Sustainable Reconstruction & Recovery Framework

For The Southern & Eastern Mediterranean

EXECUTIVE REPORT

March 2022

WorldGBC & MENA Network

The World Green Building Council (WorldGBC) catalyses the uptake of sustainable built environments for everyone, everywhere. Transforming the building and construction sector across three strategic areas — climate action, health & wellbeing, and resources & circularity — we are a global action network of over 70 Green Building Councils (GBCs).
As members of the UN Global Compact, we work with businesses, organisations, and governments to drive the ambitions of the Paris Agreement and UN Global Goals for Sustainable Development. Through a systems change approach, our network is leading the industry towards a net zero carbon, healthy, equitable and resilient built environment.
Within our global movement, the Middle East and North Africa (MENA) network is comprised of GBCs in the Emirates, Jordan, Egypt, Lebanon, Kuwait, Bahrain, Palestine, and Qatar, who are working to deliver built environments that ensure a high quality of life for people, minimise negative impacts on the environment, and maximise economic benefits.

EBRD

The European Bank for Reconstruction and Development (EBRD) is one of the Multinational Development Banks. Established in 1991 to help build a new, post-Cold War era in Central and Eastern Europe, it has expanded its mission to Southern and Eastern Mediterranean and Central Asia. The Bank has played a historic role and gained unique expertise in fostering change in the region - and beyond - investing almost €150 billion in a total of more than 6,000 projects. The EBRD is committed to furthering progress towards 'market-oriented economies and the promotion of private and entrepreneurial initiative'. This has been its guiding principle since its creation and continues to be its mission in years to come.
The EBRD is driven by strong Environmental and Social Policies and ambitious climate and sustainability commitments. Bank's Green Economy Transition (GET) 2021-25 is the new approach for helping economies where the EBRD works build green, low carbon and resilient economies. Through the new GET approach, the EBRD will increase green financing to more than 50 per cent of its annual business volume by 2025. It also aims to reach net annual GHG emissions reductions of at least 25 million tonnes over the five-year period.

UN-HABITAT

The United Nations Human Settlements Programme (UN-Habitat) is the United Nations programme working towards a better urban future. UN-Habitat's mission is to promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all. We work with partners to build inclusive, safe, resilient, and sustainable cities and communities and promote urbanization as a positive transformative force for people and communities, reducing inequality, discrimination, and poverty. UN-Habitat leads the monitoring of Sustainable Development Goal 11 (SDG11) on sustainable cities and communities as well as the New Urban Agenda.

A foreword from the WorldGBC CEO, Cristina Gamboa

At the heart of World Green Building Council's (WorldGBC) mission – sustainable built environments for everyone, everywhere – is an appreciation for the diversity of buildings and infrastructure across the globe, and the communities they support.

Urban areas across the Middle East and North Africa (MENA) region have experienced large-scale damage caused by on-going conflicts, environmental degradation, extreme temperatures, and water stress.

Reconstruction of these built environments is already taking place, but will likely do so without supporting environmental regulations. This will reduce the resilience of infrastructure to climate shocks and stresses, as well as the prospects of social stability and economic recovery.

This is why WorldGBC's Sustainable Reconstruction and Recovery Framework is critical to putting sustainability at the forefront of recovery of the built environment, turning challenges into opportunities.

Research into local heritage and cultural practices and inspiring case studies has enabled us to develop a set of principles and an actionable framework for sustainable reconstruction of the built environment in Arab cities.

With 2022 marking 20 years of WorldGBC, we have never been in a better position to support reconstruction projects on the ground and continue to advance this important topic in MENA and beyond.

A big thank you to the European Bank for Reconstruction and Development (EBRD) for their support, and particularly to Alex Hadzjiivanov and Yasmin Deghidi from EBRD's Environmental and Sustainability Department. We also thank our partner UN-Habitat and the many technical experts that have contributed to this important piece of work.

Adonai Herrera-Martinez, Director, Environmental and Sustainability Department, EBRD

The Middle East and North Africa (MENA) region faces rapid demographic growth and urbanisation. It also faces massive migration from rural areas into cities with underdeveloped, aging and frequently obsolete urban infrastructure. The negative impacts of political conflicts, global economic turmoil, and global supply chain disruption, triggered by the COVID-19 pandemic are accelerated by climate change and wider environmental degradation. MENA countries are facing faster increases of global temperatures, and heating at twice the rate of the global average and represent the most water-stressed region in the world. We need built environments that can withstand this stress.

