BACKGROUND GUIDE

UN - HABITAT

Agenda: Advancing Global Climate-Resilient Infrastructure with a special emphasis on Sustainable Development in Coastal Regions Amid Climate Change.

LETTER FROM THE EXECUTIVE BOARD

Esteemed Members of the *United Nations Human Settlement Program (UN-Habitat Assembly),* It is our honor to welcome you to the Nath Valley Model United Nations 2025. This guide has been curated to serve as a starting point for research and provides an overview of the agenda at hand. We hope that the study guide will help you throughout the course of your preparation for the conference from now on.

However, the guide only provides a bird's eye perspective of the relevant topics of discussion. We strongly encourage you all to delve deeper into the complexities of the agenda, not letting the guide limit the scope of your research. This guide will provide you with a background that will form the basis for your research. Apart from the topics covered, delegates must understand the perspective of the allotted country and weave their research based on both- the given agenda and foreign policy.

We will firmly seek active participation from all of you in the debate and the committee work. Do not feel overwhelmed by the process of researching and feel free to contact us for anything you may need on our end. We look forward to a fruitful discussion and a wholesome exchange of ideas during the proceedings in the upcoming meeting of this association, with a strong emphasis on decorum and diplomatic etiquette.

We are certain that these proceedings shall prove to be successful in determining the path to be taken to solve some issues that prove to be a great challenge to the situation of drugs and crime in the global status quo.

All the best!

Rakeysh Gupta
President
(rakeyshmgupta@gmail.com)

Kabir Karmani
Vice President
(kabirkarmani@icloud.com)

TABLE OF CONTENTS

INTRODUCTION TO THE COMMITTEE

Please note - *For the purpose of this conference, we will be simulating the UN-Habitat Assembly.*

The United Nations Human Settlements Programme (UN-Habitat) was established in 1978 as the United Nations' focal agency for urbanization, human settlements, and sustainable cities. Headquartered in Nairobi, Kenya, UN-Habitat works across 90+ countries, focusing on ecologically and socially sustainable urban development and ensuring adequate shelter for all.

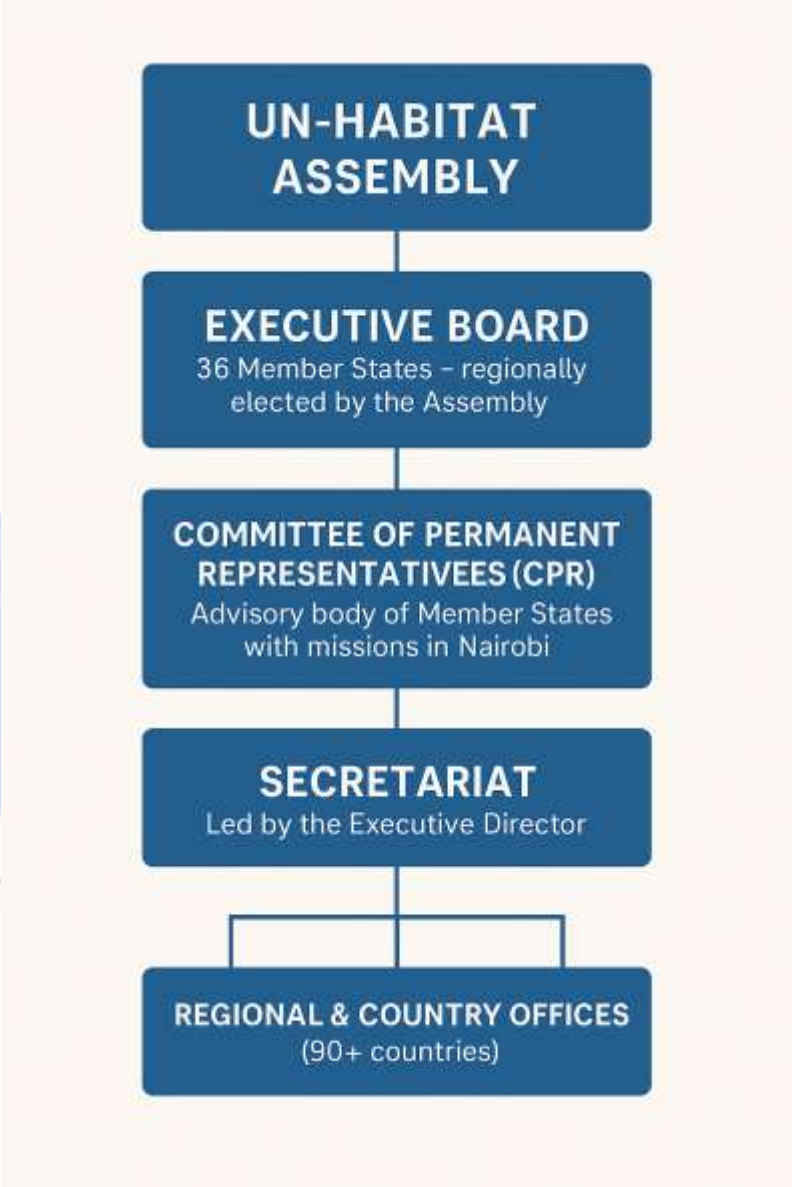
UN-Habitat supports Member States in implementing the Sustainable Development Goals (SDGs), especially SDG 11: Sustainable Cities and Communities and SDG 13: Climate Action. Its work covers a broad range of issues such as urban planning, infrastructure development, affordable housing, land tenure security, urban mobility, and building climate resilience in cities, especially in the Global South where rapid urban growth is outpacing basic service provision.

