JOINT CALL FOR COP30: HOLISTIC ACTION FOR SUSTAINABLE INFRASTRUCTURE

Presented To	Presented By
UNFCCC Parties and Policymakers, Infrastructure Policy Decision-Makers	WFEO Young Engineers / Future Leaders Working Group on Climate Action & endorsing signatories

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World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs
Committee on Young Engineers / Future Leaders

YOUNG ENGINEERS FUTURE LEADERS

ice Institution of Civil Engineers

ICSI International Coalition for Sustainable Infrastructure

ELG Engineering Leadership Group

CEC Commonwealth Engineers' Council

Introduction

The built environment is critical to climate resilience, social equity, and environmental sustainability. As the world races to meet the Paris Agreement targets, achieve net-zero emissions, and secure development pathways consistent with the Sustainable Development Goals (SDGs), sustainable infrastructure investment is now more critical than ever. Despite growing awareness of climate risks and the urgent need for resilient infrastructure, current infrastructure systems remain fragmented, underfunded, and vulnerable to climate risks, leaving many communities, particularly marginalised groups, without essential services such as clean water, sanitation, energy, and transportation. Hence, governance, procurement, and delivery frameworks must be strengthened to ensure ambition and finance are effectively translated into practical outcomes on the ground, while standards and accountability mechanisms play a central role in ensuring that infrastructure outcomes are consistent, measurable, and comparable across regions.

This policy paper, co-signed by leading organisations across the built environment sector, presents priority action areas and recommendations derived from youth-led organisations and emerging climate experts worldwide. We must align infrastructure development with sustainable and cost-effective pathways, ensuring that resources are efficiently allocated to support economic growth, enhance climate resilience, and accelerate the implementation of nationally determined contributions (NDCs) under the United Nations Framework Convention on Climate Change (UNFCCC), while also ensuring that resources with the skillsets and competences are available to enable this transition.

The subsequent sections offer recommendations to decision-makers at the multilateral, national, and subnational levels that address these systemic challenges. By leveraging existing and emerging climate expertise, fostering cross-sectoral collaboration, and incorporating global best practices, these recommendations can significantly transform our infrastructure systems to advance sustainable infrastructure that aligns with the UNFCCC's goals.

Carbon Management & Decarbonisation

Fundamentally, to limit global warming in line with the target of the Paris Agreement, and align with a sustainable development pathway, there is no alternative to rapid, deep, and sustained greenhouse gas emissions reduction.

1. Produce holistic, credible, transparent, and equitable plans integrated with NDCs[1] and NAPs to achieve decarbonisation of every infrastructure sector on a timescale compatible with the target of the Paris Agreement, with clear short-term and medium-term targets and milestones, supported by a robust investment pipeline and development of local skills[2], following a just transition approach.
2. Introduce a mandate for whole-life carbon assessments for buildings and infrastructure in line with relevant best practice standards and phase in regulations on minimum carbon performance of new and existing assets (e.g., carbon emissions limits based on gross floor area for buildings), to align with a balanced net-zero pathway.[3]
3. Integrate decarbonisation, circularity and adaptive reuse objectives and compliance into the procurement of all publicly funded, owned and operated buildings and infrastructure projects, mandating carbon management aligned with the sector's net-zero pathway.
4. Accelerate sustainable adoption of proven low-carbon technologies, and materials[4] and techniques, including vernacular ones, by streamlining standards, planning, and permitting processes.

Adaptation, Resilience & Nature-Positivity

As certain climate impacts are now unavoidable, global policy must prioritise integrated solutions that advance both mitigation and adaptation - maximising co-benefits such as reduced emissions and enhanced resilience, while recognising tradeoffs across infrastructure, ecosystems, and supply chains. A balanced and just approach must be adopted, securing the well-being of current and future generations.

1. Ensure a robust governance structure and transparency in the categorisation and reporting of adaptation finance.[5]
2. Enhance transboundary and regional cooperation for adaptation.
3. Explore innovative financing mechanisms within National Adaptation Plans (NAPs). Align national infrastructure development and planning with the UN Office for Disaster Risk Reduction (UNDRR) Principles for Resilient Infrastructure[6] and ISO 22372, supported by structured training and practitioner guidance to embed resilience consistently across project design and delivery.
4. Integrate multi-hazard early warning systems in infrastructure planning and address coverage disparities by 2027, particularly in least developed countries and Small Island Developing States.[7]
5. Increase investment globally in nature-based solutions for adaptation and resilience to close the adaptation and nature funding gaps, while embedding robust performance metrics and KPIs to track impact and strengthen accountability.
6. Integrate nature-positive outcomes in permitting and procurement processes to establish biodiversity enhancement as a core requirement, rewarding proposals that demonstrate measurable ecological improvements using standardised biodiversity metrics, and ensuring long-term monitoring of impacts.

Inclusive Growth

To ensure inclusive growth and climate justice, equitable access to training and skills development programmes, climate finance, infrastructure, and decision-making processes is required.

