kimberley highlighted the need for clear policy signals, market transformation, and public demonstration projects to accelerate the adoption of sustainable building practices. She also provided resources for architects to advocate for sustainable design and construction.

Panel 3: Holistic Approaches to Biobased Materials and Forests

Ewald Rametsteiner from Forestry Division, Food and Agriculture Organization (FAO) highlighted the potential of using trees for construction to achieve a win-win for forests and cities. He emphasized the need for sustainable forest management, reducing deforestation, and promoting efficient use of forest products. Ewald discussed the importance of balancing forest protection with sustainable use, the role of data sharing, and the need for incentives and financial support to drive innovation in sustainable building practices.

Lisa King from WWF discussed WWF's support for the sustainable use of wood in construction, emphasizing the need for responsible sourcing and sustainable forest management. She highlighted the importance of avoiding unsustainable practices and ensuring that wood use contributes to forest conservation and climate goals. Lisa emphasized the need for tracking and monitoring wood use and addressing global boundaries to ensure sustainable supply chains.

Jaime Sotela from Forest Chamber of Costa Rica shared Costa Rica's successful approach to stopping deforestation through legal changes, public-private partnerships, and community investments. He highlighted the importance of sustainable forest management, Payment for Environmental Services, and community involvement in achieving socio-economic and environmental goals. Jaime emphasized the need for new industrial perspectives and regulatory changes to promote sustainable construction practices.

Frédéric Vallier from International Hemp Organization discussed the potential of hemp as a sustainable building material. He highlighted hemp's rapid growth, carbon storage capacity, and diverse applications. Frédéric emphasized the need to remove legislative barriers, support the supply chain, and invest in hemp processing. He called for international cooperation and research programs to promote hemp's use in affordable housing and sustainable construction.

Closing Remarks

Paul King summarized the key points discussed during the session, emphasizing the importance of collaboration, innovative policies, and sustainable practices in decarbonizing buildings and promoting biobased materials. He highlighted the need for a comprehensive approach that includes decarbonizing traditional materials, fostering public-private partnerships, and ensuring community engagement. Paul invited further discussion and collaboration to achieve sustainable, resilient, and inclusive housing for all, emphasizing the goal of driving the right results for climate, forests, and local communities. He concluded by encouraging attendees to join the ongoing conversation and contribute to developing principles to ensure sustainable demand for biobased materials.


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4.11 Theme 11: International cooperation and partnerships

March 7. Union for the Mediterranean

4.11.1. Union for the Mediterranean

The Union for the Mediterranean (UfM) is an intergovernmental organization that brings together 43 countries to strengthen regional cooperation and dialogue with an emphasis on young people and women through specific projects and initiatives that address inclusive and sustainable development, stability and integration in the Euro-Mediterranean area. As a direct continuation of the Barcelona Process, the launch of the UfM in 2008 was the reflection of its member states shared political commitment to enhance the Euro-Mediterranean Partnership.

Some quotes from the participants

- "The whole network represents more than 140 experts distributed across all the beneficiary countries that you can see on the slide. Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia, all of them working together for two main objectives: to deploy as many measures of renewable energy and energy efficiency as possible in the building sector and to raise public awareness at different levels, including national and regional." Agathe Lacombe, meetMED II Project Manager, ADEME
- "We wanted to provide a small example of how we've been implementing this program for energy-efficient buildings in the Mediterranean region. It's a program that has a particular significance for us. This has been implemented for one year now with US support. We facilitate investment and we work in close coordination using the method we previously outlined in Palestine on a project that we're currently supporting. The objective of the program is to shift globally from a focus on the investment cost of a project to a global overall view on the building's lifecycle. We also aim to assess all the projects that are implemented in the Mediterranean region and provide technical support to enhance the design of these building projects." Juliette Jestin, Program Officer, French Development Agency
- "Jordan has developed or implemented many of those initiatives and they are being carried out along two paths. The first path is DMPs (Data Management Plans) within the building sector and the other is within the energy and renewable energy sector. The building sector is led by the Ministry of Public Works and Housing and the Jordan Green Building Council, while energy and renewable energy strategies are being implemented by the Minister of Energy

and Mineral Resources and the Energy and Mineral Regulatory Commission." The Royal Scientific Society, Jordan

Other remarks from participants

A debate was held aiming to share individual countries' experiences regarding decarbonization in the building sector. The discussion centered on the role of building codes in addressing both energy efficiency and cooling demands.