Supported by the European Bank for Reconstruction and Development (EBRD) and in partnership with UN-Habitat, this Framework represents the culmination of over two years of consultation from the WorldGBC network and community. The result is a highly-pragmatic and concise set of principles for sustainable urban development, reconstruction and regeneration of the built environment in the MENA region.

Starting as a set of detailed technical guidelines, the Framework represents international best practice on sustainable urban infrastructure. In compliance with provisions of the EBRD's Environmental and Social Policies in relation to the Bank's Southern and Eastern Mediterranean Region (SEMED), the Framework can be leveraged by the WorldGBC within SEMED and beyond into the MENA region.

Erfan Ali, UN-Habitat Regional Representative for Arab States

In the last decade, people have been increasingly moving to cities, following economic opportunities voluntarily or forcibly escaping from political conflicts or unprecedented extreme weather events and natural disasters. Today, more than half of the population resides in MENA/ Arab cities, a proportion that is expected to surpass 70 percent by 2050. According to the World Migration Report, the number of international migrants (including registered refugees) residing in the MENA region reached 40.8 million in 2020.

Today we are encountering an overwhelming demand for affordable housing, adequate basic services, and social protection, in addition to a rising need to strengthen our cities' resilience and adaptive capacity to climate change impacts and rebuild the physical environment and infrastructure affected by the protracted conflicts in the region.

The 2030 Agenda for Sustainable Development calls for climate action at the city level, while the New Urban Agenda has stressed the significance of efficient urban mitigation and adaptation measures including clear commitments to strengthening urban resilience to reduce the risks and impacts of disasters and establish partnerships with diverse stakeholders to find sustainable solutions to urban challenges.

We, at UN-Habitat, strongly believe in the opportunity that recovery and reconstruction offer to build back better and greener, and we value the work we were able to accomplish with the World Green Building Council to develop the Sustainable Reconstruction and Recovery Framework for the Southern and Eastern Mediterranean region, and we hope it will help stimulate further debate and action on mainstreaming climate considerations in the different stages of recovery.

We wish to thank our partners, the World Green Building Council, the esteemed technical experts for their valuable contributions to the formulation of the framework, and the Swedish International Development Cooperation Agency (SIDA) for their financial support under the SDG Climate Facility Project.

TRANSFORMING CHALLENGES INTO OPPORTUNITIES: STRENGTHENING THE BUILT ENVIRONMENT IN THE REGION

The MENA region is heating at twice the rate of the global average and is the most water-stressed region in the world.

From extreme heat waves, extensive drought periods, flash floods, coastal erosion, and cyclones, the last half-century has seen the region experience extreme weather events. Along with climate change, the region has also experienced rapid urbanisation and an increase in civil unrest, conflicts, and infrastructure degradation. Collectively, these crises have led to mass migration and wider socio-economic turmoil across several countries.

Such disasters can be categorised into three causes:

CLIMATE

Cyclone Shaheen hit Oman in 2021, damaging more than 1,000 homes.

MAN-MADE

The Beirut port explosion in 2020 was the largest non-nuclear blast in history.

WAR CONFLICT

Conflicts in Syria, Libya, Yemen, Iraq, Palestine, and sub-Saharan Africa have led to mass destruction of human settlements and interconnected deterioration of ecosystems.

