BUILDING REGULATORY CAPACITY ASSESSMENT

BRCA 2.0 METHODOLOGY

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CONTENTS

GLOSSARY

Building – a structure that is intended for people, animals, goods, or services.

Building control – mechanism and processes for reviewing design and construction information (e.g., drawings, specifications and material testing results), issuing construction and occupancy permits, inspecting the quality and completeness of construction activities, and enforcing regulatory framework requirements, including through incentives and penalties.

Building regulations/building code – a set of legal requirements for the design and construction of buildings, promulgated by local or national governments, which often refer to or incorporate other standards documents (for example, for design using certain building materials, or for material quality), thus making those standards legal requirements to be followed in all design and construction work that takes place in that building code's jurisdiction. These terms are used synonymously in this report.

Building regulatory framework – the complex set of laws, regulatory documents, compliance mechanisms, education and training requirements, product testing and certification processes, professional qualifications, and licensing schemes that support a safe, sustainable, and resilient built environment. It has two core components: (1) legislation and regulations that together form building regulatory systems, including legal acts that reference the planning regulations, building design codes and standards, and building control regulations; and (2) implementation mechanisms and capacity.

Chronic hazard – a hazard that persists for a long time or is constantly recurring, such as the occurrence of individual building fires or spontaneous building collapses (rather than larger-scale disasters). See also "Hazard".

Construction permit – an official document that gives permission to build on land or make modifications to an existing building (also referred to as "building permit").

Disaster risk management – the concept and practice of reducing disaster risks through systematic efforts to analyze and manage their causal factors, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Disaster risk reduction – the concept and practice of preventing new and reducing existing disaster risk and managing residual risk as part of wider Disaster Risk Management.

Existing building – a building that has been constructed, commissioned, and handed over to an owner.

Exposure – the location, attributes, and value of important community assets that are exposed to the hazard, such as people, buildings, agricultural land, and infrastructure.

Hazard – a natural or anthropogenic phenomenon that may cause loss of life, injury or other health impacts, property damage, social and economic disruption, or environmental degradation. Natural hazards relate to natural processes (such as floods, storms, droughts, earthquakes, and so on) and may be single, sequential, or combined in their origin and effects. They may differ in intensity or magnitude, scale, and frequency and are often classified by cause, such as hydrometeorological or geological. Anthropogenic hazards relate to hazards caused by human activity.

Inclusive environment – a universally accessible built environment that is flexible and adaptable to meet the needs of people of all ages and abilities and provide everyone with choices and options so that people feel comfortable and able to participate fully in activities.

Informal construction – a structure built without obtaining formal planning or construction permission; and/or a semi-permanent structure that does not meet building regulations. Informal buildings are most frequently self-built, either by low-income households themselves or by landowners for rental properties.

Informal settlement – an area that has been developed outside of planning regulations and legally sanctioned housing and land markets.

Land use plans – instruments to allocate land resources for sustainable development and protection purposes. Land use plans provide the framework for managing land use changes and the conforming and nonconforming activities within each use.

Persons with reduced mobility – anyone whose mobility is inhibited due to physical or mental disability—related terms used in the report are "disabled", "people with a disability", and "persons with a disability".

Physical planning – the active process of organizing the physical activities and land uses to ensure orderly and effective siting and coordination of land uses.

Primary legislation – parent laws passed by the legislature.

Qualitative data – information and data described verbally, and not represented by numerical values.

Quantitative data – information and data represented numerically, including anything that can be counted, measured, or given a numerical value.

Risk – the potential loss of life, injury, and destruction or damage to assets that could occur in a system, society, or community in a specific period and can be defined through the combination of three terms: hazard, exposure, and vulnerability.

Secondary legislation – laws made by an entity other than the legislature under powers defined by primary legislation (typically identified as a "rule", "order", or "regulation"—for example, Building Regulations).

Shock – "external short-term deviation from long-term trends that have substantial negative effects on people's current state of well-being, level of assets, livelihoods, safety, or their ability to withstand future shocks" [USAID*]. Shocks may be slow-onset like drought, or relatively rapid onset like a major earthquake or severe flood. A shock may be (but is not always) an acute hazard.

Strategic local plans – Usually refer to the policies addressing larger and longer-term issues for a given urban area and plans to achieve certain objectives through the development of a set of actions.

Stress – long-term factor that adversely affect the stability of a system, such as population growth, climate change, poverty, regulatory gaps, corruption, and conflict. A stress may be (but not always) a chronic hazard.

Universal accessibility – ease of independent approach, entry, evacuation, and/or use of a building and its services and facilities by all of the building's potential users—including people of all ages and abilities—with an assurance of individual health, safety, and welfare during the course of those activities.

Vernacular construction – small-scale buildings designed and built using local materials and methods passed down through tradition and community knowledge.

ACRONYMS

BRCA	Building Regulatory Capacity Assessment
BRR	Building Regulation for Resilience
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EIA	Environmental Impact Assessment
FCS	Fragile and Conflict-Affected Situations
FRR	Fire Resistance Rating
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GIS	Geographic Information System
NGO	Nongovernmental Organization
PRM	Persons with Reduced Mobility
QA	Quality Assurance

WHAT IS THE BRCA 2.0

The **Building Regulatory Capacity Assessment** (**BRCA**) is a methodology to help countries, and cities assess their building and land use regulatory framework and identify opportunities for priority reforms and improvements. This is a pressing issue, as in many countries, rapid urbanization is occurring without comprehensive building regulatory frameworks and corresponding capacity to better manage disaster risks.

BRCA 2.0, is an updated version of the original BRCA methodology published in 2017, and provides a simplified set of assessment questions, elaborated guidance to formulate practical and high priority recommendations, along with a reporting template to streamline report delivery. It aims to support governments' decision-makers in charge of defining the priority and scope of legal, policy, and institutional reforms related to resilient, sustainable and inclusive built environments.

By 2050, up to 70 percent of people are predicted to be living in cities. Urbanization can and should be embraced as an opportunity to reduce poverty, which can only be possible if current development patterns are transformed to guide urban growth in developing countries toward a more sustainable trajectory.

A comprehensive Building Regulatory Framework can support many social and economic objectives that rely on the quality of the built environment.

**The term Building Regulatory Framework refers to a set of laws, regulatory documents, compliance mechanisms, education and training requirements, product testing and certification processes, professional qualifications, and licensing schemes that support resilient, green, and inclusive built environments.*

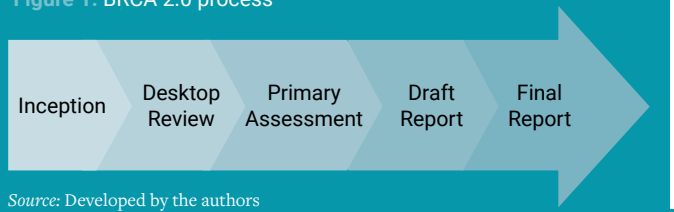
The targeted audience includes government officials and urban resilience practitioners (e.g. international organization staff and their technical partners) interested in learning how their own regulatory framework can be assessed and improved.

Ultimately, the BRCA aims to contribute to the reinforcement and/or establishment of well-structured, comprehensive, and practical Building Regulatory Frameworks, to:

- Facilitate resilient, green, and inclusive built environments to achieve the minimum levels of performance in terms of safety, health, energy and water efficiency, and universal accessibility; and
- Contribute to creating an enabling environment for sustainable economic development by establishing effective, efficient, and reliable regulatory practices that incentivize economic investments.

The BRCA identifies critical gaps and provides the necessary information to develop a baseline for formulating technical assistance to governments, as well as consolidating findings that can be used to determine areas for improvements and investments. Figure 1 provides typical approach taken to conduct BRCA 2.0.

Figure 1. BRCA 2.0 process



Source: Developed by the authors

WHAT IS NEW IN THE 2.0 VERSION

PILLAR 1:
Country Characteristics

PILLAR 2:
Legal and Regulatory Framework

PILLAR 3:
Implementation Mechanismand Capacity

- Overall refinement and clarification of the BRCA process and framework, consolidating the previous "Level 1" and "Level 2."
- Restructure of the assessment framework for clear and easy navigation by combining the previous "legal and administrative" and "development and maintenance" categories into Pillar 2: Legal and Regulatory Framework.
- Introduction of Pillar Assessment Objectives, Topic Assessment Questions, and Example Detailed Questions, replacing the previous "Screening Questions".
- Integration of a detailed guidance on formulation of Recommendations, Intervention Areas, Priority Actions and Implementation Plan. Examples of recommendations are also provided for reference.
- Development of a standard BRCA Report Template.

HOW IS THIS DOCUMENT STRUCTURED

The main content of the document is organized in four sections, with supplementary information and tools appended as follows:

SECTION A — INTRODUCING THE BRCA 2.0

- Explains the essential role of the building regulatory framework as a foundation for sustainable and resilient development, and why/how the BRCA contributes to ensure its effectiveness.
- Provides an overview of essential content for comprehensive regulatory frameworks.

SECTION B — BRCA 2.0 PROCESS AND FRAMEWORK

- Explains the structure of the BRCA 2.0 and provides guidance on the BRCA 2.0 methodology.
- Introduces the BRCA 2.0 pillars.
- Defines the format and content required for the BRCA 2.0 report, including explanatory notes to guide the consultant in developing each section.

SECTION C — DETAILED ASSESSMENT GUIDANCE

- Explains the assessment process required under each pillar of the BRCA framework, including key questions to guide the design of the data collection process and stakeholder consultations.
- Provides guidance on how to use the report template.

SECTION D — ASSESSMENT QUESTIONS SUMMARY AND EXAMPLE DETAILED QUESTIONS

- Provides a summary of the Topic Assessment Questions.
- Gives examples of Detailed Questions.

APPENDIX A

Some examples of Recommendations organized by pillars

APPENDIX B

Some Resources and examples of information sources that are needed to complete the assessment.

APPENDIX C

The BRCA Report Template.

SECTION A

INTRODUCING THE BRCA 2.0

SECTION A.1

The Essential Role of the Building Regulatory Framework

BENEFITS OF AN ENHANCED BUILDING REGULATORY FRAMEWORK

Comprehensive and well-functioning building regulatory frameworks support many societal and economic objectives that rely on the quality of the built environment. Building regulatory frameworks—laws, regulations, and implementation mechanisms that set requirements for planning, design, construction, and building control processes—help ensure that buildings, which play an essential role, have a positive impact on public health and safety, welfare, and resource efficiency, including sustainable building practices, universal accessibility, inclusivity, and resilience. The different components of the building regulatory framework should function holistically to assure that a particular building, on a particular site, can achieve the required minimum levels of performance. Building regulatory framework can facilitate:

1. Establishing the minimum standards for acceptable performance.

Left solely to the market, there can be significant variation in the minimum level of building performance. This can exacerbate risk and inequality, particularly as global challenges intensify, from climate change, to increased urban densification, rapidly aging populations, and the need for universal accessibility across the built environment. As such, building regulatory frameworks typically establish minimum planning, design, construction, and maintenance standards and are recognized as an important mechanism for:

- **Public Safety:** reducing exposure and vulnerability to natural hazards (including geological, such as earthquakes, landslides; hydrological, such as floods; meteorological, such as hurricanes, extreme temperature events; etc.) and man-made hazards (including construction quality-related hazards such as building collapses, fires, etc.).
- **Public Health:** ensuring the appropriate provision of utilities and services, and appropriate disposal of waste products.
- **Environment:** promoting environmental sustainability and green building practices by improving buildings to mitigate environmental risks and adapt to the projected impacts of climate change.

2. Facilitating context-specific and up-to-date guidance.

There is no one-size-fits-all solution that can respond to the specific context and evolving challenges that each country faces. A comprehensive, context appropriate building regulatory framework allows a country to identify, address, and respond to its specific physical, social, cultural, and economic conditions and needs. It also provides a framework through which to address emerging societal objectives holistically and comprehensively. Conversely, deficient building regulations can result in a vulnerable built environment that is unable to adapt to changing climate and is more exposed to hazards.

3. Ensuring an equitable distribution of responsibility and liability.

The primary entity responsible for constructing a building may not be directly affected by all its potential impacts. For example, they may not be affected by damage caused to surrounding buildings and people through fire or collapse, or adverse environmental impacts from emission of toxic substances. A comprehensive regulatory framework can ensure that the correct incentives are in place to ensure that responsibility and liability for mitigating potential harmful outcomes is distributed appropriately across all those involved, including design professionals, contractors, and operators.

4. Stimulating economic growth by facilitating an enhanced investment environment.

Building regulatory frameworks facilitate economic development and stability by establishing a clear set of design and construction requirements, quality standards, and reliable regulatory practices. This promotes operational efficiency across the sector. For investors and building users who require knowledge to assess and achieve the required building performance, the building regulatory frameworks provide useful indicators, including resilience to hazards, energy and water efficiency, comfort, and universal accessibility. This reduces uncertainty in real estate transactions and helps to increase the value of real estate assets. A building regulatory framework can also facilitate trade between jurisdictions, establishing a shared understanding of minimum performance and quality criteria and a clear path to approval of building products and materials.

SECTION A.2

The Need for the BRCA 2.0

HOW THE BRCA 2.0 CONTRIBUTES TO BUILDING REGULATION FOR RESILIENCE

A comprehensive and context-sensitive assessment is essential to understand challenges and opportunities for the building regulatory framework, identify actions for improvement, and strengthen resilience through building regulations. **The Building Regulatory Capacity Assessment (BRCA) 2.0** methodology provides an efficient framework to assess existing regulatory framework and facilitate the development of clear and sound recommendations to strengthen the building regulatory framework by establishing the basis for understanding:

1. the country context and its challenges and opportunities;
2. the building regulatory framework for planning, design, construction, and maintenance of buildings and surroundings, examining all key technical areas; and
3. the capacity and capability of the government and private sector to implement and work in accordance with the regulatory framework.

The BRCA 2.0 aims to:

- Facilitate an assessment of critical information about a building regulatory framework in a particular jurisdiction;
- Identify opportunities for improvements and actionable recommendations for priority reforms by governments;
- Develop a baseline for formulating technical assistance; and
- Contribute to policy dialogue between governments and World Bank task teams.

The outputs of the BRCA 2.0 aim to inform the government's decision-making for priority actions and reforms. This could be supported by investments by the World Bank, development partners, or governments themselves to enhance building regulatory framework, improve efficiency and effectiveness of building control processes (e.g. digital platforms with process reforms), as well as associated professional capacity in both public and private sectors. The ultimate objective of the BRCA 2.0 is to support governments in undertaking a wide range of development actions that contribute to improving resilience, sustainability, and universal accessibility of the built environment.