Egypt experience: the Egypt experience in implementing building codes has encountered a number of challenges, despite having prepared the necessary regulations several years ago. The focus now lies on how to effectively apply these codes across various sectors, be it private, public, or individual. Given that over 70% of buildings are constructed by the private sector and individuals, compared to only 14% by the public sector, financing becomes a critical issue, especially considering the higher costs associated with new regulations. While the percentage of affected area may seem insignificant, housing is a social responsibility, necessitating solutions that balance environmental concerns with social commitments. The primary challenge lies in incentivizing individuals and the private sector to adopt the codes. This could involve offering incentives such as increased built-up area or surface percentages, creating a mutually beneficial scenario. Identifying stakeholders, including private entities, public institutions, and individuals, is important for effective implementation. Providing financial support, particularly in the initial stages, is vital as new industries typically face higher costs. However, with time, these costs are expected to align with traditional standards, emphasizing the importance of ongoing financial backing.

Moroccan experience: in Morocco, the adoption of building codes in 2017 marked a significant step forward, with thermal simulation now a prerequisite for construction permits. However, challenges arise in verifying whether the actual insulation matches the simulation, posing an initial hurdle. Moreover, while the focus was initially on new constructions, attention is shifting towards renovating existing buildings to ensure thermal comfort, crucial given the country's diverse climates and the impact of climate change, exemplified by extreme temperatures such as the 50.4 degrees recorded in the city of Agadir. Financial constraints compound the issue, particularly for renovations, which are costly. Encouraging individuals and the private sector to invest in insulation faces resistance due to increased costs, leading to concerns about affordability and exacerbating the gap between different types of buildings. Collaborative efforts are needed to address these challenges and find viable solutions that benefit all stakeholders.

Saudi Arabia experience (from Saudi Green Building Council): Community-based organizations (CSOs) can play a significant role in this process. While many government member states are focused on policy implementation, navigating the complexities of decarbonizing industries, there's a need to engage with communities directly. Some buildings have already made significant strides in decarbonization, with high index ratings, yet governments may not be aware of these achievements. for instance, in Saudi Arabia and across the Arab world, thousands of buildings or projects have received certifications, with about 30% of these in Saudi Arabia alone. Despite these accomplishments, many member states remain unaware of them, highlighting the need for better communication and collaboration between investors and government entities.

4.11.2. Partnership and Value Chain - March 8. Parallel session bringing together Ministers and high-level representatives from business, international organizations and NGOs.

Theme #3. https://youtu.be/nmtf9jPRWc4

Opening Remarks

Diane Holdorf, Executive Vice President of the Global Business Council for Sustainable Development, welcomed participants to the high-level dialogue session on partnerships and the value chain in decarbonisation. She emphasised the importance of public and private collaboration in transforming the environment through decarbonisation and restructuring. Diane set the stage for the discussion by highlighting the significance of working together to achieve sustainable development goals.

Keynote Speech

Simona Szent-Vilis, Minister for the Environment of Spain, provided insights into the role of public-private partnerships in environmental policies. She discussed Spain's efforts in implementing new building standards, energy performance guidelines, and climate policies. Simona highlighted the European Union's impact on Spain's environmental decisions and the importance of international collaboration to enhance material standards and procurement practices.

Panel 1: Public and Private Collaboration in Decarbonisation

Philippe Pelletier, President of Plan Bâtiment Rabelais, discussed France's sustainable building plan initiated in 2009. He emphasised the importance of collective mobilisation and collaboration across the entire real estate value chain. Philippe highlighted the development of commitment charters and regional sustainable building plans to address specific territorial needs and promote energy-efficient buildings.

Jorge Laguna Celis, Director of the 10YFP and One Planet Network at UNEP, shared experiences from global multi-stakeholder partnerships in sustainable public procurement. He highlighted the importance of good procurement practices, community involvement, and life cycle perspectives in advancing the decarbonisation agenda. Jorge emphasised the need for market engagement and collaboration to achieve sustainable development goals.

Rasha Abou, Deputy Mayor of Egypt discussed the Green City Action Plan (GCAP) implemented in the city of October 6. He highlighted initiatives such as improving waste management, expanding water management, implementing a rapid transit system, and installing solar panels. Rasha emphasised the importance of engaging partners, including the private sector and local communities, to ensure the sustainability of projects.
Lena Hok, EVP of Sustainability & Innovation at Skanska, discussed the Market Transformation Action Agenda. She emphasised the importance of early involvement in project planning and the role of public procurement in setting clear requirements for sustainable outcomes. Lena highlighted the need for innovation, technological solutions, and collaboration across the value chain to drive market transformation.