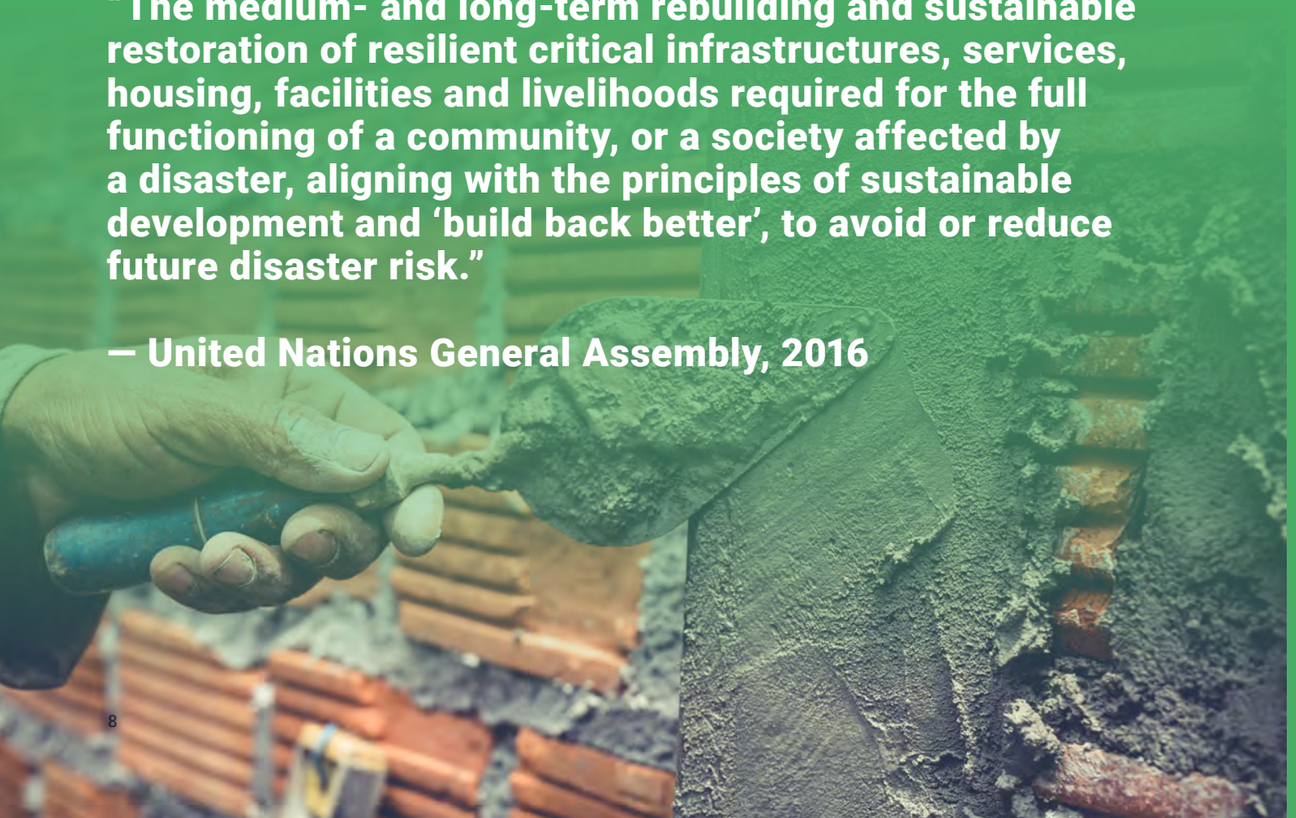
Whether the causes of such disasters are socially, economically or environmentally rooted, they all share relatively common challenges ranging from the creation of refugees, lack of intermediate settlements to widespread water contamination, debris and weak governance. Underpinning them all, is a devastating impact on the built environment and communities.

The case for a Sustainable Reconstruction and Recovery Framework for the Southern and Eastern Mediterranean

WHAT is sustainable reconstruction?

“The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community, or a society affected by a disaster, aligning with the principles of sustainable development and ‘build back better’, to avoid or reduce future disaster risk.”

— United Nations General Assembly, 2016



WHY do we need a Framework?

Sustainable Reconstruction and Recovery Framework is a toolkit for building back better through a sustainable built environment

It brings together local and international expertise to create reconstruction that can contribute to healthy, resource secure and climate resilient societies in regions experiencing natural disasters and conflict.

The Framework facilitates the reconstruction of places that are aligned with principles of sustainable development and building back better – complementing the UN Agenda for Sustainable Development 2030, the New Urban Agenda, the Sendai Framework for Disaster Risk Reduction, the Paris Agreement, and other global agendas.

Build Back Better, is defined by the United Nations International Strategy for Disaster Reduction as:

“The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalisation of livelihoods, economies, and the environment.” [1]

The Framework does not propose a one-size-fits-all solution for the built environment. It has been developed to highlight key issues, approaches and methods, and proposes bespoke solutions for individual and existing WorldGBC frameworks for Health and Wellbeing [2] and Whole Life Carbon [3] as well as with the EBRD’s Environmental and Social Policies and corresponding Performance Requirements [4].