In recognition of the growing importance of urbanization in global development, the UN General Assembly adopted Resolution A/RES/73/239 on 20 December 2018, replacing the former Governing Council with the UN-Habitat Assembly. The UN-Habitat Assembly is now the highest decision-making body of the Programme.

The UN-Habitat Assembly is a universal body composed of all 193 UN Member States, convening every four years in Nairobi. It provides strategic direction, political guidance, and global norms on human settlements and sustainable urbanization. Its core responsibilities include:

1. Identifying key issues and priorities for UN-Habitat's normative and policy work;
2. Reviewing global urbanization trends and their implications;
3. Examining and endorsing norms, standards, and best practices for sustainable urban development;
4. Adopting resolutions, declarations, and strategic documents that shape global human settlements discourse;
5. Recommending coherent strategies to integrate urban and settlement dimensions into the 2030 Agenda, New Urban Agenda, and other international frameworks;
6. Approving the Strategic Plan of UN-Habitat (prepared by the Executive Board);
7. Reviewing the Secretary-General's quadrennial report on implementation of the New Urban Agenda;
8. Promoting stakeholder participation, including local authorities, civil society, academia, and the private sector, in all levels of decision-making.

Given below is a diagram explaining the organizational structure of the UN-Habitat Assembly:



INTRODUCTION TO THE AGENDA

For the purpose of better understanding, the Executive Board has divided the 'Introduction to the Agenda' Section into two sub-sections:

Section I: Understanding Climate-Resilient Infrastructure

As the world contends with intensifying climate change impacts, the resilience of human settlements and the built environment has become a critical concern. In response, the concept of climate-resilient infrastructure has emerged as a cornerstone for sustainable development, particularly in vulnerable regions such as coastal zones. The committee of UN-Habitat, which focuses on socially and ecologically sustainable human settlements, plays a pivotal role in advancing global standards and frameworks for such infrastructure systems.

What is Climate-Resilient Infrastructure?

Climate-resilient infrastructure is infrastructure that is planned, designed, implemented, and managed to anticipate and adapt to changing climate conditions. It includes:

- Process-oriented resilience: Integrating climate adaptation, sustainability, and environmental considerations throughout the lifecycle of infrastructure—starting from planning to end-of-life.
- Outcome-oriented resilience: Ensuring that infrastructure withstands, responds to, and recovers from climate shocks while continuing to deliver essential services.