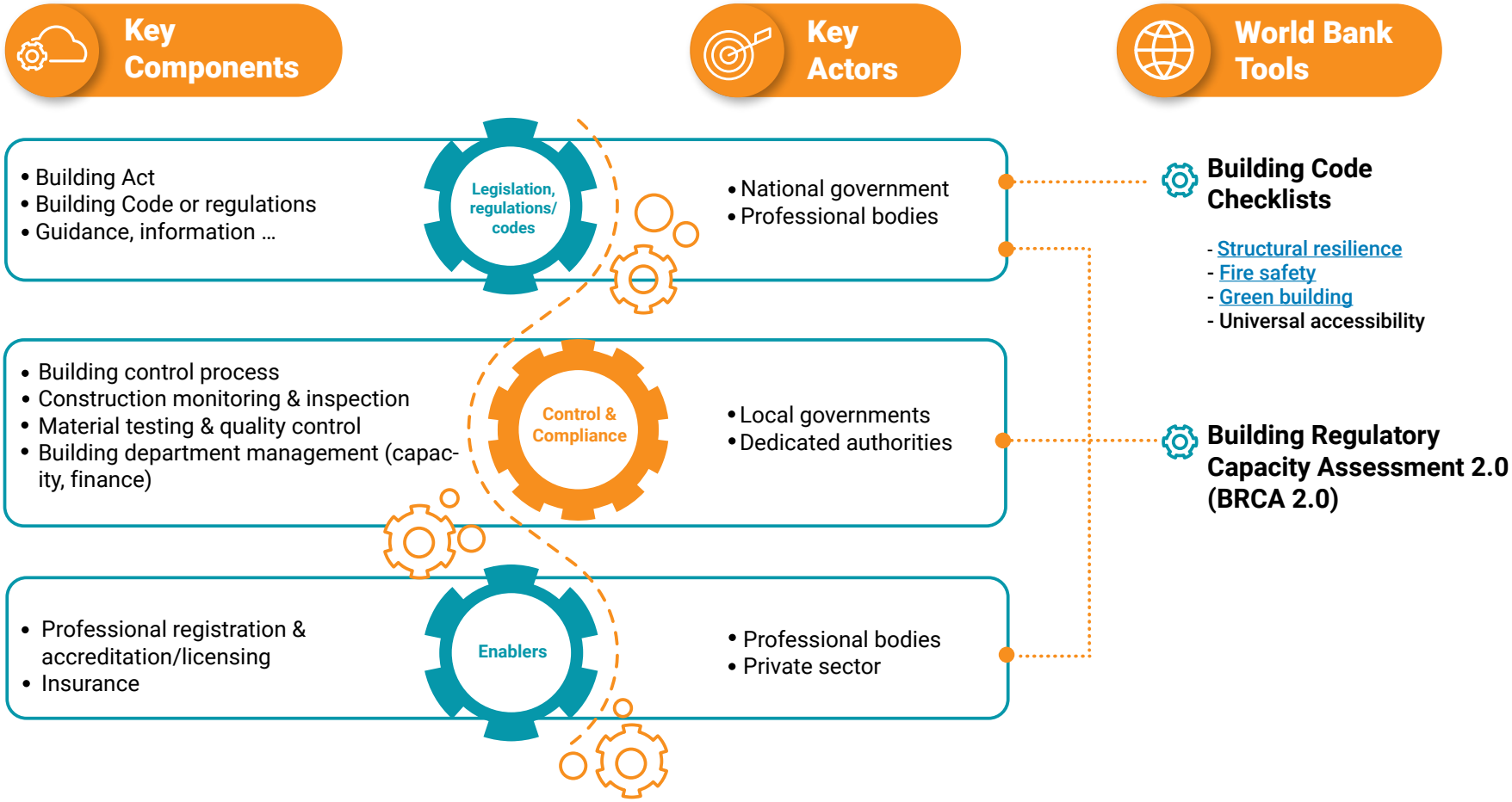
Application of the BRCA 2.0

The BRCA 2.0 is produced by the World Bank's Building Regulation for Resilience (BRR) technical area, as part of the Global Facility for Disaster Reduction and Recovery (GFDRR). The BRR supports governments in improving building regulatory frameworks, strengthening building control and compliance processes, and enhancing the capacity of building professionals. Figure 2 indicates a typical BRR work process to engage government counterparts and describes the process of assessment where the BRCA 2.0 can be leveraged. The BRCA 2.0 is often used as an engagement tool to first understand the country context and status of a country of engagement to identify appropriate entry points for the World Bank's meaningful partnership with government stakeholders. In addition to the BRCA 2.0, the BRR offers a series of checklist tools to conduct an advanced review for contents of building codes focusing on: structural resilience, fire safety, green buildings, and universal accessibility.

SECTION A.2

The Need for the BRCA 2.0 (cont.)

Figure 2. The stages of the BRR Program and associated tools



Source: Adapted from https://www.gfdrr.org/en/building-regulation-for-resilience

SECTION B

BRCA 2.0 PROCESS AND FRAMEWORK

SECTION B.1

Conducting a BRCA 2.0

GETTING STARTED

This section explains the components of the BRCA 2.0 methodology and the process of conducting a BRCA 2.0 assessment.

BRCA 2.0 Roles and Responsibilities

BRR engagements often begin with policy dialogue between governments and the World Bank, an understanding of a government's objectives for strengthening the building regulatory frameworks, or a regulatory component that supports a government's effort in improving the resilience, sustainability and inclusiveness of the built environment overall. This is typically followed by a diagnostic assessment (e.g., the BRCA) to examine challenges and opportunities in the existing building regulatory framework and implementation mechanisms.

The World Bank teams work with governments to conduct BRCAs using this methodology. Representatives from the country's government, typically led by an appropriate ministry or division with responsibility for oversight of the construction industry, will assist with input information and facilitation of stakeholder engagement.

BRCA 2.0 Process and Framework

The BRCA methodology is defined through the process and the assessment framework. The process describes the sequence of activities that should be undertaken when conducting a BRCA. The **assessment framework** facilitates systematic data collection and analyses, such that useful conclusions and outcomes can be extracted from the wider data.

The framework is comprised of three pillars (See Section B.3) that collectively define what needs to be understood and analyzed to determine recommendations to develop a context-appropriate, comprehensive, effective regulatory environment. Assessment conducted under the three pillars will synthesize data on the existing country characteristics, legal and regulatory framework, and implementation mechanism and capacity. The assessment process is not linear; rather it is an iterative endeavor of continuous data collection, data analysis, and stakeholder consultations. Sections B.2 and B.3 provide further details on the process and assessment framework, respectively.

The final component of the BRCA is where the assessment undertaken under the pillars is synthesized to propose Recommendations, Intervention Areas, and an Implementation Plan. These are key outputs of the BRCA. Sections B.4 and B.5 provide further guidance on these aspects.

Section B.5.4 provides an overview of how the different detailed components of the BRCA are synthesized.

BRCA 2.0 Report Template

Section B.6 offers broad guidance on how the BRCA should be presented, in the format of a report. More specific guidance on reporting and presentation is captured throughout the methodology in the appropriate locations. The report template is also offered in Appendix C.

SECTION B.2

BRCA 2.0 Process

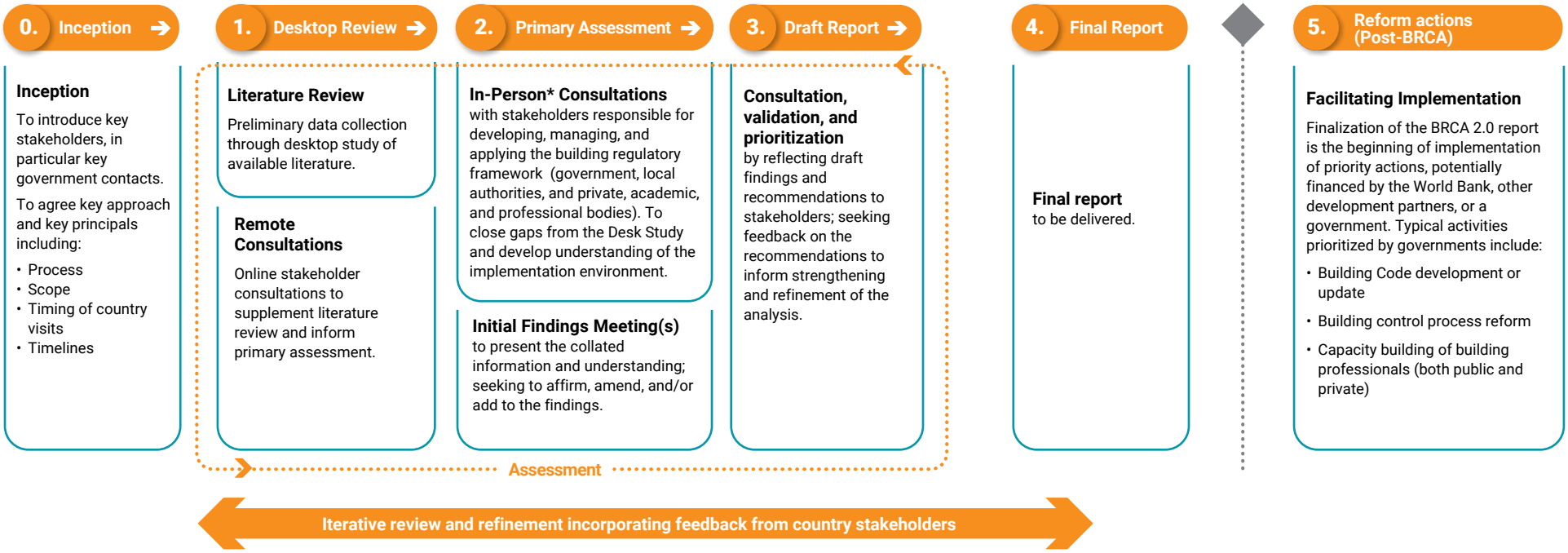
The BRCA 2.0 begins with an initial desktop review of key regulatory documents and stakeholder consultations to understand existing building regulatory frameworks.

Figure 3 shows the key activities typically performed to progress a BRCA from inception, through initial desk-based fact finding, stakeholder consultation, an analysis and validation, with interim reports and presentations prior to finalization. This process is indicative and should be refined and agreed with the government during the inception.

The different modes of data collection (desk-based literature reviews and consultations) should ensure that the assessment is comprehensive and spans a variety of information sources to generate evidence-based findings.

The assessment process is not entirely linear. Data collection and analyses are organized through application of the BRCA assessment framework (see Section B.3 and Section C), and report contents are continually being developed through an incremental and iterative process. Section B.6 provides further guidance on the BRCA report structure.

Figure 3. Typical Components of the BRCA Process



** In-person consultations are preferred where conditions permit the Consultant to conduct a field mission; however, in cases where this is not possible the Primary Assessment phase may be conducted remotely. Similarly; presentation of the draft findings and recommendations should be in person where possible. The project Terms of Reference may indicate whether a field mission is expected.*

Source: Developed by the authors.

SECTION B.3

BRCA 2.0 Assessment Framework

PILLARS, TOPICS, AND SUB-TOPICS

The BRCA assessment Pillars collectively define what needs to be understood and analyzed to inform development of a context-appropriate, comprehensive, effective regulatory environment. The pillars form an assessment framework that covers (1) the country-specific conditions that the regulatory framework needs to respond to; (2) how comprehensively the existing regulatory framework responds to the needs of the context; and (3) the adequacy of the implementation mechanism and capacity. Each Pillar contains a series of topics and sub-topics which the assessment must cover to ensure that adequate data have been collected to inform the analysis. Section C of this methodology provides detailed guidance on the data that should be collected and assessed under each pillar, and includes Pillar Assessment Objectives, Topic Assessment Questions, and Report Guidance where relevant.

PILLAR 1: Country Characteristics

The general country context and its challenges.

Topic	*Sub-topic*
1.1 Country Context	1.1.1 Natural geography and topography 1.1.2 Climate 1.1.3 Political system and administrative divisions 1.1.4 Critical infrastructure networks 1.1.5 Socioeconomic factors
1.2 Risk Profile	1.2.1 Hazards 1.2.2 Historical hazard events and future impact of climate change 1.2.3 Risk Information availability 1.2.4 Recent initiatives 1.2.5 Challenges and compounding factors
1.3 Urbanization Profile	1.3.1 Urbanization trends, effects, and challenges 1.3.2. Access to land, property registration, and basic services
1.4 Construction Materials and Methods	1.4.1 Typical materials, building typologies, and construction methods 1.4.2 Implications of current practices
1.5 Fragile and Conflict-Affected Situations	1.5.1 Fragile and conflict-affected situations
1.6 Drivers of Risk in the Built Environment	1.6.1 A summary of the principal drivers of risk

PILLAR 2: Legal and Regulatory Framework

An analysis of the buildings legal and regulatory framework in major technical areas (risk-sensitive land use planning, hazard data, structural design, fire safety and prevention, universal accessibility, resource efficiency, and construction materials and products).

Topic	*Sub-topic*
2.1 Legislative Framework Overview	2.1.1 Legislative framework 2.1.2 Development and maintenance of regulations
2.2 Spatial Planning Requirements	2.2.1 Risk-sensitive land use and physical planning 2.2.2 Risk informationmanagement
2.3 Building Code Requirements	2.3.1 Structural and geotechnical design 2.3.2 Fire safety and prevention 2.3.3 Universal accessibility and inclusive design 2.3.4 Green buildings 2.3.5 Climate change adaptation 2.3.6 Construction materials, products, and methods 2.3.7 Environmental impacts management during construction and operations* 2.3.8 Heritage and reuse* 2.3.9 Health and safety*

PILLAR 3: Implementation Mechanism and Capacity

An analysis of the implementation mechanisms and capacities of the local stakeholders (relevant ministries, sub-national governments, technical agencies, third parties, design professionals, and builders in the private sector).

