

EMIRATESGBC REFLECTIONS ON COP28 UAE

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The built environment has not always been at the forefront of international climate dialogues. The perspective on the built environment has been on a journey in the last three decades, as the built environment emerged as a contributor to the issue of climate change, but also one of its solutions [1]. The built environment is responsible for about **37** percent of energy use, **39** percent of CO2 emissions, and **40** percent of material use globally [2]. At the same time, a sustainable built environment, one that protects and enhances people, places, and the natural environment, and is critical to reducing greenhouse gas emissions and tackling the climate crisis, can have several advantages. The concrete advantages of consistently implementing sustainable methods and materials in the constructed environment would encompass an overall improvement in quality of life, gradual economic expansion, and the cultivation of enhanced local skills and job opportunities [2].

“On a broader scale, the built environment could establish a new global benchmark for everyone.”



The trajectory of the built environment at COPs has undergone fluctuations, gaining prominence since its inaugural dedicated day at COP21 in Paris in 2015 [3]. This trend continued to COP28 in Dubai in 2023, where the built environment had another dedicated day themed "**Multilevel Action, Urbanization, and Built Environment/Transport**" on December 6th. During the day, and other days of COP28, several new initiatives were announced, all serving to drive climate action in cities, spanning buildings, waste, transport, water, and nature [4].

Highlighted by diverse involvements of many ministers, championed by various countries, with the presence of numerous Green Building Councils under the leadership of the World Green Building Council, the COP28 featured active participation from leaders of the built environment.

The **Emirates Green Building Council** (EmiratesGBC) was also heavily present and engaged, at COP28, where it introduced research initiatives, facilitated thought-provoking panel discussions, and took part in various interactions during the event. Presented below are reflections by **EmiratesGBC** on the advancements made in relation to the built environment throughout COP28, with a specific focus on “**Multilevel Action, Urbanization, and Built Environment/Transport**”, themed day.

Local Advancements in the Agenda of the Built Environment

1. UAE Sustainability Built Environment Blueprint:

Considered the epitome of the **EmiratesGBC** engagements at COP28, on December the 6th, the **EmiratesGBC**, alongside the **UN High Level Climate Champions**, represented by **HE Razan Al Mubarak**, in partnership with **HSBC**, proudly launched the preview of the **UAE Sustainability Built Environment Blueprint**.

The Blueprint was endorsed by **Ministry of Energy & Infrastructure**, and it represents a culmination of 6 months of efforts by a core working group of leading developers and finance institutions, committed to the transition of the built environment sector in the UAE. The aim of the blueprint is to map the challenges faced by local developers and find the key enablers to unlocking greater climate action [5]. The launch featured a panel discussion that involved **HE Razan Al Mubarak**, as well as senior leadership from the **Ministry of Climate Change and Environment** and the **Ministry of Energy and Infrastructure**.



During the discussion, **HE Razan Al Mubarak** said: “We are here because we know that buildings contribute 21% of global greenhouse gas emission. In the UAE, this number is slightly higher, as the building sector is responsible for 27% of our emissions according to 2019 numbers...” [6].

HE Razan Al Mubarak said:
“We believe this sector promises to provide 85% of the emission reduction in the UAE by 2030...” [6].

The full report, which will be released in March 2024, will highlight key findings covering significant opportunities across core dimensions of the building sector showcasing the current efforts being undertaken by the leadership working group, that was led by the **EmiratesGBC** and the **High Level Climate Champions**, in collaboration with the UAE Government. The report will also mention the next steps that need to be taken, to co-design and implement both the policy and market enablers identified under each of these areas [5]:

- Policy
- Building Materials and Systems
- Green Finance
- Data
- Skills

The preview of the **Blueprint** can be found [here](#).

2. The National Carbon Registry:

During Cop28, the UAE Cabinet approved the **UAE's National Carbon Registry (NCR)**. The aim of the NCR, using blockchain technology, is to provide a framework for carbon registry and carbon credits, giving the UAE the opportunity to assess and track emissions' reductions across the private sector [7].

Essentially, the registry's objective is to be a platform to list, transfer, and track carbon credits by a project or business, while showcasing opportunities associated with the use of a Carbon Registry [8]. The NCR also provides a unique opportunity for the UAE to combat climate crisis, promote sustainable projects, and advance innovation in green finance, thus adding further momentum to the UAE's Net Zero 2050 Strategy [7].

“The UAE National Carbon Registry Platform is the first of its kind in the region.”

The platform will also facilitate the transfer of carbon credits across borders, strengthening global collaboration towards combating climate change and reducing greenhouse gas emissions [8].

3. Launch of the Energy Management System on Federal Roads:

Also, during **COP28**, the **Ministry of Energy and Infrastructure** launched the **Energy Management System on Federal Roads**, to advance the way in which streets are illuminated, shifting from the current high-pressure sodium lamps to LED lights. Using artificial intelligence and sensors installed on lighting poles, the adaptive lighting system optimizes illumination levels and adjusts lighting intensity on federal roads [9].