1. Support socially-inclusive community-led adaptation, clean energy, and infrastructure in underserved regions and embed associated objectives into utilisation of national and multilateral climate funds.[8]
2. Prioritise local, Indigenous, and minority-owned businesses in public climate projects, with workforce development and procurement programs to boost resilience.[9,10]
3. Engage with Traditional Ecological Knowledge (TEK) holders to respectfully integrate TEK in adaptation strategies and infrastructure planning.[11]
4. Ensure inclusive, multilingual consultations to inform equitable built environment policy and climate-responsive planning.
5. Make climate risk dashboards and early warning systems mobile-accessible, translated, and low-literacy-friendly for broader participation.[12]
6. Require equity assessments, Community Benefit Agreements (CBAs) and participatory budgeting in public projects to ensure direct community benefits and involvement.[13,14]
7. Enshrine Free, Prior, and Informed Consent (FPIC) into domestic law, and establish frameworks for co-governance with Indigenous communities in public infrastructure development.[15,16]

Policy & System Approaches

Systems-based policy integration, equitable and transparent governance, upscaling of finance, and local action are urgently needed. To close the gap between climate risk and resilience, governments must shift toward integrated policy frameworks, inclusive governance, and long-term, cross-sectoral strategies.

1. Invest in long-term strategies backed by robust monitoring, evaluation and learning systems to ensure adaptive management and sustained impact.[17]
2. Align mitigation and adaptation under a unified Climate Resilient Development Approach to drive coherent, cross-sectoral policy and investment decisions.[18]
3. Embed resilience and climate risk management across infrastructure, budgeting, and national economic planning processes, such as through the embedding of consensus-based standards into project governance.[19]
4. Mainstream climate risk management across national policy frameworks, including climate-urban planning, energy and transport, to ensure systemic resilience and risk-informed development.[20]
5. Establish or strengthen cross-sectoral coordination bodies with clear mandates to lead integrated climate responses across all levels of sectors and government, ensuring horizontal and vertical alignment.[21]
6. Scale up international finance to support global resilience partnerships and meet the needs of climate-vulnerable nations, with a focus on equity, accessibility, and long-term capacity building.[22]
7. Ensure predictable, open and transparent procurement systems to enable climate infrastructure implementation through accountable, consistent and trusted institutional processes.

Finance

To meet climate goals, global infrastructure transformation requires structured finance that is equitable and scaled-up, particularly in the Global South, noting a disproportionate exposure of marginalised communities to climate impacts. Reforming financial systems is essential to unlock sustainable infrastructure investment, free from debt burdens and exclusionary eligibility criteria.

1. Reform Multilateral Development Bank (MDB) processes to increase concessional finance for climate-resilient and low-carbon infrastructure, especially in the Global South. MDBs should expand risk-sharing instruments, offer more flexible financing terms, and increase grants for adaptation projects.[23] Tie all MDB finance to climate-aligned delivery mechanisms, such as procurement frameworks that mandate appropriate sustainability objectives.
2. Enhance blended finance mechanisms to attract private sector capital to climate infrastructure by de-risking investments through guarantees, first-loss capital, and public-private co-investment models.[24]
3. Support the creation and scaling of local green finance instruments, such as sovereign and municipal green bonds, to mobilise domestic capital markets for infrastructure aligned with net-zero and climate-resilient pathways.[25]
    a. Systematically identify and address capacity gaps (such as outdated technical standards and insufficient workforce capacity and capability) alongside financial risks to ensure effective deployment of climate finance.[26]
4. Promote international cooperation and transparency in climate finance by strengthening systems for tracking climate-related financial flows, evaluating outcomes, and ensuring accountability for developed countries' financial commitments under the Paris Agreement.[27,28]

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Endorsing Signatories

- **The World Federation of Engineering Organizations (WFEO)** - the global organization for the engineering profession. Founded in 1968, under the auspices of UNESCO, WFEO brings together national engineering institutions from some 100 nations and represents more than 30 million engineers.

- **The Institution of Civil Engineers (ICE)** - a 97,000-strong global membership organisation with more than 200 years of history. It is a centre of engineering excellence, qualifying engineers and helping them maintain lifelong competence, assuring society that the infrastructure they create is safe, dependable and well designed. Its network of experts offers trusted,impartial advice to politicians and decision makers on how to build and adapt infrastructure to create a more sustainable world.

- **The Commonwealth Engineers' Council (CEC)** - an official Commonwealth Accredited organisation whose aim is to advance the science, art and practice of engineering for the benefit of humankind. CEC Membership is open to all engineering institutions and societies across the 56 countries of the Commonwealth. Engineering is at the heart of social and economic development and as engineers we recognise our responsibility and the importance of working closely with other professions and with the engineering community at large.

- **The International Coalition for Sustainable Infrastructure (ICSI)** - the global movement for engineering action on infrastructure sustainability, resilience, and climate change. ICSI brings together a global coalition of change agents from across the engineering, investment, city, and philanthropic communities committed to bold action to solve the systemic problems that exist at the intersection of climate change, ecosystem degradation, ageing infrastructure, and underinvestment. Built upon a commitment to tangible and collaborative action, ICSI continues to broaden participation across stakeholder communities to accelerate the innovation, adoption and scaling of people-centred, sustainable, and resilient infrastructure solutions that support sustainable development for all.

- **The Engineering Leadership Group (ELG)** - brings together professional engineering services companies seeking to engage the highest levels of government on behalf of the engineering sector. ELG members engage directly into G7, G20 and UNFCCC processes, influencing the direction of policy on sustainable infrastructure and systemic resilience to climate change and other shocks and stressors.