Topic	*Sub-topic*
3.1 Urban Planning and Building Control Process	3.1.1 Control mechanisms: approvals and enforcement
3.2 Institutional Capacity Assessment	3.2.1 Key ministries and departments regulating the built environment 3.2.2 Other governmental agencies and third parties involved (if any)
3.3 Construction Industry Capacity Assessment	3.3.1 Education environment 3.3.2 Design professionals 3.3.3 Builders or contractors 3.3.4 Education and certification
3.4 Insurance and Liability System Overview	3.4.1 Summary of insurance and liability systems for professionals

**In some contexts, these sub-topics will not feature in Building Regulations, or will have varying degrees of relevance to the context. The inclusion of these sub-topics will need to reviewed and agreed for each BRCA.*

SECTION B.3.1

BRCA 2.0 Assessment Framework

ASSESSMENT OBJECTIVES AND QUESTIONS

To support comprehensive data collection and analyses, standard Assessment Objectives have been identified and describe the overarching understanding that should be derived from the data gathered under each of the pillar topics (see Example 1).

Collectively, this understanding across the three pillars will establish a clear picture of the country-specific conditions and needs the regulatory framework should respond to; the extent to which the existing framework responds to those conditions and needs; and the capacity of the supporting environment to successfully implement the framework.

In Section C, for each of the pillar topics, Topic Assessment Questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics (Example 2). The data and analyses presented in the BRCA 2.0 report should address each of these questions in the relevant topic section. Section C also provides detailed Assessment Guidance on the information to be collected and assessed under the three Pillars and includes the Assessment Objectives and Topic Assessment Questions.

In Section D, a list of guiding questions combining Topic Assessment Questions and additional example Detailed Questions are provided to aid data collection. Additional data, and/or specific focus areas may be applicable on a country-specific basis.

The Terms of Reference for a BRCA 2.0 may include information on such additional requirements; and teams should also use the inception phase to engage with a government in defining the unique BRCA scope needed to cover and respond to interests and priorities of a country.

Example 1: Assessment Objectives for Pillar 1 (Country Characteristics)

Pillar 1 Assessment Objectives

These objectives describe the overarching understanding that should be derived from the data gathered under the Pillar 1 topics:

1. To understand the principal contextual factors that are relevant to the function of the country's built environment sector and their impact on people and nature.
2. To understand the contextual factors that the building regulatory framework needs to consider in order to support safe, sustainable, and resilient built environments.

Example 2: Topic Assessment Questions for Pillar 1 Topic 1.1 (Country Context)

Topic Assessment Questions

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the defining features of the country context?
2. What is the impact of the defining country features on the built environment, people and nature?
3. How do these defining country features support or impede the building regulatory framework?

SECTION B.4

Formulating the Recommendations

Following the data collection and analyses, the consultant should generate a list of targeted, prioritized recommendations.

The focus of the recommendations should be around: strengthening the scope, provisions, and formulations of the building regulatory framework; clarifying roles and responsibilities of stakeholders involved; and identifying institutional capacity and coordination mechanisms, as well as developing an implementation plan for implementing enhanced regulatory compliance mechanisms.

The development of the recommendations should be based on a technical analysis of the pillars, in combination with inputs from the stakeholders consultations, and should consider the practicality of implementation. In some cases, it will be beneficial to refer to good international industry practices to develop the recommendations. Examples of main themes for recommendations include:

- Creation, adoption, or expansion of the scope of building regulations;
- Increasing the role of certain government authorities at national or local levels;
- Providing more clarity and detailed guidance and reducing ambiguity in building codes for facilitating better understanding of requirements for building designers and builders;
- Enhancing the capacity and capability of building officials involved in building control works from the public sector by enhancing recruitment, training, and financial management to effectively fulfil staffing needs of departments in charge of building control works;
- Capacity building to help those undertaking design and construction of buildings to comply with regulations;
- Improving inter-agency coordination for building control works with other agencies involved (e.g., Public Works, Public Health Department, fire department, etc.); and
- Enhancing certification and accreditation mechanisms and processes for building professionals.

Tips for formulating recommendations:

- Give the recommendation a unique code that can be used to distinguish it from all the recommendations across the pillars.
- Begin with a verb.
- Describe the recommendation using one clear, simple phrase.
  e.g.,
  - [Code] [Verb] [Clear, simple phrase]
  - **R3.** Complete and enact the Building Control Act.
  - **R21.** Set up a technical committee to steer the development of a National Building Code.

For an expanded list of typical recommendations formulated in this way, see Appendix A.

Further Guidance:

- The level of detail in the recommendation should be carefully considered. Avoid unnecessary details but include enough information such that the instruction is precise and unambiguous. The level of detail should be broadly consistent across the recommendations.
- Under each recommendation the key findings that led to the recommendation should be explained in one to two paragraphs.
- Recommendations for Pillars 2 and 3 should be listed at the end of the corresponding BRCA report section, along with a summary of related key findings.
- A complete list of all recommendations should also be included in Section 4 of the BRCA 2.0 report.
- See the report template in Appendix C for examples of the above points.

SECTION B.5

Developing the Implementation Plan

REFINING RECOMMENDATIONS TO DEFINE INTERVENTION AND IMPLEMENTATION PLAN

After conducting data collection and analyses (Sections B.2 and B.3), and generating recommendations (Section B.4), these should be synthesized into an Implementation Plan with Intervention Areas.

Intervention Areas are defined as the most critical areas within which to target reform action. They are identified for each subject-country by *analyzing the recommendations* that have been set out at the end of the BRCA Sections 2 and 3 (corresponding to Pillars 2 and 3, respectively) and *identifying common themes* that the recommendations can be grouped under. These common themes can be considered the first iteration of the Intervention Areas, which should then be further analyzed and developed into a more streamlined set of Intervention Areas. The aim is to *develop a succinct set of no more than four to five distinct Intervention Areas* that can encompass all the recommendations while avoiding overlaps between the themes. This may require an iterative process of working back and forth between analyzing the recommendations and refining the Intervention Areas multiple times.

The Intervention Areas Table:

Once the Intervention Areas are defined, they can be given a unique code and color, and be presented in a color-coded table (see figure 4). The recommendations developed in BRCA 2.0 Sections 2 and 3 should then be grouped under the Intervention Areas in the same table. Please note that recommendations corresponding to both Pillars 2 and 3 may be grouped under the same Intervention Area.

At this stage, the recommendations should be reviewed and refined to ensure that they are succinct and distinct. You may find that some recommendations can be combined into one, or that some recommendations may be better positioned as a *priority action* that falls underneath another recommendation (see Section B.5.2 for guidance on Priority Actions).

Once the recommendations are finalized and grouped into the correct Intervention Areas, it is necessary to **define a *Lead Entity and Implementation Timeframe* for each recommendation**.

- **Lead Entity** is the ministry, department, or combination of public and private sector entities in the subject-country that are identified as suitable for taking the lead on implementing a particular recommendation. While the lead entity may often work in collaboration with others, it is critical to define it as taking leading *responsibility* for the fulfilment of that recommendation. It is therefore important to ensure that the entities identified have the suitable jurisdiction to effectively fulfil the responsibility.
- **Implementation Timeframe** refers to the timeframe within which it is proposed to complete each recommendation. It is indicative, as the actual timeframe of implementation may differ, and is intended to reflect the following facts:
  - Some recommendations are critical and immediate action is required.
  - Some recommendations must be implemented before others can be.
  - Recommendations may be implemented in parallel with others.
  - Recommendations may require distinct actions over several years.

Defining Implementation Timeframes for each recommendation may require an iterative process of assessing the recommendations holistically in order to identify temporal relationships and dependencies between the recommendations. This work will directly feed into the Implementation Plan, for which guidance is outlined in Sections B.5.2 and B.5.3.

Where possible, further high-level information should be provided to aid prioritization and planning, such as estimated impact and cost. If high-level descriptors are used (such as high/medium/low), these should be defined for the context.

SECTION B.5.1

Developing the Implementation Plan

Figure 4. An example of Intervention Area Table that shows the desired outcome of the guidance in the preceding page. The annotations highlight the key features that contribute to the clarity of the table and that are necessary to incorporate.

The **Intervention Areas (IA)** developed provide primary structure of the table. The numbering and color-coding attributed to each IA should be used here. The description of the Intervention Area should be included.

			Proposed Lead Entities	Timeframe
IA 1	**Develop and implement the legislation, instruments and guidance, including data, needed to regulate and manage land-use planning, development control and construction.**			
	R 1	Complete the national legal framework for land-use planning and development control.	LLA	1–3 years
	R 2	Develop instruments to guide and regulate urban growth.	LLA	1–3 years
	R 10	Conduct a detailed, countrywide hazard assessment for urban areas (where there is a concentration of people and assets, and therefore risk exposure) to obtain data that may inform the planning and construction of buildings.	NDMA – EPA – MPW	1 – 2 years
	R 18	Establish a Building Code Technical Committee to lead the development and implementation of a national building code.	*(To be formed) Building Code Technical Committee*	6–12 months
	R 20	Clarify which entity has the mandate to develop and maintain fire-safety regulations and set up a technical committee to lead the development of a code that reflects current conditions in Liberia and provides the basis for effective monitoring and enforcement of fire regulations.	MPW – LNFS	Action now
IA 2	**Develop standards and a certification system for construction materials, products and systems.**			
	R 5	Adapt, adopt or create standards that are appropriate for Liberia.	LISA	1–10 years phased
	R 6	Establish a certification framework for materials, products and construction systems.	LISA	1–10 years phased
IA 3	**Improve processes and knowledge and clarify responsibilities for land-use planning and development control activities.**			
	R 12	Improve and streamline the construction permit process.	MPW – LLA	6 months to 3 years
	R 13	Develop guidelines for improving decision-making during the construction permit process.	MPW	Action now
IA 4	**Acquire and develop the human, technical and financial resources for key built environment functions.**			
	R 28	Develop higher-education courses for urban planning and Masters-level degrees for engineering subjects.	MoE – LIA – ESOL – Academia	3–5 years

The proposed **lead entity** responsible and **timeframe** should be clearly presented next to the associated recommendation.

Further columns can be added to capture more information as required, such as high-level cost and impact estimated.

Recommendations should be the primary color-coded according to the Pillar they relate to.

The table should capture all the recommendations. As such, it can be spread over several pages as required.

Include a legend as appropriate.

Pillar 2 – Legal and Regulatory Framework
Pillar 3 – Implementation Mechanism and Capacity

Source: Developed by the authors

SECTION B.5.2

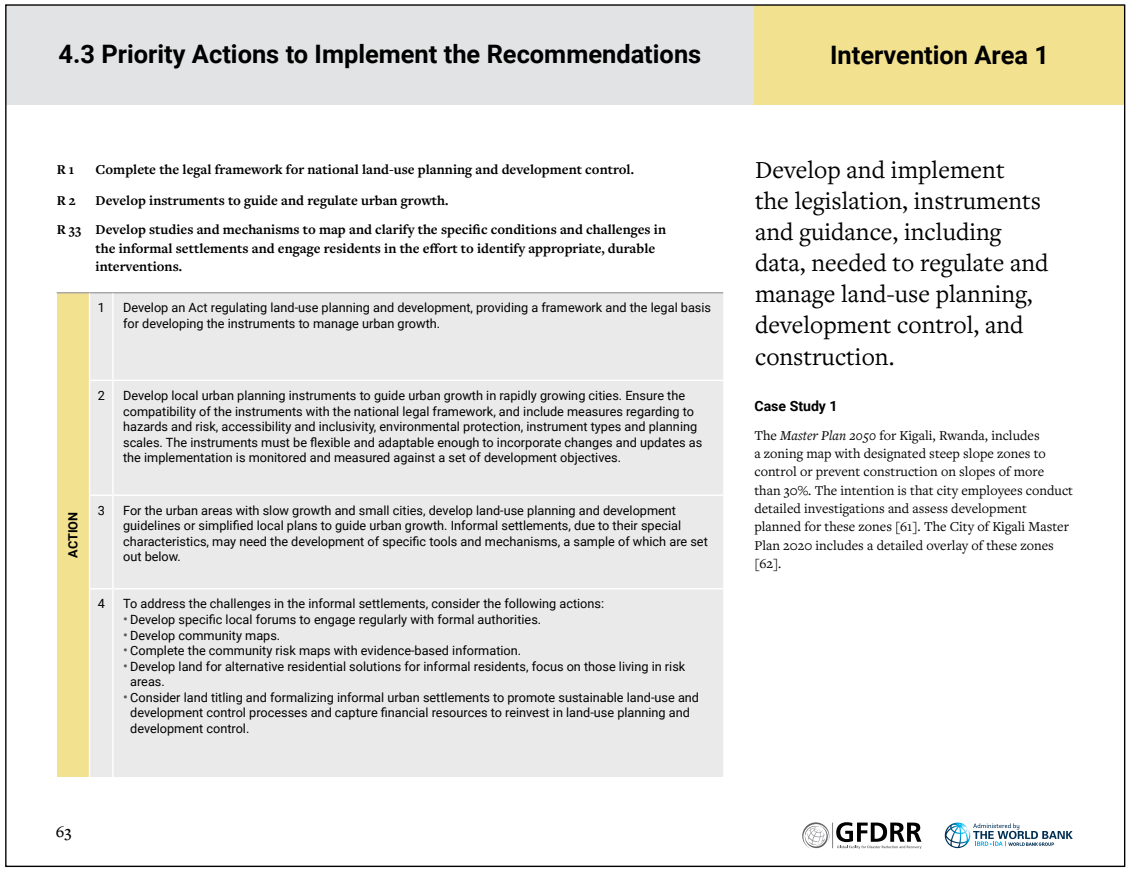
Developing the Implementation Plan

PRIORITY ACTIONS

After developing the Implementation Areas, grouping the recommendations accordingly, and identifying the Lead Entities and Implementation Timeframes for each recommendation, it is necessary to identify Priority Actions.

Priority Actions are the essential key actions required to implement the recommendations.

Figure 5. Example of Priority Actions identified for Recommendations grouped under an Intervention Area.



4.3 Priority Actions to Implement the Recommendations

Intervention Area 1

R 1 **Complete the legal framework for national land-use planning and development control.**

R 2 **Develop instruments to guide and regulate urban growth.**

R 33 **Develop studies and mechanisms to map and clarify the specific conditions and challenges in the informal settlements and engage residents in the effort to identify appropriate, durable interventions.**

ACTION	1	Develop an Act regulating land-use planning and development, providing a framework and the legal basis for developing the instruments to manage urban growth.
	2	Develop local urban planning instruments to guide urban growth in rapidly growing cities. Ensure the compatibility of the instruments with the national legal framework, and include measures regarding to hazards and risk, accessibility and inclusivity, environmental protection, instrument types and planning scales. The instruments must be flexible and adaptable enough to incorporate changes and updates as the implementation is monitored and measured against a set of development objectives.
	3	For the urban areas with slow growth and small cities, develop land-use planning and development guidelines or simplified local plans to guide urban growth. Informal settlements, due to their special characteristics, may need the development of specific tools and mechanisms, a sample of which are set out below.
	4	To address the challenges in the informal settlements, consider the following actions: • Develop specific local forums to engage regularly with formal authorities. • Develop community maps. • Complete the community risk maps with evidence-based information. • Develop land for alternative residential solutions for informal residents, focus on those living in risk areas. • Consider land titling and formalizing informal urban settlements to promote sustainable land-use and development control processes and capture financial resources to reinvest in land-use planning and development control.