The system will reduce energy consumption by 35 – 50%, a 1289 MWh annually, cut down carbon footprint by more than 6000 tons annually [9].



The system will save around AED11 million, while at the same improving road visibility [9].

The project will help make the infrastructure of the UAE more sustainable, in line with the **UAE Energy Strategy 2050**, and **UAE Net Zero by 2050** strategic Initiative, and will lead to improved energy efficiency, and reduced carbon emissions [9].

4. Launch of the Coalition for High Ambition Multilevel Partnerships for Climate Action (CHAMP):

Alongside 40 ministers, the **COP28 President, Dr Sultan Al Jaber**, launched **CHAMP** to include cities and regions in the design of federal climate related commitments and strategies. **Champ** will include **UN-Habitat** and **Bloomberg Philanthropies** to showcase and support the significant role cities and their leaders can play in the race against climate change and keeping the targets within the 1.5C alive. COP28 Presidency and Bloomberg Philanthropies partnered to deliver the **Local Climate Action Summit** [4].

“During the Local Climate Action Summit, US \$500 million were announced for new-city focused climate investment [4].”

5. The Cement Breakthrough:

The UAE, supported by several countries and in partnership with Canada, launched the **Cement Breakthrough**, an initiative focused on making clean cement the preferred choice in global markets. The initiative aims that by 2030, near zero emission cement production is established and growing in every region of the world [4].

6. The Waste to Zero Initiative:

Waste to Zero Initiative was officially launched during COP28. It is an initiative under the UAE’s **Year of Sustainability**, spearheaded by the **Ministry of Climate Change and Environment (MOCCA)**, **Abu Dhabi Waste Management Company (Tadweer)**, and **Roland Berger**.

The initiative aims to decarbonize the waste management sector and transform waste into resources. The initiative involves a voluntary coalition made up of governments of all levels, NGOs, and the private sector to accelerate its goals [10].

7. Commitments to Fossil Fuel-Free Land Transport:

The **COP28 Presidency**, the **UAE Ministry of Energy and Infrastructure**, the **International Transport Forum**, and the **International Energy Agency** collaborated to organize the first ever transport-energy ministerial at a COP. During the meeting, the **COP28 Presidency** spotlighted key solutions to decarbonize the sector. Moreover, the sustainable land and transport community declared the **26th of November**, the first ever **World Sustainable Transport Day**, and stressed on the need to increase the share of energy efficient and fossil free forms of land transport by 2030 [4].

The transport sector is responsible for around 22% of global carbon emissions [4].

8. The Global Cooling Pledge:

The **Global Cooling Pledge** is an initiative led by the **COP 28 UAE presidency** and the **U.N. Environment Programme (UNEP)**. It was launched at COP with the focus on reducing cooling-related emissions and increasing access to sustainable cooling. More than **60 countries** have signed the pledge [11].

9. UAE's Earth Platform:

Earth Platform will serve as a powerful tool to advance 5 critical domains: economy, adaptation, reduction, transition, and health. The platform was launched by the **Ministry of Energy and Infrastructure** with the main objective of enabling comprehensive assessment and monitoring of net zero activities of the UAE through a nation wide interactive and integrated digital dashboard. The tool is to be accessible by the leadership to reflect on the status quo of the nations' advancements in relation to the net-zero targets [12].

Global Advancements in the Agenda of the Built Environment

1. The Buildings' Breakthrough:

Led by **France, Morocco, and United Nations Environment Programme (UNEP)**, the **Buildings' Breakthrough** aims to transform the building sector and to facilitate the universal collaboration on "near-zero" and "resilient buildings" by 2030, through the adoption of clean technologies, and sustainable solutions.



Technologies and solutions must be affordable, accessible, and attractive [13,14]. Moreover, considering keeping the momentum going, as a next phase to the breakthrough, **Buildings and Climate Forum** will take place in March 2024 for the first time in history. The forum will focus on several aspects related to the built environment such as building codes [14].

“To monitor progress, global organizations will perform annual assessment of advancements made in the **Buildings' Breakthrough.**”

2. The Waste MAP

Set to go live in 20 global megacities, the **Waste MAP** is the first global platform to track and measure methane emissions from waste using satellite monitoring. The platform was developed by **Global Methane Hub, Google Foundation, Rocky Mountain Institute, Clean Air Taskforce, The Netherlands Institute for Space Research, and Carbon Mapper**. It is to be used by local governments and NGOs to identify and mitigate methane emissions before they become harmful [4].

3. Programs to Accelerate the Adoption of 15-minute City (15MC):

A network of nearly 100 mayors of the world's leading cities, **C40**, is increasing action to accelerate the presence and adoption of the 15-minute city, a city that is highly livable, walkable, and people oriented.

The adoption will be accelerated using two programs [4]:

a. **The Green and Thriving Neighborhoods Program**, created in collaboration with Urban Partners to provide deep support to more than 40 cities through the implementation of concrete pilot projects that can turn the 15-minute city into a reality.

b. **The Healthy Neighborhood Explorer**, a tool to measure the impact of the 15-minute city. Created by Novo Nordisk, the tool will enable policymakers to measure the reduced emissions in the 15-minute City which have direct positive impact on residents' health.