This is a working document that provides considerations and actionable guidance, addressing the changing environmental and socioeconomic landscape for reconstruction in the MENA region. The principles presented here after are accompanied by a range of useful, informative resources to raise the awareness and capacity of key stakeholders to improve decision-making, project design and evaluation.

The guidance and suggestions offer an opportunity to gather humanitarian and construction actors, and development partners to rethink ways of working together to further implement the humanitarian, development, and peace nexus in the MENA region upheld by a sustainable built environment.

1 UNISDR, Build Back Better in recovery, rehabilitation and reconstruction (Switzerland, 2017)
2 Health & Wellbeing Framework | World Green Building Council (worldgbc.org)
3 Advancing Net Zero Whole Life Carbon | World Green Building Council (worldgbc.org)
4 EBRD Environmental and Social Policy, 2019: https://www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html

WHO is the Framework for?

While the Framework is primarily created as a response to the built environment reconstruction challenges in the MENA region, it may be applicable to other similar situations around the wider region and the globe.

Multiple stakeholders are engaged in, and lead, the urban reconstruction process, and they will differ depending on the local situation in which the Framework is being used. Each will have varying priorities and needs, therefore the Framework begins with a priorities assessment. The assessment directs different stakeholders to yield the most impactful results, ensuring that recovery from these disasters is approached holistically for sustainable and resilient outcomes.

The stakeholders and users of the guidelines are identified as, but not limited to:

HOW to use this Framework?

The guidelines included in the Framework are ready to be used by various stakeholders. For each sub-theme there is an overarching intent coupled with several recommended strategies that are further expanded through key time frames across the built environment life cycle:

Assessment & Preparation	Planning & Design	Implemen-tation & Construction	Operation & Maintenance
Phase 1	**Phase 2**	**Phase 3**	**Phase 4**

Each theme has several recommended tools and references along with alignment with existing WorldGBC Frameworks and UN SDGs.

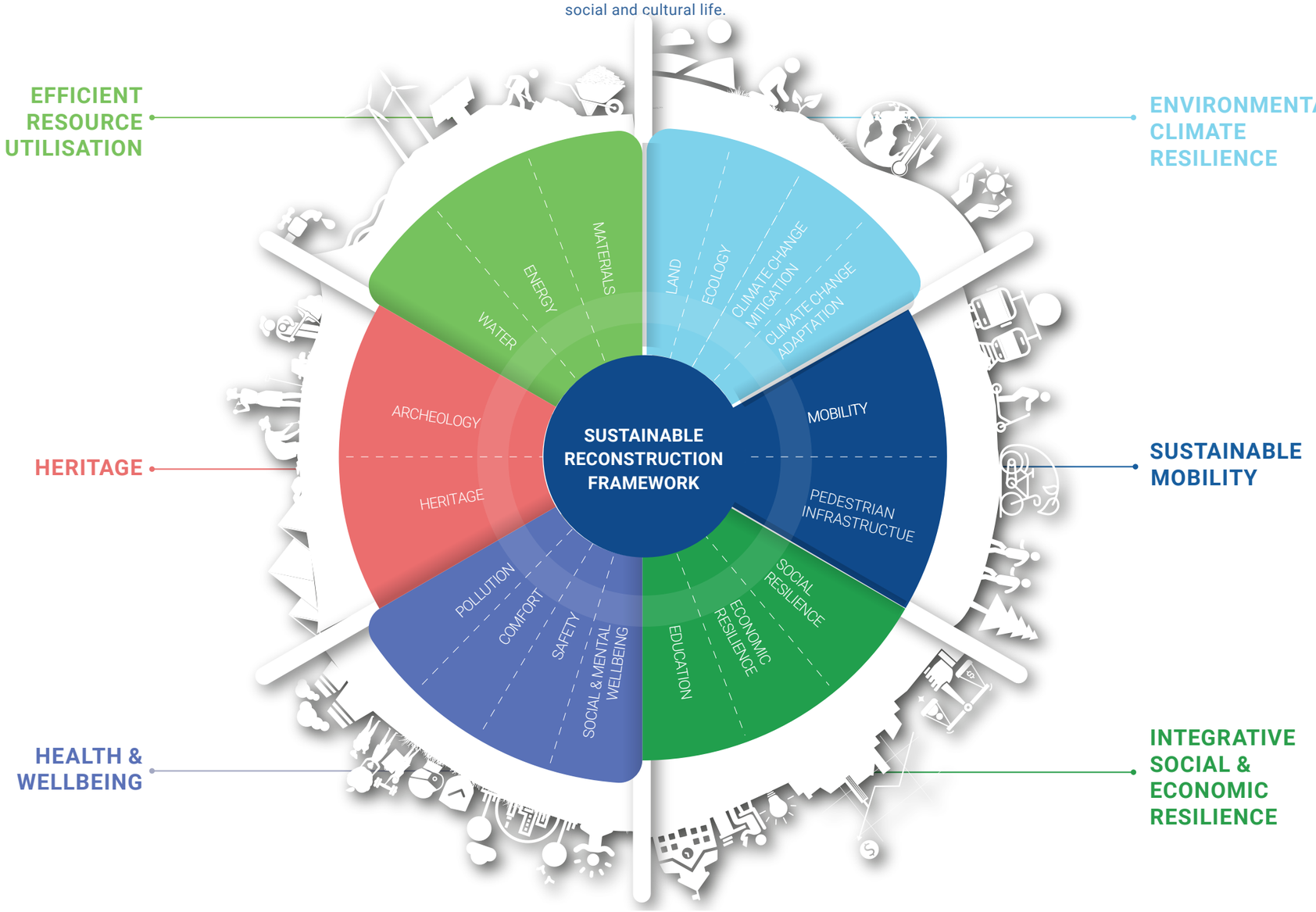
The Framework does not delve into details and intricacies nor does it imply a hierarchical order in addressing themes, due to specificities of differing contexts. It is important to view the Framework as a roadmap, where it is up to the stakeholders involved to make the necessary adjustments, define the contextual priorities, local references, and alignments with local rating tools and building codes.