Develop and implement the legislation, instruments and guidance, including data, needed to regulate and manage land-use planning, development control, and construction.

Case Study 1

The *Master Plan 2050* for Kigali, Rwanda, includes a zoning map with designated steep slope zones to control or prevent construction on slopes of more than 30%. The intention is that city employees conduct detailed investigations and assess development planned for these zones [61]. The City of Kigali Master Plan 2020 includes a detailed overlay of these zones [62].

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Source: Developed by the authors

Tips for Summary

- Actions may be defined per individual Recommendation, or it may be more appropriate to associate a set of actions to a set of Recommendations that are closely related or interdependent. This is because, even though the Recommendations should be distinct from each other, there may be cases where there are overlapping initial actions to kick-start a set of different recommendations.
- The Priority Actions should be set out underneath the Recommendation or set of Recommendations they are associated with. They should be color-coded and organized by Intervention Area, and the order of Intervention Areas, Recommendations, and associated Priority Actions should correspond to the order established in the Intervention Area table.
- As shown in figure 5, it may be helpful to include contextually relevant Case Studies to:
  a. Help the report author clearly define the actions necessary to realize reform.
  b. Help report readers understand how the actions are implemented and that the actions are achievable.

SECTION B.5.2

Developing the Implementation Plan

PRIORITY ACTIONS

Having established the Priority Actions that are necessary to implement the Recommendations, **an Implementation Plan should be developed to propose a sequence and timeframe for the realization of the Recommendations, in the format of a visual timeline** (see figure 6 in next page).

Grouped by Intervention Area, all the Recommendations should be plotted against a timeline, showing clearly the sequencing of the implementation, how the Recommendations might relate to each other, and visually identifying any key linkages, dependencies, or information flows between Recommendations. For example, the Implementation Plan should highlight if there are any Recommendations that necessarily must precede another Recommendation, or if it is preferable to conduct two Recommendations simultaneously.

The timeline and sequencing of the Recommendations should correspond to the Implementation Timeframe already established for each Recommendation and set out in the Intervention Area Table. However, the task of developing the Implementation Plan offers another opportunity to review the Recommendations, the priority actions, and their Implementation Timeframe holistically and refine the proposal, paying specific attention to how the Recommendations relate to each other. This may require an iterative process, and any associated changes to the Implementation Timeframes of each Recommendation should be updated in the Intervention Area Table such that all the information is consistent.

The Implementation Plan should maintain the color-coding that has been used throughout the BRCA 2.0 to clearly identify the Intervention Areas, the Recommendations that have been grouped under each one, and in turn, how each Recommendation relates to the BRCA 2.0 assessment pillars. An example Implementation Plan is provided in figure 6.

Collectively, the Intervention Areas, Recommendations, Priority Actions and the Implementation Plan take the BRCA 2.0 for the subject-country a step further by providing a structure for reform. As well as introducing new concepts, the structure should also highlight known issues that remain unresolved, broaden awareness of these issues, and focus attention on what may be necessary to drive change. However, It is important to note that reform is not a simple or necessarily linear process. Accordingly, the Implementation Plan shall, by necessity, be considered as a departure point rather than a destination. The sequence and timings in the Implementation Plan are indicative only and provided to inform planning and a consideration of national and local priorities concerning development and building control in the subject-country.

SECTION B.5.3

Developing the Implementation Plan

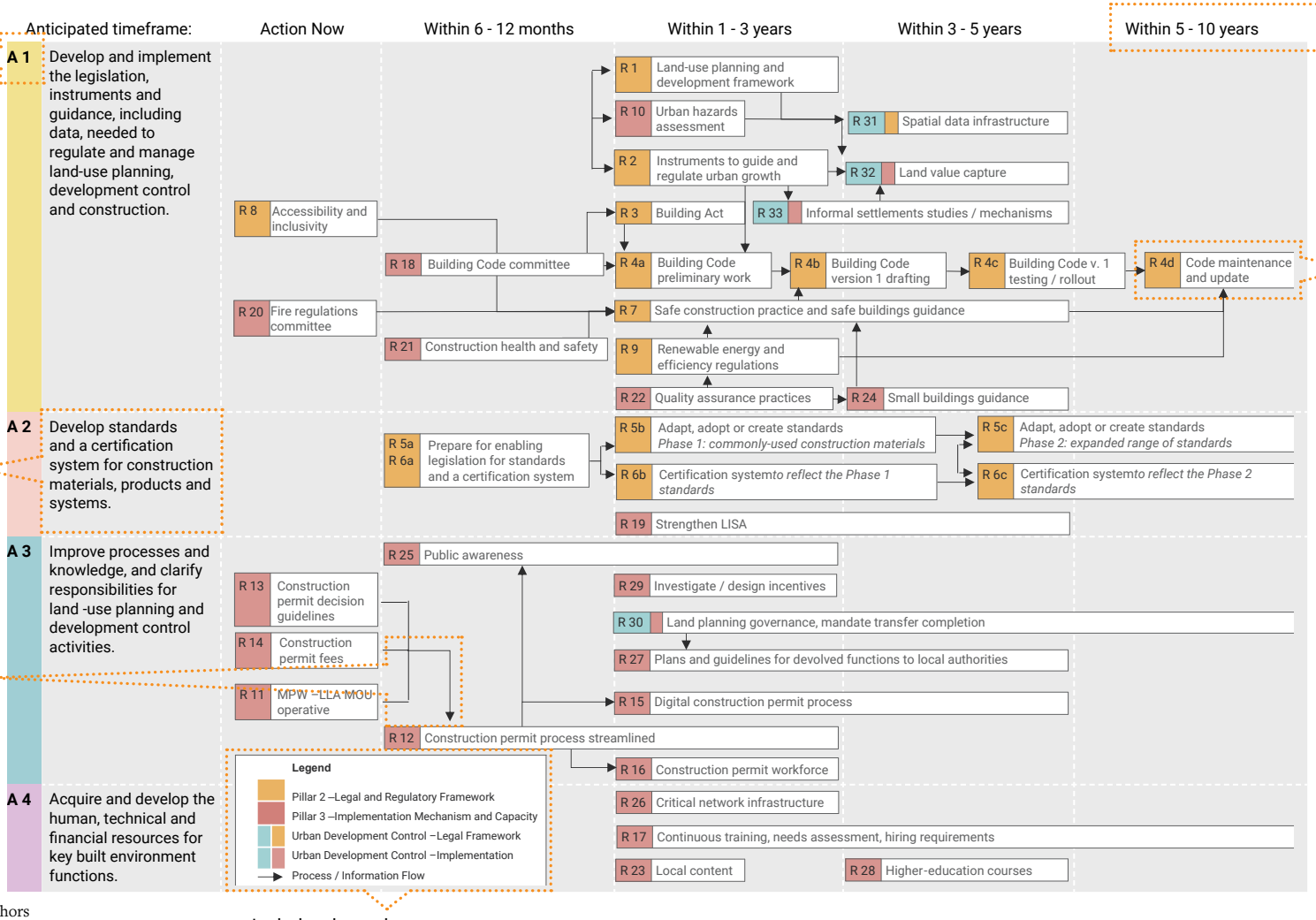
EXAMPLE OF IMPLEMENTATION PLAN

Figure 6. An example of Implementation Plan. The annotations highlight the features to include within the Implementation Plan.

The **Intervention Areas (IA)** provide the "y-axis" structure of the plan. The **numbering and color-coding** previously attributed to each IA should be used here.

The **description** of the Intervention Area should be included.

Arrows are used to describe linkages and dependencies between the recommendations



The range of **Action Timeframes** set out in the Intervention Areas Table provide the "x-axis" structure of the plan.

Each of the Recommendations are plotted against the timeframe using the **unique code, and assessment pillar color-coding**. A short summary of the recommendation should also be included.

Include a legend, as necessary.

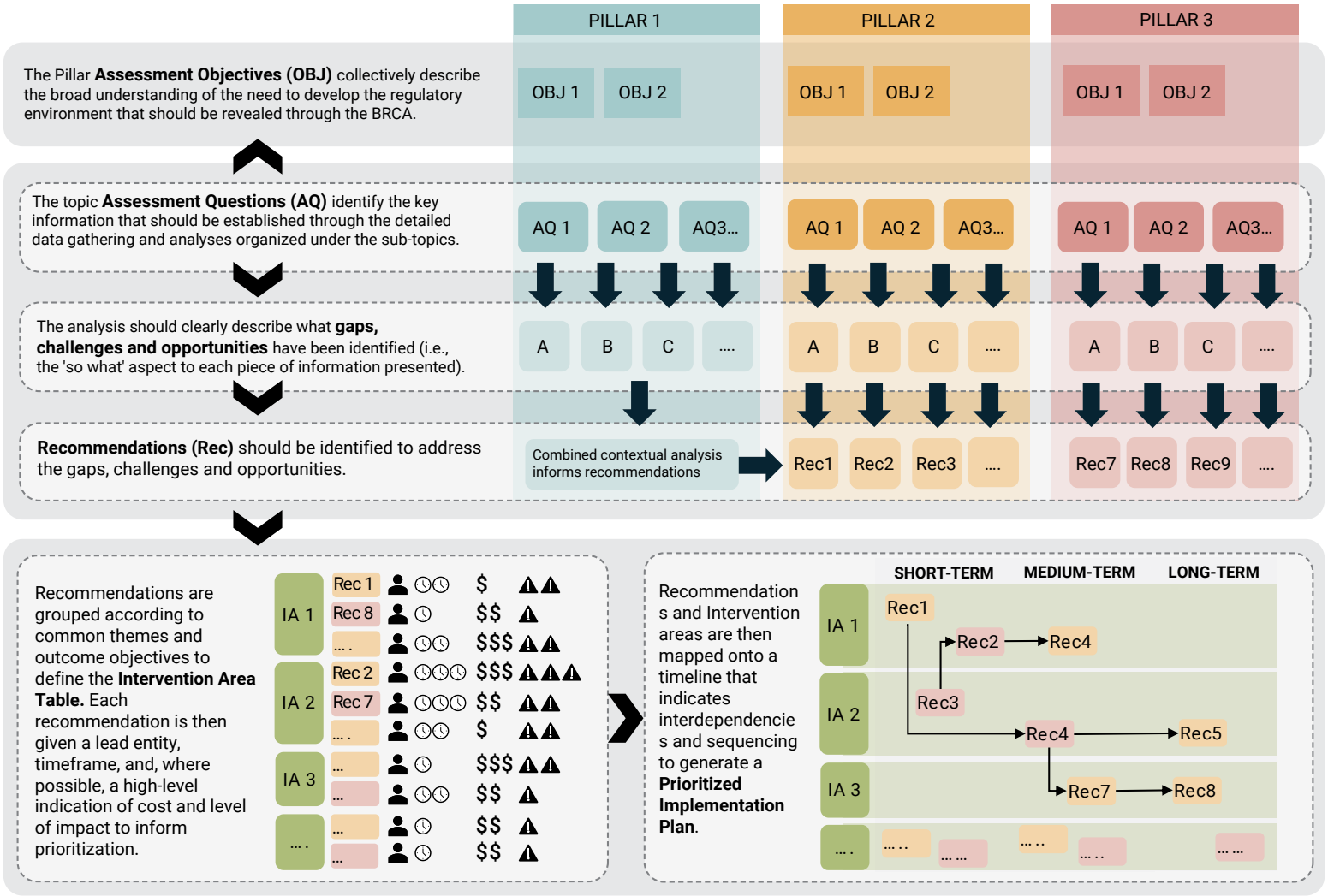
Source: Developed by the authors

SECTION B.5.4

BRCA 2.0 In a Glance

SUMMARY OF THE ASSESSMENT COMPONENTS AND FINDING SUMMARIES DESCRIBED IN THIS SECTION.

Figure 7. Section summary



SECTION B.6

BRCA 2.0 Reporting

Overall Reporting Guidance

The team conducting a BRCA 2.0 should collate their findings into a report. A standard report template has been provided in Appendix C, which can be used as a guide; however, the reporting format should be reviewed to see if any adjustments are needed to address specific needs for the country being assessed, as communicated by the government counterparts and other key stakeholders. The report should be structured using the key BRCA 2.0 sections outlined below (figure 8), which follow the three Pillar structure.

The BRCA 2.0 draws on many sources of information. As such, it is important to capture these sources in a form that allows data to be checked and validated. A Document Register, as used in the report template, can be used for this purpose, while supplemental information sources such as academic articles can be recorded in the References section. In addition, sources should be adequately referenced throughout the report.

Specific Report Guidance

Specific guidance and examples for how to format the report can be found in the report template provided in Appendix C. This is an example and should not be considered a prescriptive format.

Further guidance on report presentation can also be found throughout this document, where appropriate. For example, Section B.5 of this methodology explains how to develop an implementation plan with appropriate intervention areas. This section is a crucial component of the BRCA 2.0 to present an overview of recommended priority reforms and investments in a simple manner. As such, the guidance in this section also clearly explains how it is best presented in the report. Report guidance is also included throughout Section C on separate, clearly indicated pages.

Figure 8. BRCA 2.0 Report Sections.

Section		Summary
0	**Introduction**	An explanation of the overall project context, the specific tasks and aims of the BRCA 2.0 for the country, the methodology applied, and the report structure.
1	**Pillar 1 | Country Characteristics**	A description of the key features of the country context, including a hazard profile, urbanization profile, and the principal construction methods.
2	**Pillar 2 | Legal and Regulatory Framework**	An overview of the legislative and regulatory framework and a review of the coverage, quality, and appropriateness of relevant legal and regulatory instruments.
3	**Pillar 3 | Implementation Mechanism and Capacity**	A description of current implementation mechanisms and processes and an assessment of the capacity and capability of national and local government agencies, built environment professionals, academic and training institutions, and other relevant stakeholders.
4	**Intervention Areas, Recommendations and Implementation Plan**	The recommendations that flow from the assessment are classified by Intervention Area and organized in an Implementation Plan that proposes a sequence and timeframe for their realization. For each group of recommendations, priority actions are proposed. These are the actions taken to implement the recommendations.
	References and Annexes	Supplementary information such as references, the document register, and information databases can be included at the end of the report.