Critically, climate-resilient infrastructure also fosters resilience through infrastructure by maximizing social and environmental co-benefits. This includes protecting ecosystems, enhancing social equity, reducing carbon emissions, and supporting vulnerable populations who bear the brunt of climate impacts.

Interdisciplinary Nature of Climate-Resilient Infrastructure

Climate-resilient infrastructure exists at the intersection of several key global efforts:

- Disaster Risk Reduction (DRR): Infrastructure must reduce exposure and vulnerability to hazards, improve preparedness, and employ strategies like risk avoidance, mitigation, and adaptation.
- Climate Change Adaptation: Infrastructure systems must evolve to cope with long-term changes in average climate conditions. This includes retrofitting existing systems and designing new assets such as seawalls, drainage systems, and climate-resilient transportation networks.
- Climate Risk Management: By assessing hazards, vulnerabilities, exposures, and adaptive capacity, infrastructure can be better designed to manage future climate risks. A commonly used formula:

$$Climate\ Risk = (Climate\ Hazard \times Vulnerability) - Adaptive\ Capacity$$

- Sustainability: Sustainable infrastructure is long-lasting, financially viable, socially inclusive, and environmentally sound. Climate resilience contributes directly to sustainability by improving infrastructure durability and minimizing failure under stress.
- Climate Change Mitigation: Even while focusing on adaptation, climate-resilient infrastructure should minimize its environmental footprint and align with global goals to reduce greenhouse gas emissions.

Types and Systems of Infrastructure

The UN-Habitat recognizes three categories of infrastructure critical to resilient cities:

- Economic infrastructure (e.g., transport, energy, water)
- Social infrastructure (e.g., housing, healthcare, education)
- Soft infrastructure (e.g., governance, regulations, public institutions)

Climate-resilient development requires transformations across all these categories to support systemic resilience in a warming world.

Risks Addressed by Climate-Resilient Infrastructure

Such infrastructure must be prepared for chronic stresses (e.g., sea-level rise, droughts) and acute shocks (e.g., hurricanes, floods, wildfires). Coastal regions in particular face compounding climate hazards such as:

- Temperature extremes
- Coastal and urban flooding
- Storm surges and coastal erosion
- Water scarcity and salinity intrusion
- Transition risks and migration pressures

Therefore, climate-resilient infrastructure must be designed to operate effectively under both current and future climate conditions, incorporating future-oriented planning and adaptive flexibility.

Lifecycle Integration and Resilience Value

Resilience must be embedded throughout the infrastructure lifecycle, encompassing nine key phases: Needs Identification, Planning, Delivery, Management, and their sub-phases. At each step, stakeholders must ensure that decisions build and retain Resilience Value—the ability of infrastructure to protect, connect, and serve society under ordinary and extraordinary conditions.

Section II: Sustainable Development in Coastal Regions

Coastal regions are at the frontlines of climate change. They are shaped by the dynamic interplay between land, ocean, infrastructure, and human settlement—forming systems that are at once economically vital and environmentally fragile. As discussed in Section I, advancing climate-resilient infrastructure requires a systems-oriented and lifecycle-based approach. Nowhere is this

integration more urgent and complex than in coastal regions, where sustainable development is both a necessity and a challenge.

Why Coastal Regions Matter?

Globally, coastal zones occupy less than 10% of the Earth's land area, yet they support over 40% of the global population and generate a significant share of global GDP through activities such as shipping, trade, tourism, and fisheries. This disproportionate importance magnifies the stakes: failure to ensure sustainability and resilience in coastal regions can trigger cascading disruptions across national economies and international systems.