Focusing on the built environment, the following sections outline:

- Six opportunities for building resilience post disaster.
- The essential conditions that must be in place in order for framework implementation to be most effective.
- The overarching principles that apply across all elements of the framework.
- How to use the framework across the building life cycle.
- How to set post-crisis localised priorities.

Six opportunities for reconstructing a resilient built environment

To build more resilient communities, the Sustainable Reconstruction and Recovery Framework for built environments is structured around six themes which address disasters as opportunities. The Framework how disaster risk reduction and the sustainable urban reconstruction of the physical environment can restore the wellbeing of communities, revitalise their livelihoods, and support their social and cultural life.



01 EFFICIENT RESOURCE UTILISATION

A physical environment that ensures the proper utilisation of resources, continued growth and environmental resilience.

MATERIALS

- Ensure efficient utilisation of local materials and a reduction in the demand for virgin materials.
- Assess an optimised whole life cycle approach towards the handling of existing materials, especially pertaining to reconstruction, by exploring strategies that utilise debris, reduce waste and divert waste from landfills.

ENERGY

- Use reconstruction to build a sustainable energy infrastructure for buildings and cities as a whole.
- Ensure proper utilisation of available energy resources, which includes optimising energy demand and performance through passive and active methods.
- Maximise the reliance on renewable energy sources in meeting the demands, while ensuring optimum performance when commissioning and monitoring energy systems to reduce overall emissions, operating costs, and reliance on fossil fuels.

WATER

- Ensure proper utilisation and protection of available water resources, which includes optimising the demand on freshwater, protecting natural water resources, maximising water reuse, and managing water operations to rescue the depletion of available freshwater in the long term.

02 ENVIRONMENTAL AND CLIMATE RESILIENCE

Promote long-term integrative planning to decrease the communities' vulnerability and increase its adaptability to the harmful effects of climate change.

LAND

- Create ecological resilience, engineering resilience, and promote community health and wellbeing.
- Provide spaces that meet the needs of residents and accommodate their daily activities while minimising the negative environmental impact of reconstruction.

ECOLOGY

- Conduct an accurate and detailed assessment of ecological health of the area, and set an agenda of remedial work needed and baseline conditions for planning and design.