Source: Developed by the authors

SECTION C

DETAILED ASSESSMENT GUIDANCE

SECTION C.1

PILLAR 1: Country Characteristics

OVERVIEW AND GUIDANCE

Pillar 1 develops a broad and specific assessment of country characteristics that establishes a baseline understanding of current conditions and principal risk factors for the built environment sector. This informs the understanding of the specific requirements a country can address through improving its building regulatory framework or its implementation. Gaps, challenges, and opportunities should be identified and highlighted throughout the pillar assessment. The topics and sub-topics under Pillar 1 are outlined below, and the following pages provide further guidance and Topic Assessment Questions for each topic.

Pillar 1. Topics and Sub-topics

Topic		Sub-topic
1.1	Country Context	1.1.1 Natural geography and topography 1.1.2 Climate 1.1.3 Political system and administrativedivisions 1.1.4 Critical infrastructure networks 1.1.5 Socioeconomic factors
1.2	Risk Profile	1.2.1 Hazards 1.2.2 Historical hazard events and future impact ofclimate change 1.2.3 Risk information availability 1.2.4 Recent initiatives 1.2.5 Challenges and compounding factors
1.3	Urbanization Profile	1.3.1 Urbanization trends, effects, andchallenges 1.3.2. Access to land, property registration, and basic services
1.4	Construction Materials and Methods	1.4.1 Typical materials, building typologies, and construction methods 1.4.2 Implications of current practices
1.5	Fragile and Conflict-Affected Situations	1.5.1 Fragile and conflict-affected situations
1.6	Drivers of Risk in the Built	1.6.1 A summary of the principal drivers of risk

Pillar 1 Assessment Objectives

These objectives describe the overarching understanding that should be derived from the data gathered under the Pillar 1 topics:

1. To understand the principal contextual factors that are relevant to the function of the country's built environment sector and their impact on people and nature.
2. To understand the contextual factors that the building regulatory framework needs to consider, in order to support safe, sustainable, and resilient construction.

Contextualizing Pillar 1 Assessment

The assessment under Pillar 1 sets the context for the analysis of the legal and regulatory framework and implementation mechanism and capacity in Pillars 2 and 3, respectively. As explained in Section B, it is important to remember that the assessment process does not progress linearly from Pillar 1 to 2 to 3. The assessment process may simultaneously produce data that are relevant to several of the pillars. Part of the task under Pillar 1 is to sort through the information and identify what should be captured under this pillar and inform the analysis specific to the pillar.

Information Sources

For Pillar 1, it is anticipated that data and information for each sub-topic will be compiled largely from factual information available for the country, as may be available in geopolitical summaries, hazard data bases, and similar resources. As such, the majority of Pillar 1 data collection could likely be completed during the Desk Study Study stage of the BRCA 2.0 methodological process.

SECTION C.1.1

Topic 1.1: Country Context

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 should describe key features of the country context. The data and analysis in this topic should highlight the contextual factors that might have a material impact on the building regulatory framework and its implementation. The following sub-topics should be addressed:

1.1.1 Natural geography and topography: This sub-topic refers to the geographic location of the country, topographic and hydrographic context, main landscape characteristics, and related information.

1.1.2 Climate: This sub-topic refers to the prevalent climate conditions present in the country, such as average annual rainfall, types of seasons, etc.

1.1.3 Political system and administrative divisions: This sub-topic refers to the political structure in the country, the type of government at national, regional, and local levels, and how these levels interact and their key responsibilities. Factors particularly relevant to the building regulatory environment include centralization vs. decentralization, which will shape the regulatory process.

1.1.4 Critical infrastructure networks: This sub-topic refers to infrastructure networks such as the road network, power network, or internet access and communications networks and what kind of vulnerabilities they present. Internet access shapes countrywide communication and document submission, which will particularly impact the building regulatory environment. Poor internet access may also heighten the impact of the road network.

1.1.5 Socioeconomic factors: This sub-topic refers to the social and economic context of the country, including the main industries, the per capita Gross Domestic Product (GDP), data on employment and education, and demographic information, such as statistics on population, gender, and disability.

Note: across all sub-topics, the consultant should consider and describe implications of the historical context as applicable. i.e., key historical events that have influenced, and may continue to influence, current conditions such as geographical, political, and social divisions and trends.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the defining features of the country context?
2. What is the impact of the defining country features on the built environment, people, and nature?
3. How do these defining country features support or impede the building regulatory framework?

The data and analyses presented in the BRCA 2.0 report under this topic should address each of the Topic Assessment Questions above, and consider each of the sub-topics to the left. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report.

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to the country context. This will be the basis of formulating recommendations to address the issues identified.

Special considerations can be integrated in countries affected by fragile and conflict situations (FCS), as conflict-related disruptions may lead to reduced compliance with city planning and resilient construction standards (see Section 1.5).

SECTION C.1.1

Topic 1.1: Country Context

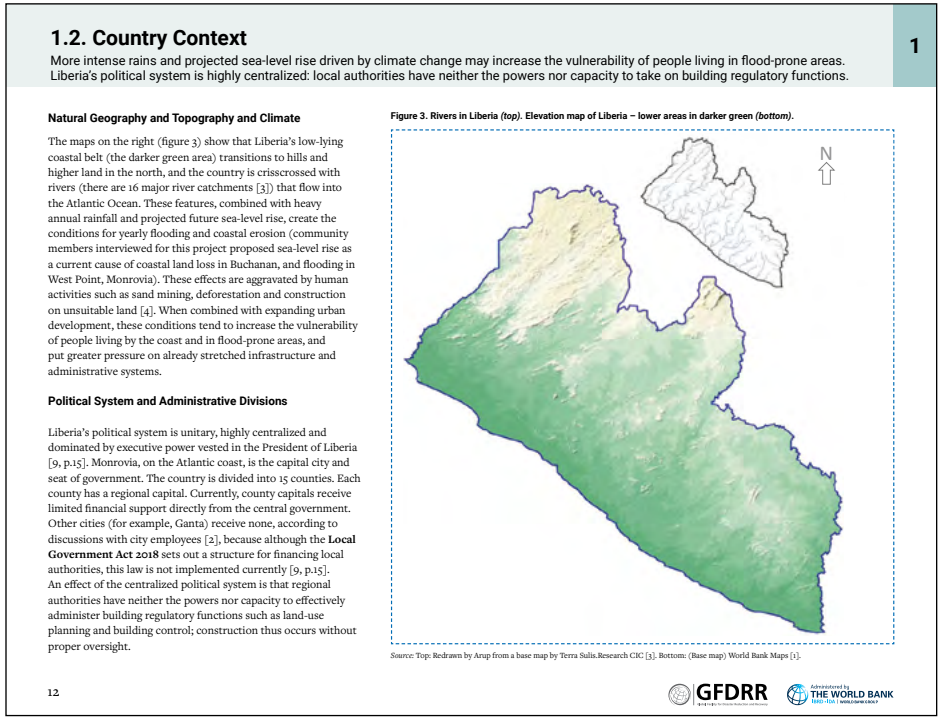
REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 9), consider the following:

Using location maps to illustrate geographical relationships:

Using tables to present key country statistics in a clear, digestible way:

Figure 9. Examples of BRCA 2.0 Country Context Section to display information.



1.2. Country Context

More intense rains and projected sea-level rise driven by climate change may increase the vulnerability of people living in flood-prone areas. Liberia's political system is highly centralized: local authorities have neither the powers nor capacity to take on building regulatory functions.

1

Natural Geography and Topography and Climate

The maps on the right (figure 3) show that Liberia's low-lying coastal belt (the darker green area) transitions to hills and higher land in the north, and the country is crisscrossed with rivers (there are 16 major river catchments [3]) that flow into the Atlantic Ocean. These features, combined with heavy annual rainfall and projected future sea-level rise, create the conditions for yearly flooding and coastal erosion (community members interviewed for this project proposed sea-level rise as a current cause of coastal land loss in Buchanan, and flooding in West Point, Monrovia). These effects are aggravated by human activities such as sand mining, deforestation and construction on unsuitable land [4]. When combined with expanding urban development, these conditions tend to increase the vulnerability of people living by the coast and in flood-prone areas, and put greater pressure on already stretched infrastructure and administrative systems.

Political System and Administrative Divisions

Liberia's political system is unitary, highly centralized and dominated by executive power vested in the President of Liberia [9, p.15]. Monrovia, on the Atlantic coast, is the capital city and seat of government. The country is divided into 15 counties. Each county has a regional capital. Currently, county capitals receive limited financial support directly from the central government. Other cities (for example, Ganta) receive none, according to discussions with city employees [2], because although the **Local Government Act 2018** sets out a structure for financing local authorities, this law is not implemented currently [9, p.15]. An effect of the centralized political system is that regional authorities have neither the powers nor capacity to effectively administer building regulatory functions such as land-use planning and building control; construction thus occurs without proper oversight.

Figure 3. Rivers in Liberia *(top)*. Elevation map of Liberia – lower areas in darker green *(bottom)*.

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Source: Top: Redrawn by Arup from a base map by Terra Sulis.Research CIC [3]. Bottom: (Base map) World Bank Maps [1].

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Source: Developed by the authors

Table 3. Liberia population and GDP data

Population - 2021
5.2 million
Gross Domestic Product (GDP) - 2021
US$ 3.5 Billion
Per Capita GDP
US$ 676 Reference Per Capita GDPs • Sierra Leone US$ 480 • Nigeria US$ 2,065 • USA US$ 23,315

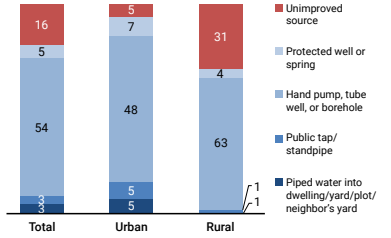
Source: [5]

Table 4. Liberia – educational attainment (by gender).

Education – 2020 data		
The percentage distribution of women and men ages 15–49 by highest level of education attended or completed		
6	11	Higher
22	34	Senior high
18	19	Junior High
24	23	Elementary
31	13	No education
Women	Men	

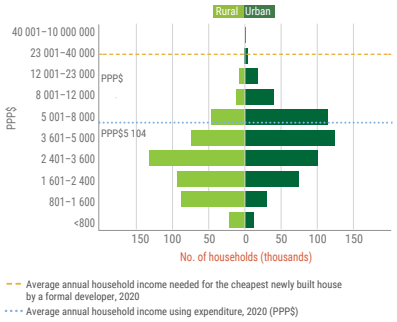
Source: [8]

Figure 4. Distribution of households by source of drinking water



Source: LISGIS [57].

Figure 5. Income profile for rural and urban households based on consumption.



Source: Centre for Affordable Housing Finance in Africa [58].

1. Maps should be legible at the size they are displayed.
2. Captions should include a clear description and the information source.

1. Use the table or chart format most appropriate for the data
2. Captions should include a clear description and the information source.

SECTION C.1.2

Topic 1.2: Risk Profile

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA should provide essential information regarding the types of hazards to which the country is exposed and how these impact its built environment, by addressing the following sub-topics:

1.2.1. Hazards: This sub-topic refers to the predominant hazards the country is exposed to, such as floods, landslides, fires, and epidemics, and identifying whether hazards are either chronic (long-term stresses) or acute (short-term shocks).

1.2.2 Historical hazard events and future impact of climate change: This sub-topic refers to historical data and records of hazards impacts that may indicate changes in the frequency and severity of events and their consequences over the exposed key areas.

1.2.3 Risk information availability: This sub-topic refers to the breadth and depth of data that are collected and available regarding the nature, frequency, magnitude, and impact of natural hazards (including historical information). This information is assessed to provide a perspective on the "completeness" of the assessment that can be conducted under this pillar, and to identify potential challenges and limitations for Disaster Risk Management (DRM), and associated urban planning and investment.

1.2.4 Recent initiatives: This sub-topic refers to the most significant recent efforts made to prepare or enrich hazard information and/or utilize them as part of building regulatory framework.

1.2.5 Challenges and compounding factors: This sub-topic refers to the factors and trends that may create barriers to hazard mitigation and/or exacerbate the impact of hazards, such as climate change and rapid urbanization

The data and analyses presented in the BRCA 2.0 report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the principal hazards (chronic and acute) impacting the country?
2. What is the impact of these principal hazards on the built environment, people, and nature?
3. To what extent does the building regulatory framework and the main documents available (policies, investment priorities, etc.) in the main area of concerns respond to these principal hazards?
4. What sources of information are available and how reliable are they in terms of accuracy and completeness?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to the hazard information and risk management of the built environment. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.1.3

Topic 1.3: Urbanization Profile

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 should provide an overview of the urbanization profile of the country. The following sub-topic should be addressed:

1.3.1 Urbanization trends, effects, and challenges: This sub-topic refers to:

- Urbanization drivers and urbanization growth trends in the country, such as urban population growth and population distribution in urban centers.
- Unregulated development, informal buildings, and informal settlements, including information on their hotspot locations, key risks, the proportion of people living in them, the percentage of informal buildings in the country, the predominant building materials used*, and accessibility to basic infrastructures.

1.3.2 Access to land, property registration, and basic services: This sub-topic refers to:

- How easy it is to access land property and the main legal principles regarding this aspect in the country of study.
- The existing titling and registration framework regarding land ownership (e.g., the existence of a cadastre and related tools like a cadastral map, for example).
- The different aspects regarding the access to basic services like water, wastewater treatment, or electricity.

The data and analysis presented in the BRCA report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report.

Assessment related to this point may also be relevant to Topic 1.4

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the defining features of the country urbanization profile?
2. To what extent does the building regulatory framework respond to or guide urban development/the urbanization profile/defining urbanization features?
3. To what extent does the building regulatory framework integrate and is adapted to the main realities of the urbanization profile?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to the urbanization profile. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.1.4

Topic 1.4: Construction Materials and Methods

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 should provide details of the form and quality of construction found in the country by addressing the following sub-topics:

1.4.1 Typical materials, building typologies, and construction methods: This sub-topic refers to:

- The main materials used in construction, with consideration of contextual trends, such as materials used in rural vs. urban sites. This should also include if and how material quality is assessed and controlled.
- The common construction methods and key practices, such as the amount of construction carried out by hand or low-tech means vs. by machinery and automation.
- The main construction typologies that characterize levels of complexity and resilience, such as size, number of stories, and structural typologies (wood, steel, reinforced concrete).