Sunita Purushottam, Head of Sustainability at Mahindra Life Space Developers Limited, discussed the Decarbonization Business Charter in India. She highlighted the collaborative approach involving various stakeholders, including architectural firms, material manufacturers, and facility management companies. Sunita emphasised the importance of voluntary action, capacity building, and data-driven decision-making to achieve climate goals.

Panel 2: Business Models and Innovations for Decarbonisation

Julie Kjestrup, President of Policy and Thought Leadership at Vélix, discussed the company's efforts in reducing Scope 3 emissions and the importance of collaboration across the organisation. She highlighted the Living Places project, which showcases the potential of building low-carbon homes with off-the-shelf materials. Julie emphasised the need for data-driven decisions and partnerships to achieve sustainability goals.

Maria Teresa Verdu Martinez from Spain discussed Spain's comprehensive approach to building decarbonisation, focusing on cities and urban areas. She highlighted the Spanish Urban Agenda, the High-Quality Architecture Law, and programs for renovating public buildings. Maria emphasised the importance of a holistic approach, including energy efficiency, accessibility, and circular economy principles.

Andrew Friendly, Vice President of Government Affairs and Public Policy at Autodesk, discussed the role of data and technology in enabling sustainable construction. He highlighted the importance of Building Information Models (BIM) in making informed decisions throughout a building's lifecycle. Andrew emphasised the need for public policy support and collaboration with technology partners to achieve sustainability goals.

Rana Ghoneim, Head of the Decarbonization and Sustainable Energy Division at UNIDO, discussed the importance of data transparency and consistent methodologies in decarbonising construction materials. She highlighted the role of public procurement in creating market demand for low-carbon materials and the need for technical assistance to support SMEs in developing countries.

Lois Moulas discussed the role of the Sustainable Buildings Observatory in accelerating the ecological transition in the real estate industry. He highlighted the importance of independent organisations in collecting and analysing data, developing benchmarks, and informing policy decisions. Louis emphasised the need for tools and platforms to support actors in addressing climate change and promoting sustainability.

Closing Remarks

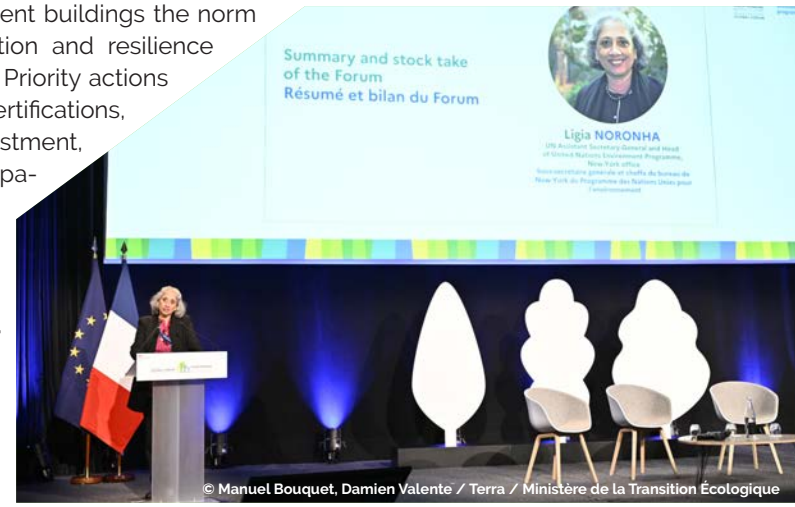
Diane Holdorf concluded the session by summarising the key points discussed, emphasising the importance of partnerships, data, and innovation in driving sustainable development. She highlighted the need for regulatory mechanisms, voluntary actions, and collaborative efforts to achieve decarbonisation and resilience in the built environment. The session ended with a call to action for continued collaboration and implementation of sustainable practices.

4.11.3. International Cooperation – Buildings Breakthrough

March 8. Parallel session bringing together Ministers and high-level representatives from business, international organizations and NGOs. Theme #5. https://youtu.be/GlTI4qPzg0U

Following the successful launch of the Buildings Breakthrough at COP28, this high-level dialogue showcased the critical role 'international collaboration' plays in unlocking the transition to near- zero and resilient buildings. The session brought together ministers and non-state actors and spotlight the emerging plans for the sector's priority actions.