These regions are also home to ecosystems—such as mangroves, coral reefs, salt marshes, and estuaries—that offer essential services like carbon sequestration, storm protection, water filtration, and biodiversity conservation. However, they are under extreme threat from urban expansion, rising sea levels, habitat degradation, and unsustainable land-use practices.

The Problem of Vulnerability and Development Demand

Coastal communities face a dual burden: they are highly exposed to climate hazards (such as storm surges, floods, erosion, and salinization) while also experiencing rapid population growth, economic pressures, and infrastructure gaps. This makes sustainable development in coastal zones a particularly complex task, demanding solutions that are:

- Resilient, by design and function, to the chronic and acute climate shocks discussed in Section I.
- Equitable, ensuring that development benefits are distributed fairly and protect the most vulnerable.
- Ecologically integrated, supporting and leveraging natural ecosystems rather than replacing or degrading them.

From a systems-thinking perspective, this means infrastructure in coastal areas must not be treated in isolation—it must be developed in synergy with social systems (housing, healthcare, education), economic drivers (port logistics, fisheries, tourism), and environmental boundaries (wetlands, floodplains, aquifers).

Resilience as an Enabler of Sustainability

Climate-resilient infrastructure in coastal regions must balance physical durability, ecological harmony, and socio-economic inclusivity. Building back better cannot simply mean stronger sea walls or elevated highways—it must also mean systems that protect livelihoods, preserve coastal cultures, ensure food and water security, and promote environmental justice.

This approach requires the lifecycle and systems-thinking strategies outlined in Section I to be localized and contextualized to coastal regions. It also demands future-oriented planning that recognizes that infrastructure built today will have to withstand climate realities decades from now.

By aligning resilient infrastructure with the UN Sustainable Development Goals (particularly SDG 11, SDG 13, and SDG 14) and the Sendai Framework for Disaster Risk Reduction, sustainable development in coastal zones can serve as a global model for integrated, inclusive, and forward-thinking resilience.

STATEMENT OF PROBLEM

Despite growing global recognition of the need for climate-resilient infrastructure, the world remains critically underprepared to implement sustainable, inclusive, and effective infrastructure systems—especially in climate-vulnerable coastal regions. While the technical frameworks, scientific tools, and international declarations exist, the translation of these concepts into coherent, cross-sectoral, and community-grounded action remains limited, uneven, and fragmented.

Poorly Coordinated and Fragmented Infrastructure Systems

Infrastructure in coastal areas is often developed in separate sectors—for example, housing, roads, water systems, ports, and coastal barriers are all planned by different agencies. These sectors rarely coordinate with each other, and they may not share data or planning goals. As a result:

- Infrastructure projects may unintentionally increase risks elsewhere—for example, a sea wall protecting a port may increase flooding in a nearby informal settlement.
- Cities miss opportunities to create multi-functional, efficient systems that solve several problems at once.
- Responsibility is unclear during crises, leading to delays in emergency response or recovery.

In addition, different levels of government—national, state, and local—often have overlapping authority in coastal zones, which leads to policy conflicts and gaps in enforcement.

Incomplete Integration of Climate Risk into Infrastructure Planning

Infrastructure is typically designed based on historical data, not future risks. But climate change is altering patterns of rainfall, sea levels, storm intensity, and temperatures—especially in coastal regions. Because of this:

- Design standards are outdated, and new infrastructure may not survive future conditions.
- Climate risks are not considered across the full lifecycle—for example, maintenance and upgrades often ignore long-term adaptation.
- Many countries lack tools or systems to translate climate science into practical design requirements.

This leads to infrastructure that is vulnerable by default, and that will need expensive retrofitting—or may fail altogether—as climate conditions worsen.

Lack of Finance and Investment for Resilience

Building infrastructure that is climate-resilient usually costs more upfront but saves money in the long run. However, most governments—especially in low- and middle-income coastal countries—face:

- Limited national budgets and more immediate development priorities.
- Difficulty accessing climate finance from global institutions due to complex application processes.