1.4.2 Implications of current practices: This refers to the inherent challenges and opportunities associated with the information gathered in sub-topic 1.4.1. In particular, this should cover how the materials and methods commonly used influence vulnerability in the built environment and how this may be addressed through improvement of regulations and guidance.

The data and analysis presented in the BRCA report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the common materials and methods used in the construction industry?
2. What kind of construction materials, methods, and typologies commonly utilized in the built environment influence vulnerability, and what measures can be taken to enhance the resilience of buildings through improved building regulations and guidance?
3. To what extent does the building regulatory framework respond to these common construction materials and methods?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to the construction materials and methodologies. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.1.4

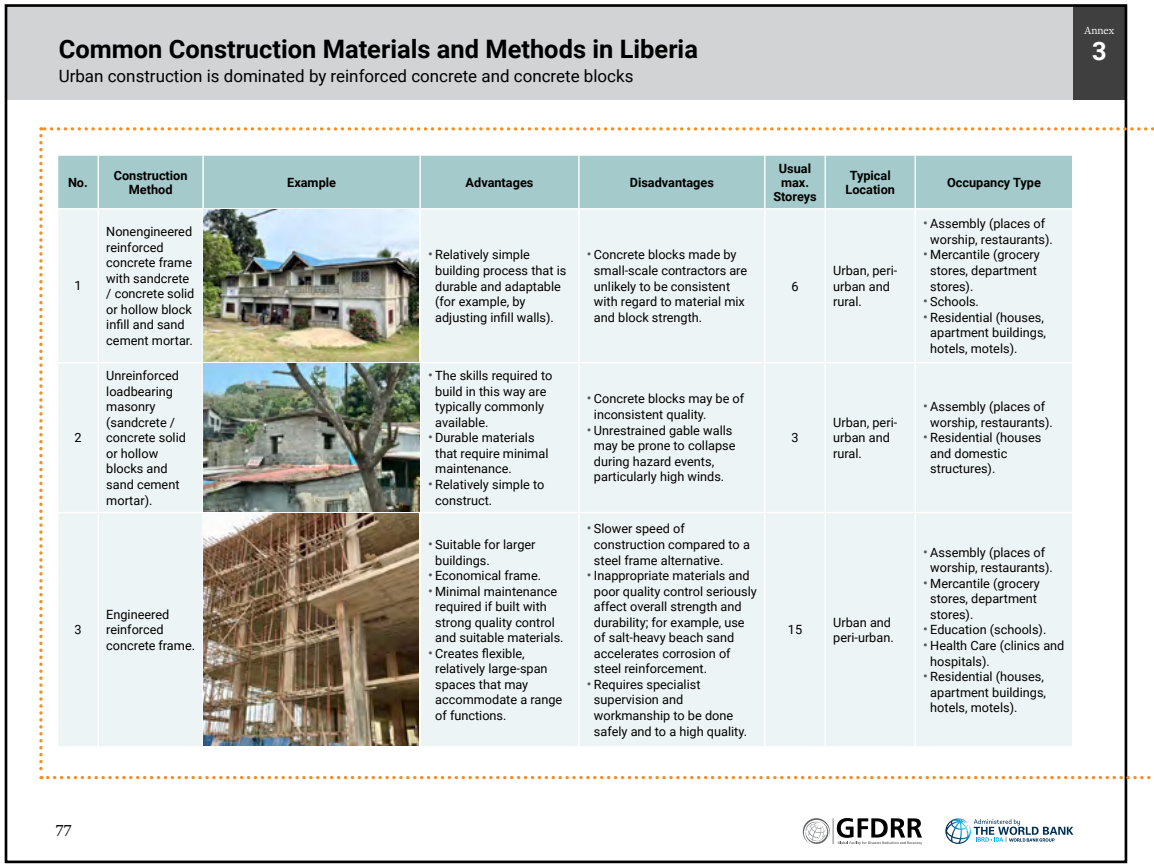
Topic 1.4: Construction Materials and Methods

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 10), consider the following:

Using images to show the main construction materials, construction methods, and structural typologies in context. A table with images of all the common construction materials and methods should be included in the appendix.

Figure 10. Examples of displaying Construction Materials and Methods information in a BRCA 2.0 Report



Common Construction Materials and Methods in Liberia

Urban construction is dominated by reinforced concrete and concrete blocks

Annex 3

No.	Construction Method	Example	Advantages	Disadvantages	Usual max. Storeys	Typical Location	Occupancy Type
1	Nonengineered reinforced concrete frame with sandcrete / concrete solid or hollow block infill and sand cement mortar.		• Relatively simple building process that is durable and adaptable (for example, by adjusting infill walls).	• Concrete blocks made by small-scale contractors are unlikely to be consistent with regard to material mix and block strength.	6	Urban, peri-urban and rural.	• Assembly (places of worship, restaurants). • Mercantile (grocery stores, department stores). • Schools. • Residential (houses, apartment buildings, hotels, motels).
2	Unreinforced loadbearing masonry (sandcrete / concrete solid or hollow blocks and sand cement mortar).		• The skills required to build in this way are typically commonly available. • Durable materials that require minimal maintenance. • Relatively simple to construct.	• Concrete blocks may be of inconsistent quality. • Unrestrained gable walls may be prone to collapse during hazard events, particularly high winds.	3	Urban, peri-urban and rural.	• Assembly (places of worship, restaurants). • Residential (houses and domestic structures).
3	Engineered reinforced concrete frame.		• Suitable for larger buildings. • Economical frame. • Minimal maintenance required if built with strong quality control and suitable materials. • Creates flexible, relatively large-span spaces that may accommodate a range of functions.	• Slower speed of construction compared to a steel frame alternative. • Inappropriate materials and poor quality control seriously affect overall strength and durability; for example, use of salt-heavy beach sand accelerates corrosion of steel reinforcement. • Requires specialist supervision and workmanship to be done safely and to a high quality.	15	Urban and peri-urban.	• Assembly (places of worship, restaurants). • Mercantile (grocery stores, department stores). • Education (schools). • Health Care (clinics and hospitals). • Residential (houses, apartment buildings, hotels, motels).

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1. Images should be legible at the size that they are displayed and should be of sufficient resolution.
2. Captions should include a clear description and the information source.
3. Images can be used in conjunction with tables and charts to make information quickly accessible to the reader.

Source: Developed by the authors

SECTION C.1.5

Topic 1.5: Fragile and conflict-affected situations (FCS) (*Applicable only for FCS countries)

ASSESSMENT GUIDANCE

Sub-topic Description:

1.5.1 Fragile and Conflict-Affected Situations (if the context applies): This sub-topic refers and integrates some specific aspects, challenges, and risks derived from fragile and conflict situations (FCS), that may affect the Building Regulatory Environment. Assessments in FCS countries should incorporate some specific information and assessment, and emphasize key considerations regarding the additional factors derived from such as ongoing situations and their impacts in the building regulations.

This sub-topic is optional only for countries defined as FCS by the World Bank (figure 11).

FCS conditions significantly impact the resilience of the built environment. Political disputes, civil war, and displacements can destabilize governance, affecting compliance with city planning and resilient construction standards. Conflict-related disruptions can lead to reduced skilled laborers, restricted access to construction materials, and increased transportation costs. This compromises structural integrity and increases vulnerability to disasters.

The content of this sub-topic aims to provide an additional layer of information in reference to the particular country situation.

Some considerations regarding FCS countries:

- Crises and institutional fragility often disrupt urban planning processes and decision-making mechanisms.
- While urban planning plays a crucial role in post-conflict reconstruction, it can also exacerbate vulnerabilities if not properly enacted. The influx of conflict-affected displaced people can result in the occupation of available areas in risk-prone zones such as floodplains or steep slopes.

FCS-related analysis should be presented in a specific section dedicated to it, as well as including any relevant mention in the relevant report sections. If sufficient information cannot be found to respond to questions, such limitation should be clearly stated in the report.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. If the BRCA applies to an FCS country: Are there any additional challenges derived from the fragile or conflict situation?
2. Are there specific constraints in terms of access to financing, operation, and maintenance of buildings caused by FCS factors?

Figure 11. The list of fragile and conflict-affected situations (FCS) is released annually by the World Bank

Source: https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations

SECTION C.1.6

Topic 1.6: Drivers of Risk in the Built Environment

ASSESSMENT GUIDANCE

Sub-topic Description:

This topic should summarize the data and understanding collected under all the topics in Pillar 1, according to the following sub-topic:

1.6.1 A summary of the principal drivers of risk: This sub-topic refers to the key drivers of risk that will inform critical issues for the Building Regulatory Environment. The items identified and summarized should be specific to this context, and repeating generalized characteristics should be avoided.

This information should be presented in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. Based on the data collected so far in Pillar 1, what are the principal and contextually specific risk factors in the built environment?

When summarizing the findings of Pillar 1 under topic 1.6, remember to extract and discuss the critical impact of the risk, and the challenges or opportunities it presents for building regulatory improvement.

Information Sources

Topic 1.6 should be a clear, specific summary of the key information identified through the rest of the Pillar 1 assessment. It should not require new assessment, but rather is a synthesis of existing information.

SECTION C.1.6

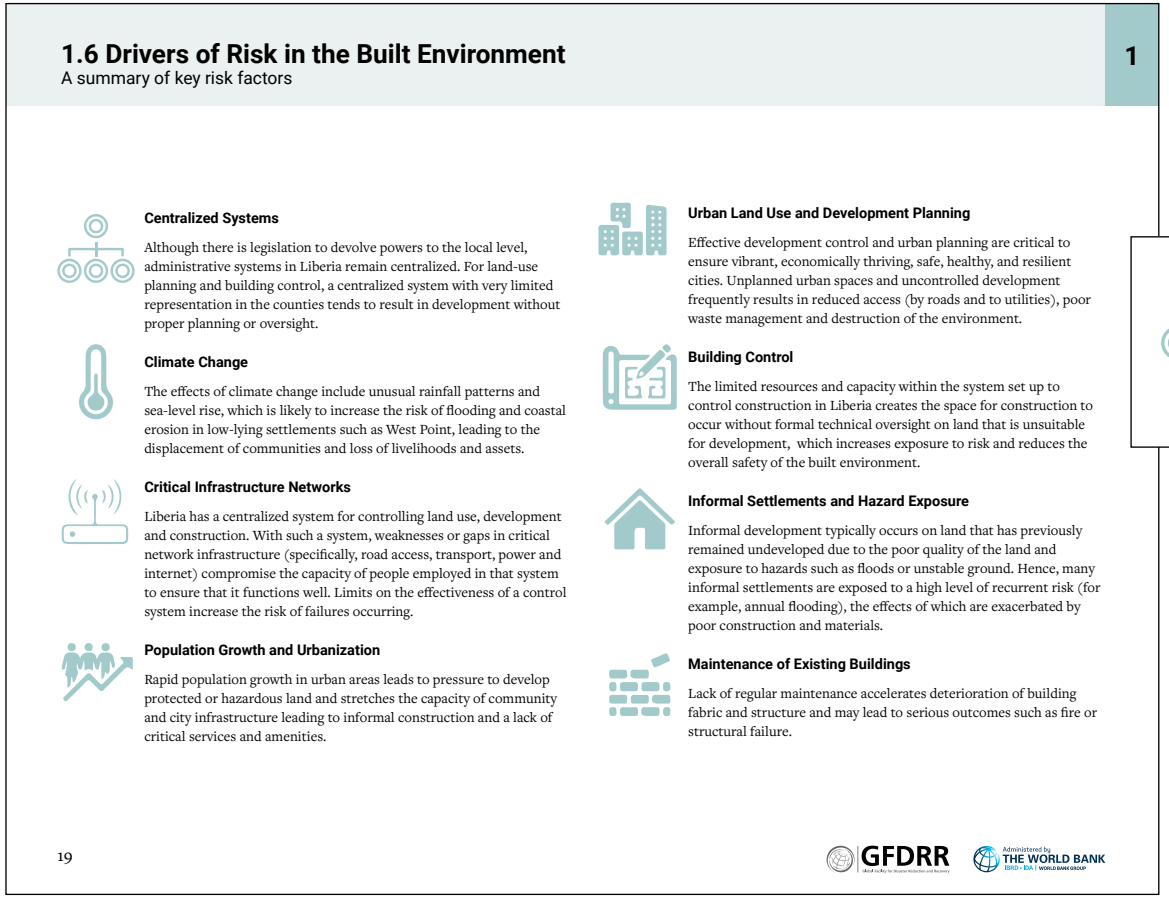
Topic 1.6: Drivers of Risk in the Built Environment

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 12), consider the following:

A concise and "at glance" format that can quickly communicate key points.

Figure 12. Example of Drivers of Risk chart for a BRCA Report.



1.6 Drivers of Risk in the Built Environment
A summary of key risk factors

1

Centralized Systems

Although there is legislation to devolve powers to the local level, administrative systems in Liberia remain centralized. For land-use planning and building control, a centralized system with very limited representation in the counties tends to result in development without proper planning or oversight.

Climate Change

The effects of climate change include unusual rainfall patterns and sea-level rise, which is likely to increase the risk of flooding and coastal erosion in low-lying settlements such as West Point, leading to the displacement of communities and loss of livelihoods and assets.

Critical Infrastructure Networks

Liberia has a centralized system for controlling land use, development and construction. With such a system, weaknesses or gaps in critical network infrastructure (specifically, road access, transport, power and internet) compromise the capacity of people employed in that system to ensure that it functions well. Limits on the effectiveness of a control system increase the risk of failures occurring.

Population Growth and Urbanization

Rapid population growth in urban areas leads to pressure to develop protected or hazardous land and stretches the capacity of community and city infrastructure leading to informal construction and a lack of critical services and amenities.

Urban Land Use and Development Planning

Effective development control and urban planning are critical to ensure vibrant, economically thriving, safe, healthy, and resilient cities. Unplanned urban spaces and uncontrolled development frequently results in reduced access (by roads and to utilities), poor waste management and destruction of the environment.

Building Control

The limited resources and capacity within the system set up to control construction in Liberia creates the space for construction to occur without formal technical oversight on land that is unsuitable for development, which increases exposure to risk and reduces the overall safety of the built environment.

