GUIDELINES FOR SUSTAINABLE RECONSTRUCTION AND URBAN REGENERATION IN THE MENA REGION

Executive Summary

October 2021
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According to the United Nations High Commissioner for Refugees (UNHCR), the Middle East and North Africa (MENA) region hosted some 15 million refugees, Internally Displaced Persons (IDPs), asylum-seekers and returnees in 2018. More than 10 million of which were internally displaced from conflicts in Iraq, the Syrian Arab Republic and Yemen and some 7.2 million refugees and asylum-seekers from the same conflicts found protection and assistance in countries across the region and further abroad. Moreover, 35 million people needed humanitarian services on a daily basis in conflict-ridden areas. The toll a war or conflict can take on cities, infrastructure, neighborhoods, and housing, is reflective of the impact conflict can have on human beings, physically and mentally. The built environment is intrinsically integrated with the population that functions within it and a thriving economy develops people and their built-environment forms equally.

Another threat that compounds the existing danger of conflict is climate change. The MENA region is specifically vulnerable to floods, extreme heat/cold, drought, wildfire, and rising sea levels. As observed in other parts of the world, these climatic anomalies threaten to increase the risk of poverty, poor livelihood, and more conflict over endangered natural resources. These risks are mutually reinforcing and can magnify other risks such as poor physical health and mental wellbeing.

However, with consideration to stress, conflict, and climate change, human beings are biologically primed with a powerful survival instinct that is inclusive of their innate psychological primacy of seeking growth, wellbeing and prosperity. Consequently, in the MENA region, postwar populations will inevitably recover, heal and strengthen over time through diligent humanitarian efforts that also give rise to a new built environment. Therein
also lies the opportunity to benefit from not only the latest sustainable construction best practices, materials and technologies, but also to ensure resilient and sustainable development, social wellbeing, environmental protection and the reduction of construction-based, financial and legal risk.

Hence, the United Nations Human Settlements Programme (UN-Habitat) and the World Green Building Council (WorldGBC) co-developed the *Guidelines for Sustainable Reconstruction and Urban Regeneration in the MENA Region* to highlight key issues, approaches and methods, and propose bespoke solutions for individual and community-wide sustainable reconstruction projects based on the Build Back Better, leveraging recognized sustainability practices in the built environment while also addressing context specific needs unique to post-conflict reconstruction and urban regeneration. This entails the restoration of physical infrastructure, environmental and societal ecosystems, and the revitalization of livelihoods through a thriving economy. In several MENA countries where conflict has destabilized the foundation of many communities, the methodical and planned recovery, rehabilitation and reconstruction that must take place is an essential antidote that can also increase the resilience of cities and neighborhoods. When communities are built back better, incorporating sustainability principles, societies are stabilized and economies revitalized.

The Guidelines for Sustainable Reconstruction & Urban Regeneration in the MENA Region is a working document that pools local and international knowledge and best practices in order to provide considerations and actionable guidance that addresses the changing environmental landscape for reconstruction in the MENA region. Among the primary aims of the document is to highlight the regulatory vacuum that exists in several post-conflict cities and communities, and to fill that void with essential knowledge and tools that promote multi-stakeholder capacity and the prospect of inclusivity, long-term social stability, and economic recovery.

The Guidelines offer a holistic framework for urban reconstruction and
regeneration that is grounded in sustainable built environment principles spanning Climate Action, Resources & Circularity and Health & Wellbeing, with additional emphasis on Mobility & Accessibility, Social & Economic Resilience and Heritage. The document comprises six overarching thematic areas that encapsulate a spectrum of opportunities which when implemented thoroughly will enable resilient long-term growth. The relevant themes are: 1) Efficient resource utilization, 2) Environmental management and climate resilience, 3) Sustainable mobility and accessibility, 4) Integrative social and economic resilience, 5) Health and wellbeing and 6) Heritage.

Each of the six overarching themes delve deeper into nineteen related subtopics or chapters, which range from life cycle assessment strategies, to energy and water saving measures to protocols of good archeological preservation.
The first two themes ensure the proper utilization and regeneration of resources to ensure continued growth and environmental resilience. The following four themes address the social environment as they reflect on the wellbeing of a community: this entails freedom of access for all members of society in an environmentally sensitive and healthy manner; the establishment of integrative social and economic resilience which in-turn fosters community growth, health and wellbeing, and lastly, the preservation of local heritage which has enriched the history and culture of the MENA region and which promotes a sense of belonging and wellbeing for its residents. The last theme of heritage is of utmost importance for the MENA region, which is rich in history and culture. Identity is strongly linked to the heritage of an area and is a crucial aspect towards a sense of belonging, and in-turn wellbeing.

An addendum chapter referring to Governance is attached to the Guidelines, which addresses ‘good’ urban governance as an essential condition to Sustainable Reconstruction and Urban Regeneration. This chapter affirms the need for a common interest in instilling a governance framework that all stakeholders can participate in for proactive, inclusive, effective recovery effort that is driven by five key pillars; Ownership, Participation, Communication, Capacity, and Accountability.