CLIMATE CHANGE MITIGATION

- Integrate climate change mitigation strategies into sustainable reconstruction processes, taking into consideration the life cycle of the project.
- Provide multi-level monitoring and assessment tools for reduction of GHGs and ozone depletion.
- Avoid reconstruction activities that may potentially contribute to climate change and to simultaneously identify the best reconstruction practises in this regard.

CLIMATE CHANGE ADAPTATION

- Prevent or reduce the impact of climate change on the natural and built environment, and human systems, by planning and implementing legal, physical, socio-economic (including mental health and wellbeing) interventions.

03 SUSTAINABLE MOBILITY

Ensure freedom of access to all members of society in an environmentally sensitive and healthy manner.

MOBILITY

- Enable and guide planners and designers towards rebuilding a sustainable mobility network.
- Encourage the shift towards clean and environmentally friendly transportation.
- Improve the efficiency and attractiveness of existing transportation modes and facilities.
- Reduce CO_2 emissions and noise resulting from transportation.
- Raise awareness about the importance of environmentally friendly transportation systems.

PEDESTRIAN INFRASTRUCTURE

- Enable and guide better universal accessibility by raising awareness on the importance of environmentally friendly transportation systems.
- Provide transportation infrastructure and services that are safe, affordable, equitable and that provide social justice, ensuring no transportation-disadvantaged people are left behind.
- Encourage a shift towards clean and environmentally friendly transportation by reducing the use of vehicles, cutting residents' expenses on fuel and helping decrease CO_2 emissions.
- These strategies can promote healthier and more sustainable lifestyles through walkability.

04 INTEGRATIVE SOCIAL AND ECONOMIC RESILIENCE

Ensure social networks are given equal importance to physical networks, and are rebuilt and supported in the physical environment in ways that facilitate opportunities for economic growth and community resilience.

SOCIAL RESILIENCE

- Assess and improve the social resilience of post-conflict and post-disaster cities, and suggest ways to benefit from the social resilience of the city during the reconstruction process.
- Map community stakeholders and their priorities concerning the city's development and housing, and assess their ability to support the urban reconstruction process.
- Enable cities and communities to take advantage of strong social resilience, leverage their newly developed social capital towards accomplishing further sustainable urban priorities.

ECONOMIC RESILIENCE

- Provide guidelines for an economically efficient and successful implementation of sustainable urban reconstruction practises in post-crisis cities. This is to be done by considering phasing according to the community's priorities and emphasising transparency.

EDUCATION

- Propose strategic training and education initiatives post-crisis with the aim towards sustainable urban reconstruction. The initiatives may comprise both school education for children and adults, and public awareness campaigns.

05 HEALTH AND WELLBEING

Address both the objective and subjective aspects of community's wellbeing, especially post crisis through urban planning.

SOCIAL & MENTAL WELLBEING	• Offer spaces, services, and activities where the promotion and development of human vitality and wellbeing is materialised. As social and mental wellbeing are outcomes of good urban planning and design, there are several general and context-specific principles that can be considered and applied towards urban reconstruction efforts in post-crisis cities and neighbourhoods for this purpose.
SAFETY	• Provide integrated safety and disaster risk mitigation/prevention planning and management measures over the life cycle of the reconstruction process of cities whilst maintaining the wellbeing of all stakeholders. • Explore effective measures which prioritise safety for all stakeholders at all development levels, in the context of a health pandemic.
COMFORT	• Encourage occupant wellbeing by ensuring thermal, visual, auditory, and olfactory comfort. Encourage beneficial lifestyle practises which include good nutrition, hydration, and social connectivity.
POLLUTION	• Approach pollution mitigation and prevention through a comprehensive, integrative, and multidisciplinary design approach, and elaborate on the preservation of air, water and soil quality to minimise health risks. • For optimum protection against harm which also encapsulates human wellbeing, the theme provides mitigation strategies for other sources of pollution such as noise and light.

06 HERITAGE

Maintain a strong link to the built heritage of an area, representing the historic and cultural richness of the region, which is crucial in ensuring belonging and, in turn, wellbeing

ARCHAEOLOGY	• Maximise the unique opportunity of accessing archaeology prior to reconstruction, and carrying out archaeological investigations and excavations without jeopardising the reconstruction process. • Integrate existing archaeology, as well as potential archaeological findings, in any reconstruction scenario or master plan by applying UNESCO principles which protect existing archaeology from unorganised urban development. • Prevent reconstruction works from damaging archaeological findings.
HERITAGE	• Provide a comprehensive set of qualitative and quantitative data which informs the recommendations and processes for the protection, integration, and celebration of built heritage and its cultural significance in reconstruction plans. • Design a development framework that balances built heritage conservation, community reconstruction needs, and socioeconomic growth.