- A private sector that is often reluctant to invest in long-term resilience with unclear returns.

As a result, decision-makers often choose cheaper, short-term infrastructure that is not designed to withstand future risks, creating long-term vulnerabilities.

Ignorance of Nature-Based Solutions

Natural ecosystems like mangroves, wetlands, and sand dunes provide natural protection against coastal hazards. They also support fisheries, biodiversity, and carbon storage. However:

- These solutions are often seen as less reliable than concrete infrastructure.
- Engineers and planners may not have the training or data to design projects that include both built and natural systems.
- There is little guidance on how to measure the benefits of nature-based solutions or include them in budgets.

This means many coastal areas continue to rely only on grey infrastructure (like sea walls), which may work in the short term but often fail under extreme events and degrade the environment.

Social Inequality and Exclusion in Coastal Development

In many coastal cities, low-income and marginalized communities live in high-risk areas—such as informal settlements near rivers or shorelines—without proper drainage, housing, or early warning systems. However:

- Infrastructure projects often focus on economic centres (ports, business zones) and neglect poorer areas.
- People are sometimes displaced by development or climate impacts with no support or alternative housing.
- Communities are rarely involved in planning, so solutions often don't reflect their real needs or knowledge.

This creates a cycle of vulnerability, where infrastructure not only fails to protect people—it increases inequality and risk.

Gaps in Data, Technical Capacity, and Long-Term Planning

Building climate-resilient infrastructure requires detailed information on:

- Climate projections
- Soil and terrain types
- Local population trends
- Ecosystem functions

However, many regions lack reliable, local-level data, and even when data exists, engineers and planners may not know how to use it for resilience planning. Additionally:

- Uncertainty in climate models makes it hard to choose the "right" solutions.
- Governments and agencies often lack technical staff and funding for training.

This creates hesitation, poor-quality infrastructure, or a continued reliance on outdated systems.

RELEVANT TREATIES, CONVENTIONS AND RESOLUTIONS

1. The Paris Agreement (2015)

- Adopted under the UN Framework Convention on Climate Change (UNFCCC), the Paris Agreement sets global goals to limit temperature rise well below 2°C and pursue efforts to limit it to 1.5°C.
- Emphasizes adaptation and resilience-building, calling on parties to strengthen resilience and reduce vulnerability to climate change.
- Relevant to the agenda as it frames the global commitment to climate adaptation and resilient infrastructure development.

2. Sendai Framework for Disaster Risk Reduction (2015-2030)

- A global agreement focused on reducing disaster risks through understanding hazards, strengthening governance, investing in resilience, and enhancing preparedness.
- Highlights the importance of building resilient infrastructure to reduce risks from natural hazards, including climate-related events.
- Directly supports climate-resilient infrastructure development, especially in vulnerable coastal regions.

3. United Nations Sustainable Development Goals (SDGs)

- Particularly relevant SDGs include:
    - SDG 11: Sustainable Cities and Communities – emphasizing resilient infrastructure and inclusive urbanization.
    - SDG 13: Climate Action – focusing on integrating climate change measures into policies and strategies.
    - SDG 14: Life Below Water – protecting coastal and marine ecosystems.
- These goals provide a comprehensive development framework linking climate resilience, infrastructure, and sustainable coastal development.

4. United Nations Framework Convention on Climate Change (UNFCCC, 1992)

- The foundational treaty for international cooperation on climate change.
- Calls for adaptation to climate impacts and fostering resilience in vulnerable sectors, including infrastructure.
- Supports efforts under the Paris Agreement and other climate adaptation initiatives.

5. New Urban Agenda (2016)

- Adopted at Habitat III, this agenda promotes sustainable urban development, resilience building, and inclusive cities.
- Emphasizes the importance of integrating resilience and climate change adaptation into urban planning and infrastructure development.
- Highly relevant for UN-Habitat's mandate and this agenda on climate-resilient coastal infrastructure.