The overarching themes in the Guidelines can be referenced independently for project related purposes, however, it is recommended that planning and design teams leverage the synergy between the thematic subchapters in order to create a robust development strategy. More importantly, the Guidelines for Sustainable Reconstruction & Urban Regeneration are not restricted to the MENA region alone. The framework is underpinned by strategic versatility and can be integrated into any urban regeneration project in the world, especially those reviving under similar circumstances of war, conflict, and/or natural disaster.

Lastly, the Guidelines aim to revive and restore struggling communities and cities through the prescription of effective stakeholder consultation
exercises at all development phases. This approach, when implemented judiciously, has been proven to streamline disparate development objectives and align all relevant stakeholders - such as the government, private sector, philanthropic institutions, NGOs, development teams and the public - on a common platform of sustainable and resilient urban regeneration and reconstruction work. This is an important feature that determines resilience as it reduces development costs and risk, promotes economic growth, and positively reinforces wellbeing and health.

Each theme is elaborated on as per its importance to the Build Back Better vision. This is followed by a definition from an international organization clarifying the intended scope of the theme followed by its sub-thematic areas and essential conditions. From there, the reader may navigate to the corresponding sub-thematic Chapters.

Each Chapter starts with the main sustainability intent of the proposed strategies, followed by theory and background, and definitions for specific terms. The main overarching development strategies are then introduced in accordance with applicable levels of development. This is followed by a list of suggested stakeholders who are considered essential for enabling the proposed strategies. The three urban development levels which are the focus of the Guidelines are as follows:

1. City level
2. Intermediary level, i.e. Neighborhood level or Man-Made Open Space level
3. Building level

Moreover, each Chapter is subdivided into the following time frames:

**Phase 1:** Assessment & Preparation
**Phase 2:** Planning & Design
**Phase 3:** Implementation, Construction & Operation
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| **EFFICIENT RESOURCE UTILIZATION** | **Life cycle assessment** | Life cycle assessment  
Promote sustainable procurements |
|                   | **Materials**     | Reduce waste  
Upcycling / recycling / reuse  
Construction debris / waste management  
Waste management (operational phase)  
Prioritize use of local material |
|                   | **Energy**        | Energy modeling and simulation  
Renewable energy  
Energy efficiency  
Monitoring systems  
Prioritize use of local sources |
|                   | **Water**         | Preserve water  
Reduce demand / reuse  
Monitoring systems |
| **ENVIRONMENTAL MANAGEMENT AND CLIMATE RESILIENCE** | **Land**          | Reduce man made footprint  
Brownfield recovery |
|                   | **Ecology**       | Preserve/restore undeveloped land  
Preserve/restore ecology, wetland  
Preserve/restore surface water, groundwater quality  
Preserve/restore habitat |
|                   | **Climate Change Adaptation** | Control floods  
Control landslides/sinkholes  
Multifunctional infrastructure |
|                   | **Climate Change Mitigation** | Reduce embodied CO2  
Reduce operational CO2 emissions  
Heat-island effect |
| **SUSTAINABLE MOBILITY AND ACCESSIBILITY** | **Mobility**      | Alternative transportation  
Public transportation  
Parking |
|                   | **Accessibility** | Wayfinding  
Equity & social justice  
Walkability & accessibility |
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| **INTEGRATIVE SOCIAL AND ECONOMIC RESILIENCE** | **Social Resilience** | Provision of utilities  
Participatory approach  
Enhancing social networks  
Diversity of land use  
Provision of public open space  
Social inclusion  
Transparency and accountability  
Public space and community amenities  
Affordable housing |
| | **Economic Resilience** | Local participation in reconstruction  
Economic development & capacity building  
Asset / facility management  
Life cycle cost  
Affordability and feasibility  
Access to agriculture land  
Access to employment  
Land tenure |
| | **Education** | Awareness on climate/environmental risks  
Preparedness to climate and environmental risks  
Training for green energies jobs |
| **HEALTH AND WELLBEING** | **Social & mental well-being** | Community needs and notions of well-being  
Biophilic design  
Healthy, clean and comfortable environment |
| | **Safety** | UXO (Unexploded Ordnance) clearance  
Accessibility of emergency vehicles  
Disaster Risk Reduction  
Public health and safety  
Construction soundness  
Mold & dampness prevention  
Structural safety  
Construction site safety |
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<td>HEALTH AND WELL-BEING</td>
<td><strong>Comfort</strong></td>
<td>Air quality &amp; ventilation, Thermal comfort, Lighting, Noise, acoustics &amp; vibration, Daylight &amp; views</td>
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<td><strong>Pollution</strong></td>
<td>Air, Water and Soil, Noise, vibration, acoustics and light, Construction impact</td>
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<td>HERITAGE</td>
<td><strong>Archeology</strong></td>
<td>Site assessment, Protection of archaeological sites, Rehabilitation of historic ensembles, single monuments and spaces of cultural practices</td>
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<td><strong>Heritage</strong></td>
<td>Heritage and Identity</td>
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