Defining priorities

Post crises there are typically overwhelming immediate needs. A sustainable reconstruction approach for infrastructure also requires an early understanding of the medium and long-term needs. The following questions define the priorities in utilising the Framework themes and strategies.

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THEME	SUB-THEME	QUESTIONS	IMMEDIATE ACTION	MID-TERM ACTION	LONG TERM ACTION
EFFICIENT RESOURCE UTILISATION	Water	Are water resources and infrastructure affected by this crisis?	YES	Partially Available	NO
	Materials	To what extent is the existing waste and debris?	HIGH	Medium	LOW
	Materials	Is there disruption to the reconstruction material supply chain?	YES	Partially Available	NO
	Energy	Are energy resources and networks operational?	NO	Partially Available	YES
ENVIRONMENTAL & CLIMATE RESILIENCE	Land	Are degraded sites ready for reconstruction?	NO	Ready	YES
	Ecology	Is there an established assessment of the ecological health of the area?	NO	Partially Available	YES
	Climate Change Mitigation	Is there a long-term climate change mitigation plan?	NO	Partially Available	YES
	Climate Change Adaptation	Is there a climate change adaptation plan?	NO	Plan	YES
SUSTAINABLE MOBILITY	Mobility	Do you have established environmentally friendly mobility modes available?	NO	Partially Available	YES
	Pedestrian Infrastructure	Is there a pedestrian infrastructure in place?	NO	Partially Available	YES
INTEGRATIVE SOCIAL & ECONOMIC RESILIENCE	Social Resilience	Is there a clear map for community stakeholders?	NO	Partially Available	YES
	Economic Resilience	Are there economical and funding issues?	YES	Partially	NO
	Education	What is the need for training and education initiatives?	HIGH	Medium	LOW
HEALTH & WELLBEING	Wellbeing Design Tools	Is human vitality and wellbeing materialised in the affected area?	NO	Partially Available	YES
	Safety	At all development levels is it considered safe for stakeholders?	NO	Partially Safe	YES
	Comfort	Is comfort considered for residence wellbeing?	NO	Partially Comfort	YES
	Pollution	Are there high-risk pollution issues?	YES	Partially	NO
HERITAGE	Archaeology	Are there archaeological sites affected?	YES	Partially Affected	NO
	Heritage	Is there built heritage and cultural significance in the affected area?	YES	Partially Affected	NO

Essential conditions

The following elements are identified as important prerequisites that must exist before the implementation of the Framework:

01 Cessation of violence

Safety, security and shelter are primary concerns for communities that have suffered shock and/or conflict and represent a tangible setting which directly concerns and affects all stakeholders. As such, security and safety in the built environment is a central issue as well as an opportunity to improve the lives of community members and ensure long lasting peace.

In the case of reconstruction in a post-conflict situation, efforts towards rebuilding must take place after a satisfactory resolution of conflict has been established. Stakeholders involved must reach a conclusion to the dispute as they begin to plan, design, and implement the rebuilding process. However since post conflict situations are complex, systems should be designed to be resilient to possible future conflicts.

02 Governance

The Framework has been designed to deal with the physical aspects of the reconstruction process, however good governance is crucial to their successful implementation. In post-conflict situations the state of governance is left weak due to lack of resources and expertise. Hence a parallel mechanism for running and monitoring a governing process needs to be developed, taking into consideration the various communities and stakeholders.

For sustainable rebuilding to take place, there must be a functioning governing authority that is present that acts as the primary safeguard for the community and day-to-day functioning of businesses, both post-disaster and reconstruction.

03 Finance

Adequate financing must be available during the planning and implementation phase. Sound accounting practises can control the risk of significant but expected up-front costs, and ensure a feasible return on investment in the long-term – financially, environmentally, and through improved wellbeing. Transparency and accountability should be a prime condition.