4. The Generation Restoration Project

The **Generation Restoration Project** focuses on catalyzing urban ecosystem restoration and emission mitigation in eight world cities such as Kochi in India and Quezon City in the Philippines. The program is guided by the **Paris Agreement** and the **Global Biodiversity Framework** [4].

5. 'A Playbook for Nature-Positive Infrastructure Development'

In partnership with the **World Wildlife Fund (WWF)** and the **International Federation of Consulting Engineers (FIDIC)**, the playbook focuses on the construction sector's role in conserving and restoring natural ecosystems. The playbook offers practitioners a wide range of nature-based solutions that prioritize nature at the heart of infrastructure design through drawing on some of the world's most important infrastructure projects [4].

6. Forest & Climate Leaders' Partnership's (FCLP) Greening Construction with Sustainable Wood initiative

The **FCLP** initiative, in addition to the cement and building breakthrough, aim to unlock the potential of intergovernmental and multilevel collaboration, offering a framework to accelerate the shift towards a more sustainable built environment with greater mitigation, adaptation, and resilience [4].

7. World Green Building Council Open Letter

The **World Green Building Council** called for a unified approach to urge the political leaders to deliver the regulations necessary to scale up action on the massive potential of the built environment sector. The unified action approach was in the form of an open letter that also supports the **Buildings Breakthrough**, noting that the sector has the potential to reduce **37%** of global emissions [14].

According to WorldGBC the built environment can result in a \$1.5 trillion sustainable investment opportunities in emerging markets [14].

8. Green Public Procurement Pledge

Construction materials significantly impact carbon emissions, and more than **100 billion tons** of waste worldwide is generated from waste of construction, renovation, and demolition. Therefore, **Germany** and the **UK** alongside other countries, signed the **Green Public Procurement Pledge**. The pledge constitutes commitments to drive the demand for near-zero-emissions steel, cement, and concrete through public procurement. The pledge also asks to develop harmonized emissions, accounting standards, and definitions for construction related material [14].

Construction materials currently result in 9% of all energy related CO2 emissions.

9. Fossil Fuel Transition:

On the last day of **COP28**, the conference closed with an agreement that signals the beginning of the end of the fossil fuel era. The parties agreed to an equitable transition away from fossil fuels, reinforced by huge emission cuts and ambitious, scaled-up financing plans. Almost **200** parties came together in the first “global stocktake”, with the goal to limit global temperature rise of 1.5C. The stocktake calls for a tripling of renewable energy, and a doubling of energy efficiency by 2030. It also includes the phase-down of unabated coal power and of inefficient fossil fuel subsidies, in a just manner, where developed countries take the lead [15]. Generally, countries are encouraged to set ambitious economy-wide emission reduction targets that cover all green house gases and their sectors by 2025, in their Nationally Determined Contributions or NDCs [15].

“It was the first-time, in COP28, that oil and gas are included in agreements at COPs.”

10. Loss and Damage fund:

On the first day of **COP28**, delegates agreed to operationalize a fund that was agreed upon during **COP27** in **Sharm Al Sheikh**. The fund would help compensate countries suffering most from loss and damage caused by climate change. The fund has been, for a long time, requested by developing countries, and the agreement comes following several years of intense negotiations highlighted by the developed nations extending support for the need to set the fund during COP27 [16].

In total, multiple countries including the UAE, combined, have pledged 700 million dollars to the **Loss and Damage Fund** [16,17].

“The UAE is contributing \$100 million dollars to the Loss and Damage Fund” [16, 17].

11. Increasing Climate Finance

The great enabler of climate action, climate finance, took center stage at **COP28**. The **Green Climate Fund (GCF)** received second replenishment from six countries that pledged, during **COP28**, for new funding. The **Green Climate Fund** currently encompasses USD **12.8** billion from **31** countries, with more contributions expected ahead. There were also further pledges made to the Adaptation fund. The new pledges made during COP28 total nearly USD **188** million so far. However, these financial commitments, as mentioned in the global stocktake, are far from the trillions needed to support developing countries into a

clean energy transition with national climate and adaptation plans [15]. The commitments to green finance will surely trickle down to fund and support a greener built environment.

“There needs to be a new collective quantified goal on climate finance for 2024, setting USD 100 billion per year as a baseline [15].”

Where is the Built Environment Going Next?

The above-mentioned points are directly and indirectly related to the built environment, but with the need to build a city the size of Paris each week, the built environment is a part and parcel of the transition towards a better, more sustainable future.

In conclusion, **COP28** signifies a turning point for the construction industry, symbolizing a more assertive commitment to sustainability. The summit's deliberations chart a course where buildings evolve into embodiments of environmental stewardship, social responsibility, and energy efficiency with **COP28** emphasizing the potential for substantial change.

Collaborative endeavors among governments, industries, and the **Emirates Green Building Council** are vital in translating ambitious visions into tangible realities aligned with the 1.5°C target.

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