Ligia Nerona, UN Assistant Secretary and Head of the UNEP Office in New York welcomed attendees to the high-level dialogue on building resilience and achieving sub-zero emissions in the building sector. She stressed the sector's significant environmental impact, contributing 40% of CO2 emissions, using 50% of extracted materials, and generating a third of the world's waste. She highlighted the need for a coordinated response by national governments and introduced the Buildings Breakthrough initiative, co-led by France, the UK, and Morocco. This initiative aims to make sub-zero emissions and resilient buildings the norm by 2030, supporting decarbonization and resilience through international collaboration. Priority actions launched include standards and certifications, demand creation, finance and investment, research and development, and capacity and skills.



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Keynote Speech

Minister Lord Callinan, Ministry for Energy, Efficiency and Finance, Department of Energy and Security, and NetZero, United Kingdom expressed gratitude to the organizers and highlighted the UK's leadership

in sectors including buildings. He emphasized the need for international standards, proactive government policies, and collective action across the value chain to achieve decarbonization goals. He confirmed the UK's support for the priority actions and mentioned the Green Public Procurement Agreement signed at COP28, which aims to reduce emissions in public buildings and infrastructure.

Panel 1: Standards and Certifications

Ms. Buna Aslan from the Turkish Ministry of Environment, Urbanization and Climate Change discussed Turkey's efforts to improve energy efficiency in public buildings, increase energy savings targets, and promote environmentally friendly practices. She emphasized the importance of harmonizing national regulations with EU standards and expanding the use of heating systems to save energy.

Christina Gamboa from the World Green Building Council emphasized the need for transparency, clarity, and trust in standards and certifications. She discussed the importance of comparable performance data across different regions and shared examples of international partnerships to promote sustainable finance and building standards. She highlighted the role of green building councils in supporting government efforts to enhance building performance and sustainability.

Panel 2: Demand Creation

Mr. Jeffrey Little, Secretary General of Housing Assistance, Urban Development Unit, US, outlined the US government's strategies to achieve net-zero emissions in federal buildings, including prioritizing energy efficiency and promoting low-carbon building materials through the Buy Clean initiative. He emphasized the impact of federal procurement policies in driving market demand for sustainable products and services.

Ms. Nancy Gillis, Global Affairs Council for Sustainable Development, discussed the role of procurement in creating demand for sustainable building solutions. She highlighted the need for consistent and transparent approaches to carbon accounting and the importance of sustainable public procurement. She introduced the Market Transformation Action Agenda, which outlines steps to align behind lifecycle carbon, integrate carbon cost and price, and transform demand through sustainable procurement practices.

Panel 3: Finance and Investment

Charles Maloupi, Minister of Infrastructure, Housing and Urban Development, Zambia spoke about the severe impact of climate change on Zambia and the need for international cooperation to finance resilient and green housing projects. He highlighted the importance of public-private partnerships and global collaboration to address emissions and support climate resilience. He called for collective action to mitigate climate impacts and emphasized the necessity of inclusive approaches to financing and policymaking.

Manelle Alt-Sahalia from the French Development Agency (AFD) presented the Partnership for Energy Efficiency in Buildings (PEEB), which provides financial and technical support for energy-efficient building projects. She emphasized the need for collaboration among development banks and partners to support policy frameworks and innovative financial solutions for sustainable buildings. She shared examples of successful partnerships and highlighted the importance of creating a space for sharing experiences and lessons learned.

Panel 4: Research and Development

Ms. Nalia Noor from Bangladesh, representing Minister Chowdhury discussed Bangladesh's vulnerability to climate change and the government's efforts to build resilient cities. She emphasized the need for international cooperation, research, and skills development to implement innovative construction materials and techniques. She highlighted the importance of integrating traditional knowledge and modern innovations to achieve sustainable building practices.

Myriam Schwartz from Solar Impulse Foundation highlighted the foundation's work in identifying and promoting solutions for sustainable construction. She emphasized the importance of visibility for innovators and shared practical examples of solutions that can reduce environmental impact in cities. She stressed the need for governments to support innovation through visibility, funding, and legislative measures.

Panel 5: Capacity and Skills

Dr. Ibrahim Abdel-Khalek, Assistant Minister of Technical Affairs, Egypt discussed the importance of capacity building for both public and private sectors, including policymakers, local authorities, developers, and industry. He shared Egypt's experience with green social housing initiatives and emphasized the need for public-private partnerships and knowledge transfer. He outlined steps to improve awareness, involve stakeholders, and enhance technical skills through training programs and centers of excellence.