6. Convention on Biological Diversity (CBD, 1992)

- Promotes conservation of biodiversity and sustainable use of ecosystems.
- Supports the integration of nature-based solutions (e.g., mangrove restoration) into coastal infrastructure strategies.
- Links biodiversity preservation to climate resilience and sustainable development.

7. Ramsar Convention on Wetlands (1971)

- An international treaty for the conservation and sustainable use of wetlands.
- Encourages protection and wise use of coastal wetlands, which are critical for climate resilience and ecosystem services.
- Relevant for coastal infrastructure planning that leverages natural ecosystems.

8. Agenda 21 and the Johannesburg Plan of Implementation (2002)

- Global sustainable development plans emphasizing integrated management of coastal zones and infrastructure.
- Encourage resilience and adaptation strategies within national and local development policies.

9. International Strategy for Disaster Reduction (ISDR)

- Precursor to the Sendai Framework, promoting disaster risk reduction globally.
- Important historical framework that underpins current resilience strategies.

QUESTIONS A RESOLUTION MUST ANSWER (QARMAS)

1. How can member states improve integrated planning and coordination across different infrastructure sectors and levels of government to build climate resilience in coastal regions?
2. What strategies and standards should be adopted to ensure that climate risk assessments and future climate projections are incorporated into all phases of infrastructure development—from design to maintenance?
3. How can the international community mobilize and increase climate finance—both public and private—to support the development and retrofitting of climate-resilient infrastructure in financially constrained coastal countries?
4. What mechanisms can be put in place to improve data collection, technical capacity, and knowledge sharing to support evidence-based, adaptive, and forward-looking infrastructure planning?
5. How can member states and UN-Habitat promote long-term resilience thinking in political and economic decision-making, overcoming short-termism in infrastructure investment and governance?
6. How can nature-based solutions be standardized and integrated with engineered infrastructure projects using performance indicators (e.g., flood attenuation capacity, biodiversity enhancement, carbon sequestration) to ensure measurable environmental co-benefits?
7. How can monitoring and early-warning systems be embedded within coastal infrastructure assets to ensure real-time data collection for maintenance and emergency response, especially for multi-hazard resilience?

RECOMMENDED SOURCES

Please note: This list includes a selection of key sources relevant to the committee and agenda. It is not exhaustive and does not limit the range of materials delegates may consult.

UN Documents and Resolutions

- United Nations General Assembly. Transforming Our World: The 2030 Agenda for Sustainable Development, A/RES/70/1 (2015).
- United Nations General Assembly. New Urban Agenda, A/RES/71/256 (2016).
- United Nations General Assembly. Climate Change and Its Impact on Human Settlements, A/RES/74/216 (2019).
- United Nations Human Settlements Programme (UN-Habitat). Annual Reports and Policy Briefs, 2018-2024.

Reports and Assessments

- Intergovernmental Panel on Climate Change (IPCC). Sixth Assessment Report (2021-2022).
- UN-Habitat. "World Cities Report 2020: The Value of Sustainable Urbanization."
- World Bank. "Building Resilient Cities: Infrastructure and Climate Adaptation in Coastal Areas" (2019).
- United Nations Environment Programme (UNEP). "Global Environment Outlook 6" (2019).
- OECD. "Enhancing Climate Resilience in Coastal Cities" (2020).

Case Studies and Articles

- Nurse, L.A., et al. "Small islands." In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability*, IPCC.

Websites and Data Sources

- UN-Habitat official website: https://unhabitat.org
- IPCC website: https://www.ipcc.ch
- World Bank Climate Change Knowledge Portal: https://climateknowledgeportal.worldbank.org
- Green Climate Fund: https://www.greenclimate.fund
- United Nations Office for Disaster Risk Reduction: https://www.undrr.org
- Sea Level | Vital Signs – Climate Change