Informal Settlements and Hazard Exposure

Informal development typically occurs on land that has previously remained undeveloped due to the poor quality of the land and exposure to hazards such as floods or unstable ground. Hence, many informal settlements are exposed to a high level of recurrent risk (for example, annual flooding), the effects of which are exacerbated by poor construction and materials.

Maintenance of Existing Buildings

Lack of regular maintenance accelerates deterioration of building fabric and structure and may lead to serious outcomes such as fire or structural failure.

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Source: Developed by the authors

If the BRCA 2.0 is applied to a FCS country (see Section 1.5), specific risks associated with FCS context should be part of this summary (see template for Section 1.5).

Centralized Systems

Although there is legislation to devolve powers to the local level, administrative systems in Liberia remain centralized. For land-use planning and building control, a centralized system with very limited representation in the counties tends to result in development without proper planning or oversight.

Tips for summarizing Drivers of Risk:

- Simple graphic icon
- Clear, specific heading
- Summative text

SECTION C.2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

PILLAR OVERVIEW AND GUIDANCE

Pillar 2 analyzes the existing legal and regulatory instruments that form the legislative environment for the built environment sector. The assessment under this pillar should provide a broad and comprehensive appreciation of the existing legislative framework governing spatial planning and building performance and functional requirements, and the responsibilities for its development and maintenance. Gaps, challenges, and opportunities should be identified and highlighted throughout the pillar assessment.

The topics and sub-topics under Pillar 2 are outlined below, and the following pages provide further guidance and Topic Assessment Questions for each topic.

Pillar 2. Topics and Sub-topics

Topic		Sub-topic
2.1	Legislative Framework Overview	2.1.1 Legislative framework 2.1.2 Development and maintenance of regulations
2.2	Spatial Planning Requirements	2.2.1 Risk-sensitive land use and physical planning 2.2.2 Risk informationmanagement
2.3	Building Code Requirements	2.3.1 Structural and geotechnical design 2.3.2 Fire safety and prevention 2.3.3 Universal accessibility and inclusive design 2.3.4 Green buildings 2.3.5 Climate change adaptation 2.3.6 Construction materials, products, and methods 2.3.7 Environmental impacts management during construction and operations* 2.3.8 Heritage and reuse* 2.3.9 Health and safety*

*In some contexts, these sub-topics will not feature in Building Regulations, or will have varying degrees of relevance to the context. The inclusion of these sub-topics will need to reviewed and agreed for each BRCA.

Pillar 2 Assessment Objectives

These objectives describe the overarching understanding that should be derived from the data gathered under the Pillar 2 topics:

1. To identify the scope, consistency, and coverage of the existing legal and regulatory instruments in the country, and highlight where there are gaps that may be addressed.
2. To understand the extent to which the existing regulatory framework responds to the needs of the context, and highlight where there are gaps that may be addressed.

Contextualizing Pillar 2 Assessment

Some of the country characteristics identified in Pillar 1 will inform the assessment undertaken at Pillar 2. For example, an understanding of which of the performance and functional requirements examined under Topic 2.3 are most relevant to the context will be informed by the contextual understanding developed through Pillar 1. In turn, Pillar 2 provides the foundational understanding of the legislative environment, which Pillar 3 builds on. As explained in Section B of this methodology, the assessment process is not linear, and may simultaneously produce data that are relevant to several of the pillars. Part of the task under Pillar 2 is to sort through the information and identify what should be captured under this pillar and inform the analysis specific to the pillar.

Information Sources

Typically, substantial data collection for Pillar 2 can be completed during the Desk Study Study stage. The Primary Assessment stage can then be used to close any gaps and ambiguities through targeted stakeholder consultation.

SECTION C.2.1

Topic 2.1: Legislative Framework Overview

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 should determine and summarize the structure of the legislative framework that exists in the subject country. An example of the typical components and hierarchy of a building regulatory framework can be included in this section as a reference point (see report guidance on next page). The consultant should review this against the existing framework in the country and provide commentary on variations from the typical structure, with a focus on the following sub-topics:

2.1.1 Legislative framework: This sub-topic refers to the legislation, and associated policy, regulations, and standards, which govern spatial planning and building performance and functional requirements. This includes legislation at all levels: local, regional, and national. The analysis should include information on structure, process, and responsibilities, and an understanding of centralization vs. decentralization. The assessment should establish whether documents are enacted/live, in draft, repealed, do not exist or their status is unknown.

2.1.2 Development and maintenance of regulations: This sub-topic refers to the processes in place for developing and maintaining the regulations, and the lead entities involved. This assessment can include references to typical or best-practice legislative maintenance cycles.

The data and analysis presented in the BRCA report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. To what extent is there a legal framework governing the built environment and what legislation, policy, regulations, standards, and plans, and other relevant instruments does it consist of?
2. To what extent is there a legal requirement or a process for developing, enabling, and maintaining the document that constitutes this legal framework?
3. To what extent is there a lead entity with a clear mandate for developing, promulgating, and maintaining each document within this legal framework, and are they carrying out the mandate?
4. To what extent is this information accessible and legible to the public, and how is it accessed?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities within the regulatory framework and responsibilities for its development and maintenance. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.2.1

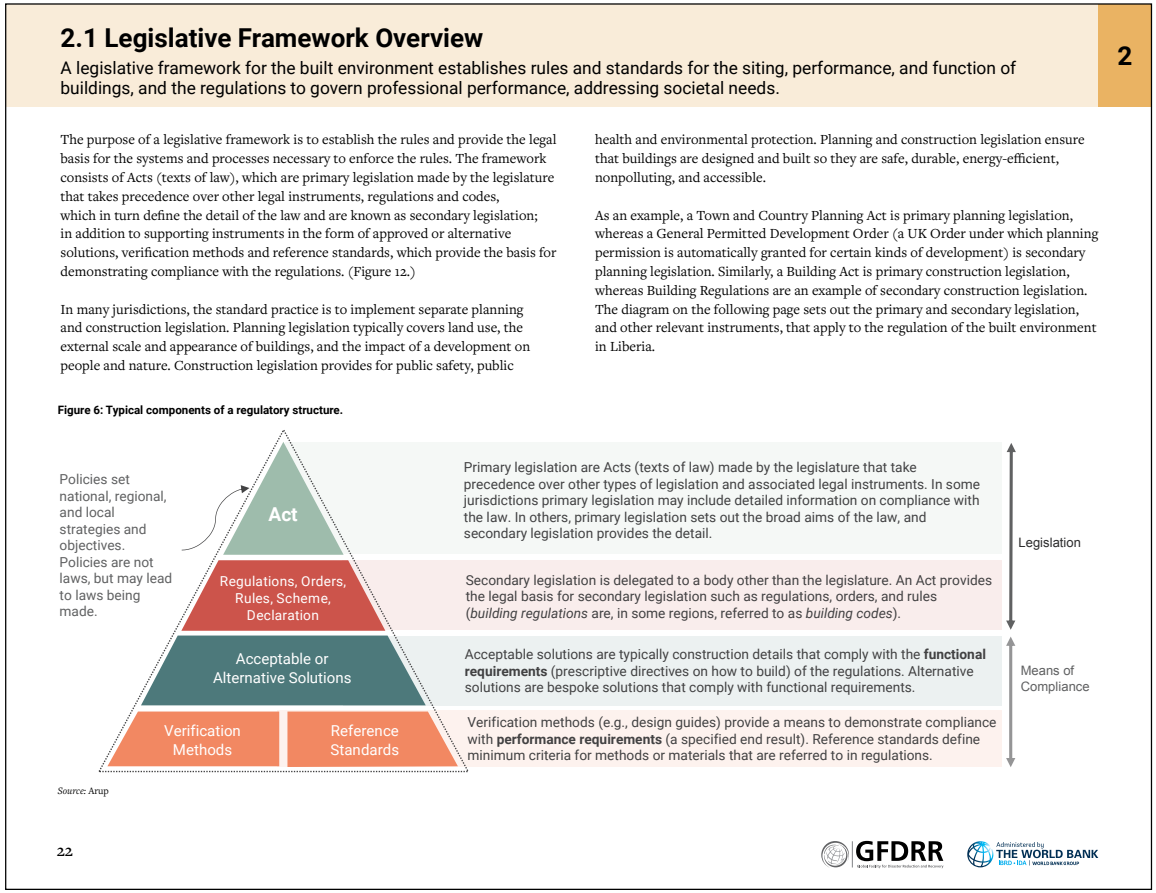
Topic 2.1: Legislative Framework Overview

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 13), consider the following:

Including a page and diagram explaining the typical components and hierarchy of a building regulatory framework, as a reference point:

Figure 13. Example of BRCA 2.0 Legislative Framework.



2.1 Legislative Framework Overview

2

A legislative framework for the built environment establishes rules and standards for the siting, performance, and function of buildings, and the regulations to govern professional performance, addressing societal needs.

The purpose of a legislative framework is to establish the rules and provide the legal basis for the systems and processes necessary to enforce the rules. The framework consists of Acts (texts of law), which are primary legislation made by the legislature that takes precedence over other legal instruments, regulations and codes, which in turn define the detail of the law and are known as secondary legislation; in addition to supporting instruments in the form of approved or alternative solutions, verification methods and reference standards, which provide the basis for demonstrating compliance with the regulations. (Figure 12.)

In many jurisdictions, the standard practice is to implement separate planning and construction legislation. Planning legislation typically covers land use, the external scale and appearance of buildings, and the impact of a development on people and nature. Construction legislation provides for public safety, public health and environmental protection. Planning and construction legislation ensure that buildings are designed and built so they are safe, durable, energy-efficient, nonpolluting, and accessible.

As an example, a Town and Country Planning Act is primary planning legislation, whereas a General Permitted Development Order (a UK Order under which planning permission is automatically granted for certain kinds of development) is secondary planning legislation. Similarly, a Building Act is primary construction legislation, whereas Building Regulations are an example of secondary construction legislation. The diagram on the following page sets out the primary and secondary legislation, and other relevant instruments, that apply to the regulation of the built environment in Liberia.

Figure 6: Typical components of a regulatory structure.

Source: Arup

2.2

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A version of this diagram that has been reviewed and updated as appropriate to align with the legislative framework of the subject country should be included in the BRCA 2.0 report.

Source: Developed by the authors

SECTION C.2.1

Topic 2.1: Legislative Framework Overview

REPORT GUIDANCE

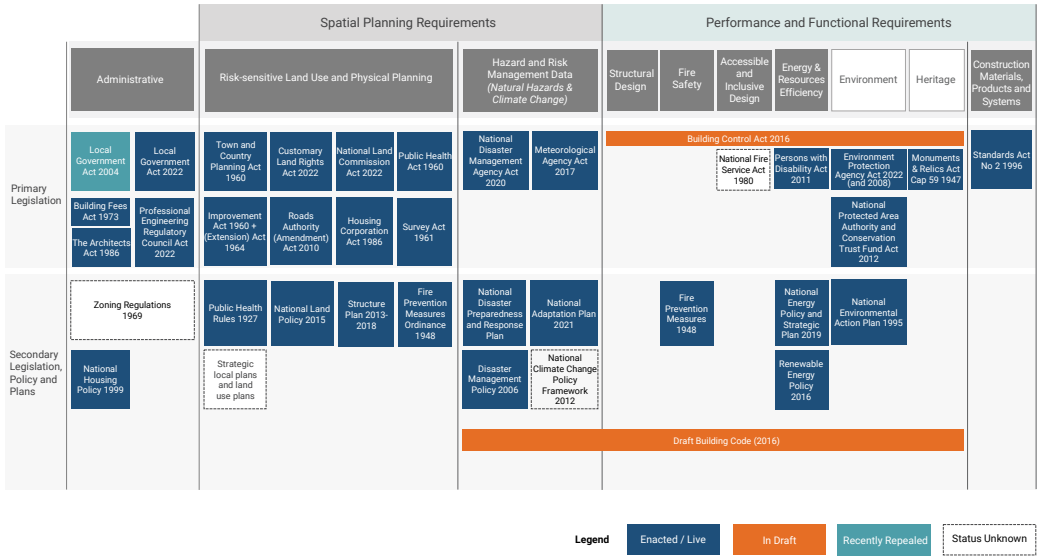
After identifying all the documentation associated with the administrative, spatial planning, and performance and functional requirements, the hierarchy and status of these framework components should be mapped to a diagram, as showed in figure 14.

Figure 14. Example of diagram to represent the Country's BRCA Legislative Framework.

2.1.1 The Legislative Framework in *[insert subject country]* 2

Develop a figure that explains a legislative framework of the country of assessment, using the following example:

Figure 7: The legislative framework in *[Insert subject country]*.



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Source: Developed by the authors

Tips for Formulation

- Clear headings distinguish between "spatial planning requirements" and "performance and functional requirements".
- The diagram clearly establishes a hierarchy between "primary legislation", "secondary legislation", and "other documents".
- Color-coding and a key are used to quickly show the status of each document.

SECTION C.2.1

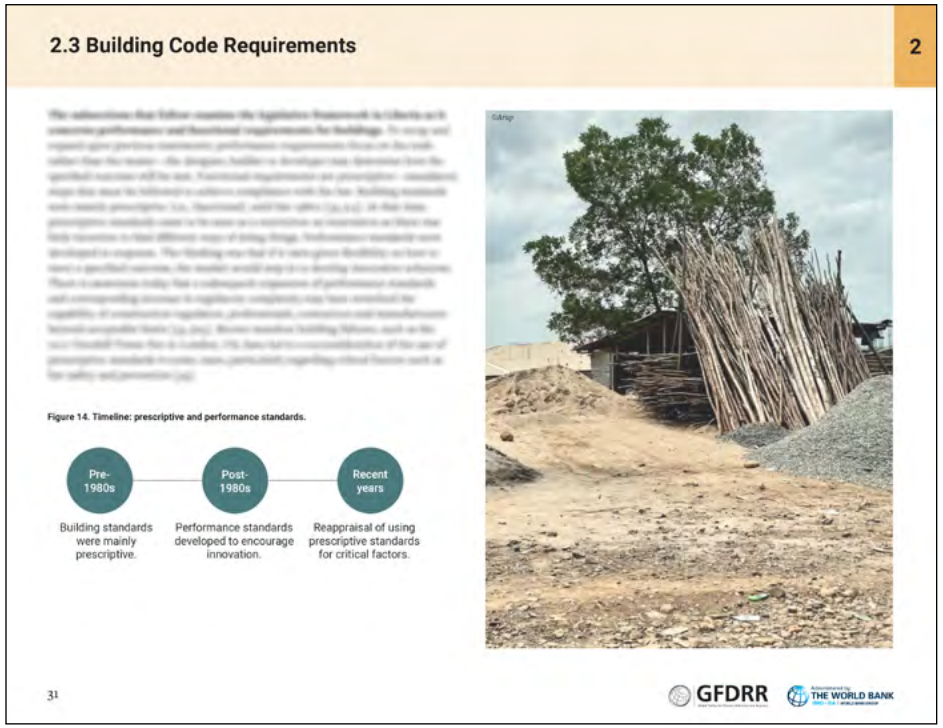
Topic 2.1: Legislative Framework Overview

REPORT GUIDANCE

When communicating the process of developing and maintaining regulations, it may be useful to include examples from other contexts and to illustrate best-practice, as compared to the assessment of the subject country.