Mr. Stuart Tom, President of the International Assembly underscored the importance of developing and implementing clear international standards and building codes to achieve sustainability goals. He highlighted the role of capacity building in ensuring effective enforcement and compliance with these standards. He introduced the Sustainable and Resilient Buildings initiative, designed to support jurisdictions in adopting and enforcing building regulations holistically.

Closing Remarks

Regis Meyer, French Ministry of the Ecological Transition, representing Emmanuel de Lanversin summarized the discussions and emphasized the importance of international cooperation in achieving decarbonization goals. He described the collaborative framework for international partnerships and assistance to developing countries, coordinated under the GlobalABC initiative. He highlighted the need for focused and sustained efforts on priority actions and the importance of allocating resources effectively to achieve these goals. He concluded with a call for collective action to ensure a low-carbon future.

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5. Conclusions and perspectives

Build Our Future: From Paris to Belém

Closing plenary. March 8.
https://youtu.be/SivizGQTyJU

This high-level closing plenary reflected on the achievements of the first Buildings and Climate Global Forum and paves the way for the sector's ongoing transition in the run-up to COP30 in Belem, Brazil.

Debrief by Ligia Noronha

Ligia Noronha highlighted key messages from the forum, emphasising the urgent need to achieve climate goals. She noted that the world is far from meeting its climate targets, citing the 2023 Global Status Report on Buildings and Construction. Ligia stressed the importance of implementing technical solutions, enhancing energy efficiency, and promoting sustainable practices in the construction sector. She introduced the Breakthrough Actions for Buildings initiative, which aims to support the proliferation of sustainable technologies. Ligia concluded by expressing appreciation to the Government of France and all participants for their contributions.

Keynote Speech

Fatih Birol, Director General of the International Energy Agency (IEA), emphasized the critical role of energy efficiency in addressing global energy needs. He pointed out the significant energy consumption in buildings and the necessity of implementing efficiency standards. Fatih praised the forum for its focus on practical solutions and called for enhanced coordination among various government ministries to promote energy efficiency policies. He highlighted the need for financial support to help developing countries transition to sustainable energy.

Panel: Financing and Implementation of Sustainable Building Initiatives

Bertrand Walckenaer, Deputy CEO of the French Development Agency (AFD), discussed the role of development banks in financing sustainable building projects. He emphasised the importance of public-private partnerships and the need for innovative financial instruments to support large-scale implementation. Bertrand highlighted AFD's commitment to energy efficiency programmes and the importance of setting ambitious standards to guide industrial and private sector investments.

Michal Mlynar, Director General of UN Habitat, reiterated the urgency of addressing the global housing crisis and its impact on sustainable development. He emphasized the importance of inclusive and environmentally sustainable housing solutions. Michal called for collaborative efforts across sectors to implement effective strategies and highlighted the role of the Chaillot Declaration in guiding sustainable urban development. He invited participants to the World Urbanism Forum in Cairo and the upcoming COP30 in Belém, Brazil.

Closing Remarks

Minister Jader Barbahlo Filho, Minister of Cities, Brazil expressed gratitude for the opportunity to participate in the forum. He outlined Brazil's commitment to sustainable urban development, highlighting the return of investments in infrastructure and social housing under President Lula's government. Minister Filho discussed Brazil's initiatives in clean energy, climate adaptation, and reducing deforestation. He emphasised the need for international cooperation and financial support to achieve climate goals. The minister extended an invitation to COP30 in Belém, underscoring Brazil's dedication to social and climate justice.

Final Comments by Christophe Béchu, French Minister for Ecological Transition and Territorial Cohesion, delivered a personal message, thanking all participants for their dedication. He highlighted the achievements of the forum, including the signing of the Chaillot Declaration by 70 states, and the commitment to creating an intergovernmental council on building and climate. Christophe emphasized the importance of operationalizing diplomatic commitments and the need for continuous collaboration to achieve tangible solutions. He concluded by encouraging participants to enjoy their weekend and expressing optimism for future initiatives.

Conclusion

The "Build Our Future: From Paris to Belém" forum concluded with a call to action for continued collaboration and innovative solutions in the building and construction sector. Participants were encouraged to maintain momentum and work towards achieving the ambitious goals set during the event.

ANNEX: Déclaration de Chaillot (Chaillot Declaration):
https://www.ecologie.gouv.fr/sites/default/files/declaration-de-chaillot-forum-batiments-climat.pdf

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