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Overarching Principles

The following overarching principles are identified as critical to the integrity of the Framework and must be sustained throughout implementation:

INTEGRATIVE SYSTEM THINKING

The Integrative System Thinking approach is the backbone of the Framework. This process encourages project team members to explore applicable and sustainable design, construction, and operation systems, with a focus on incorporating the interrelationships between systems in order to draw innovative solutions and more streamlined development.

INCLUSIVITY OF STAKEHOLDERS

It is crucial to ensure and identify inclusive groupings of stakeholders, especially local capacities, talents and expertise. Each theme in the framework provides a separate list of stakeholders relevant to the theme's topic and industry. Readers must note that the stakeholder lists included in each chapter provide the optimum level of stakeholders that need to be appointed for each project. It is up to the project team leaders to determine the final list of stakeholders based on availability and accessibility.

For a successful integrative process, each theme in the Framework introduces a specific list of strategies which project team leaders and stakeholders can implement to streamline their project for short-term and long-term success. Project stakeholders are encouraged to add to the list of strategies and adopt other proven methods, technologies and/or tools that are contextually applicable.

WHOLE LIFE CYCLE APPROACH

The intent is to ensure proper environmental utilisation of materials used in construction, by reducing the impact on the environment and humans over the life cycle of the construction process, while maintaining the performance, function, and the economic feasibility of the intended development.

For proper and rational implementation of a life cycle assessment (LCA) design approach, the following **challenges** must be addressed at the early stage of the planning process:
1. Local data and supply chain information.
2. Effective application of life cycle thinking to investments.
3. Integrated supply chain planning and procurement.

CULTURAL CONSIDERATIONS AND PRIORITIES

Through inclusive and equitable representation of the local stakeholders, it is vital to map and identify cultural considerations and priorities. Such considerations would reflect the local community's identity and empower their sense of ownership and belonging to the reconstruction project.

Call to action

Leverage the strength of the Framework

The Framework can be used in various ways, intended for use by diverse stakeholders across the construction life cycle. A few recommended starting points:

1. Use the Framework proactively; follow the principles in all design, operation and management projects – from design to reconstruction, across the lifecycle.

2. Use the Framework reactively; in times of system stressor and urgency, refer to principles of the Framework to ensure accurate assessment of reconstruction challenges, and to direct initial and subsequent rebuilding efforts.

3. Prioritise effectively; consider all principles of the Framework as essential components of a holistic approach to sustainable development, but prioritise essential challenges to human and environmental quality of life on a bespoke project basis.

Framework use cases:

AN EDUCATION RESOURCE: The full digital version of the Framework (available at worldgbc.org/reconstruction-framework) offers detailed information around each of the themes, and sub-principles within. A live resource library has been created through consultation with the WorldGBC global network, including academic articles and building rating tools, that can be updated over time to ensure presentation of most relevant information.

AN ASSESSMENT AND PLANNING CHECKLIST: The sub-principles of the Framework can be utilised as a checklist for design teams at early stages of project planning and throughout implementation to ensure that the sustainable reconstruction considerations are being addressed for community scale projects.

AN ADVOCACY TOOL: The Framework strategies can be analysed by city or regional scale policymakers to map alignment against building, construction and urban planning policies, design codes and standards, and highlight potential gaps in regards to sustainable reconstruction.

A STEPPING STONE TO CERTIFICATION: The Framework can act as a stepping stone to comprehensive local rating tools, which offer third-party validation of implementation for sustainable reconstruction strategies against standardised benchmarks.

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Further developments

The World Green Building Council and its network of GBCs is proud to champion ambitious leadership around the expanding scope of sustainable reconstruction in the built environment. However, this work is far from over. The next steps for a wide adoption of the Sustainable Reconstruction and Recovery Framework can include:

- Prioritise localisation and define contextual reconstruction priorities.
- Document and disseminate local case studies, tools, and best practises.
- Expand the Framework strategies to cover the operational stage to align with long-term sustainability goals.

Acknowledgements

WorldGBC would like to thank the following subject matter experts and organisations for their expertise and involvement in the extensive consultation process that has led to this valuable output.

Subject Matter Experts

Dr Adel Al-Assaf

Ahmad Al-Musa

Amira Ayoub

Eman Abdelsabour

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Louise Lambert

Marian Khan

Mohammad Asfour

Rashed Al Nasa'a

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