This example (figure 15) uses a table to capture key details regarding the maintenance process in other countries as a reference:

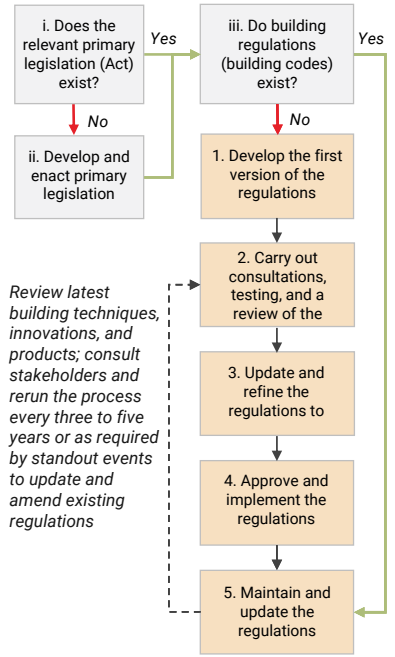
Figure 15. Example of Legislative Framework section for a BRCA 2.0 Report.



Source: Developed by the authors.

1. Useful information to capture includes the responsible authority, and the timeframe of the maintenance cycle.
2. It is important to ensure that such information is clearly labelled, to avoid confusion with the subject-country assessment.

This example (figure 15) uses a table to capture key details regarding the maintenance process in other countries as a reference:



1. Flowcharts should be unambiguous and clear.
2. Information showing best-practice should be clearly labelled as such.

SECTION C.2.2

Topic 2.2: Spatial Planning Requirements

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 should provide a deeper understanding of the current legislation, instruments, and their respective application regarding the following sub-topics:

2.2.1 Risk-sensitive land use and physical planning: This sub-topic refers to the components of the legal framework (including development plans and related aspects) that determine how risk is considered, integrated, and managed through the different building control–related legislations and instruments.

2.2.2 Risk information management: This sub-topic refers to the components of the legal framework that provide a mandate for relevant information collection (e.g., wind, seismic, floods, etc.), establish what information is collected, how and by whom, and if/how this information informs regulation of land use.

The data and analysis presented in the BRCA 2.0 report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report. For sub-topics 2.2.1 and 2.2.2 in this topic, example Detailed questions are provided in Section D to aid data collection.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the quality and coverage of the components of the legal framework that relate to the sub-topics in this topic?
2. To what extent is there a legal requirement or a process for developing, enabling, and maintaining these components?
3. To what extent is there a lead entity with a clear mandate for developing, promulgating, and maintaining these components, and are they carrying out the mandate?
4. To what extent is this information accessible and legible to the public, and how is it accessed?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to risk sensitive land use, physical planning, and hazard data. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.2.2

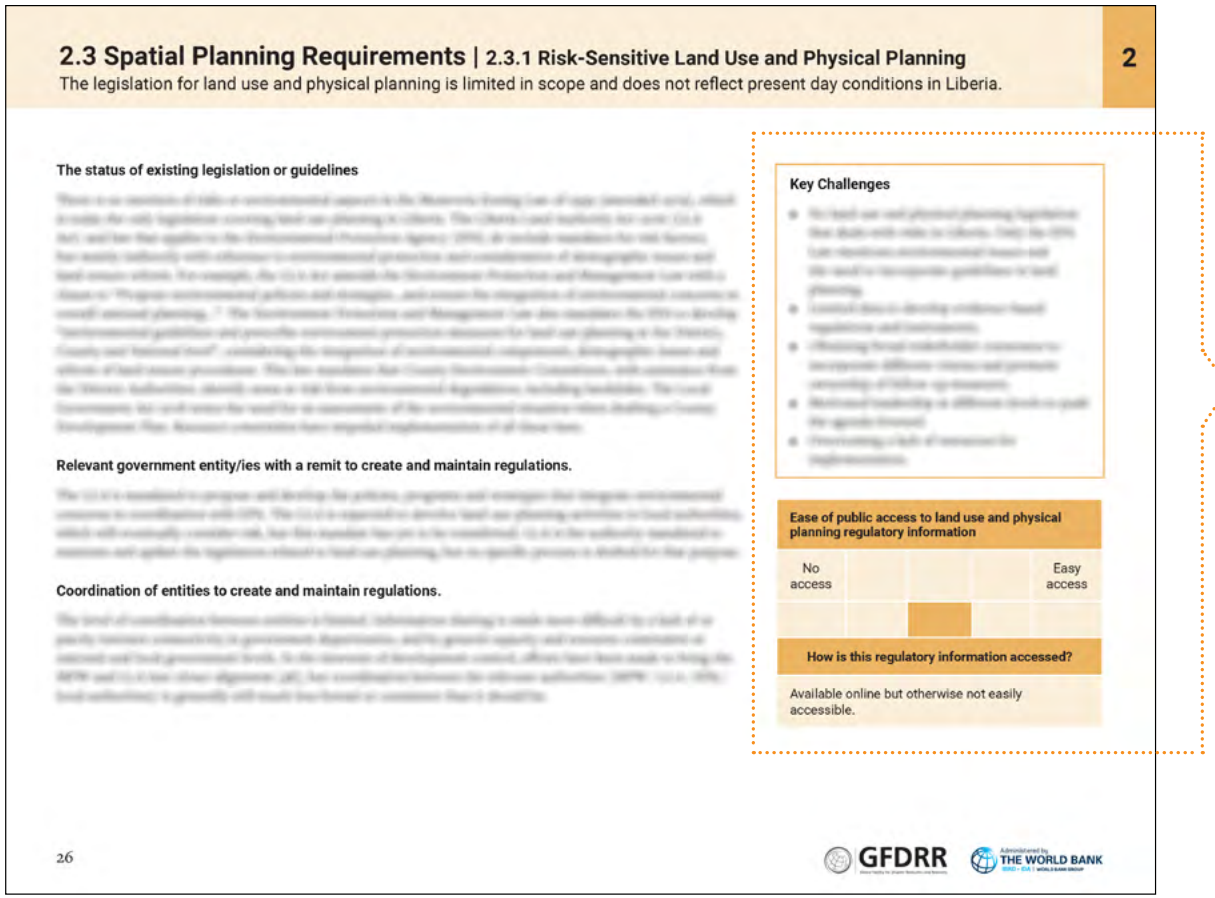
Topic 2.2: Spatial Planning Requirements

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA report (figure 16), consider the following:

Using a side panel to draw out key information:

Figure 16. Example of Spatial Planning Requirements section for a BRCA 2.0 Report.



Source: Developed by the authors

In this example, the side panel is used to consistently highlight "Key Challenges". This is a critical component of the BRCA 2.0 and applies to all topics. Highlighting it in this way not only makes sure that it is visible, but also ensures that it is covered.

The lower portion of the side panel is used to show visually, the high-level assessment of accessibility of the information to the public. When used consistently across the sub-topics, this allows for easy comparison. This also ensures that one of the key Topic Assessment Questions is covered.

The side panel can be used to highlight other information, where appropriate. For example, a summative list of the legislation discussed in the main body of the page can provide a clear reference point for the reader.

SECTION C.2.3

Topic 2.3: Building Code Requirements

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 should provide a deeper understanding of the current legislation, instruments, and their respective application regarding the following regulatory requirements for buildings. The following sub-topics should be addressed:

2.3.1 Structural and geotechnical design: This sub-topic refers to the structural and geotechnical design provisions set in the regulatory framework, how they are organized, based on which standards, and if their overall quality can respond adequately to safety and resilience objectives.

2.3.2 Fire safety and prevention: This sub-topic refers to the set of precautions, procedures, and measures taken to prevent fires, minimize the risk of fire-related accidents, and ensure the safety of individuals and property in the event of a fire. Thus, this subtopic is aimed to analyze fire safety and prevention provisions set in the legal framework.

2.3.3 Universal accessibility and inclusive design: This sub-topic refers to the different existing regulatory aspects to build physical, learning, and work environments so they are usable by a wide range of people, regardless of age, size, or disability status. This sub-topic analyzes main universal accessibility requirements covered and their overall quality.

2.3.4 Green buildings: This sub-topic refers to resource efficient methods of design and construction that produces sustainable buildings which have less impact on the environment and cost less to operate and maintain. This sustainable approach to construction accounts for a building's entire life cycle: siting, design, construction, operation, maintenance, renovation, and demolition.

2.3.5 Climate change adaptation: This sub-topic refers to any provisions or instruments (guidelines, etc.) within the regulatory framework that tend to mitigate most adverse climate change effects and extreme weather events (heatwaves, strong wind events, storm surges, droughts, and floods) on the built environment.

2.3.6 Construction materials, products, and methods: This sub-topic refers to the general framework in charge of generating and controlling technical specifications or practices concerning construction materials, products, or systems.

*In some contexts, these sub-topics may not feature in building regulations, or will have varying degrees of relevance to the context. The inclusion of these sub-topics will need to be reviewed and agreed for each BRCA 2.0.

SECTION C.2.3

Topic 2.3: Building Code Requirements

ASSESSMENT GUIDANCE

2.3.7 Environmental impacts management during construction and operations*: This sub-topic refers to the set of measures, procedures, and practices foreseen in the regulatory framework in order to protect the environment and avoid or reduce negative impacts of projects or activities that could disrupt ecological balance, or violate established health conditions.

2.3.8 Heritage and reuse*: This sub-topic refers to all measures aimed at protecting cultural heritage properties against damage due to natural or anthropogenic causes. Thus, this subtopic is aimed to analyze heritage building/site management–related provisions set in the regulatory framework.

2.3.9 Health and safety*: This sub-topic refers to the provisions contained in the legal, administrative, technical, and educational framework for safety and health related to the built environment in order to prevent harmful effects on the health of workers arising from employment in construction and to ensure appropriate design and implementation of construction projects.

It's important to consider whether there is coordination and cohesion across these sub-topics or if there is duplication or conflict across different documents. Similarly, the assessment should determine the level of coordination across stakeholders with responsibilities for different sub-topics (e.g., structural design vs. fire safety).

The data and analysis presented in the BRCA report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report. For all the sub-topics in this topic, example Detailed Questions are provided in Section D to aid data collection.

*In some contexts, these sub-topics may not feature in building regulations, or will have varying degrees of relevance to the context. The inclusion of these sub-topics will need to be reviewed and agreed for each BRCA 2.0.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the quality and coverage of the components of the legal framework that relate to the sub-topics in this topic?
2. To what extent is there a legal requirement or a process for developing, enabling, and maintaining these components?
3. To what extent is there a lead entity with a clear mandate for developing, promulgating, and maintaining these components, and are they carrying out the mandate?
4. To what extent is this information accessible and legible to the public, and how is it accessed?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to performance and functional requirements. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.3

PILLAR 3: IMPLEMENTATION MECHANISM AND CAPACITY

Pillar Overview and Guidance

Pillar 3 assesses the processes and mechanisms that are designed to ensure implementation of regulatory requirements, and the capacity and capability of the responsible entities to meet their obligations to ensure that a certain standard of practice is upheld. The entities assessed cover the relevant national government, local councils, technical agencies, private sector firms, design professionals, and builders. The assessment seeks to highlight where there are gaps that may be addressed by strengthening control and enforcement systems and processes, clarifying mandates, improving coordination between critical agencies, and strengthening education and training. Gaps, challenges, and opportunities should be identified and highlighted throughout the pillar assessment.

The topics and sub-topics under Pill ar 3 are outlined below, and the following pages provide further guidance and Topic Assessment Questions for each topic.

Pillar 3. Topics and Sub-topics

Topic		Sub-topic
3.1	Urban Planning and Building Control Process	3.1.1 Control mechanisms: approvals and enforcement
3.2	Institutional Capacity Assessment	3.2.1 Key ministries and departments regulating the built environment 3.2.2 Other governmental agencies and third parties involved (if any)
3.3	Construction Industry Capacity Assessment	3.3.1 Education environment 3.3.2 Design professionals 3.3.3 Builders or contractors 3.3.4 Education and certification
3.4	Insurance and Liability System Overview	3.4.1 Summary of insurance and liability systems for professionals

Pillar 3 Assessment Objectives

These objectives describe the overarching understanding that should be derived from the data gathered under the Pillar 2 topics:

1. To identify the institutional and industry processes and entities currently in place to implement and uphold the legal and regulatory framework, and highlight where there are gaps that may be addressed.
2. To understand the role of these entities, whether they have legal responsibilities under the regulatory framework, assess their capacity to fulfil these roles and responsibilities, and highlight where there are gaps that may be addressed.

Contextualizing Pillar 3 Assessment

Pillar 3 leverages information identified under Pillar 2 to identify the relevant processes, mechanisms, and entities with roles and responsibilities relating to implementation of the regulation framework to guide further assessment on these areas. The assessment process is not linear and may simultaneously produce data that are relevant to several of the pillars. Part of the task under Pillar 3 is to sort through the information and identify what should be captured under this pillar and inform the analysis specific to the pillar.

Information Sources

It is likely that substantial data collection under this Pillar will be through consultation with the relevant stakeholders during the Primary Assessment stage, particularly as this section of the assessment focuses on the realities of implementation. However, some preliminary information for Pillar 3 may be identified during the Desktop Review stage, particularly through qualitative assessment papers that address similar themes.

SECTION C.3.1

Topic 3.1: Urban Planning and Building Control Process

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic assesses the processes in place to ensure compliance with the regulations that control what is built. The assessment should consider both what is defined by the legislation and the status of implementation with reference to relevant stakeholders. The sub-topics that should be assessed are:

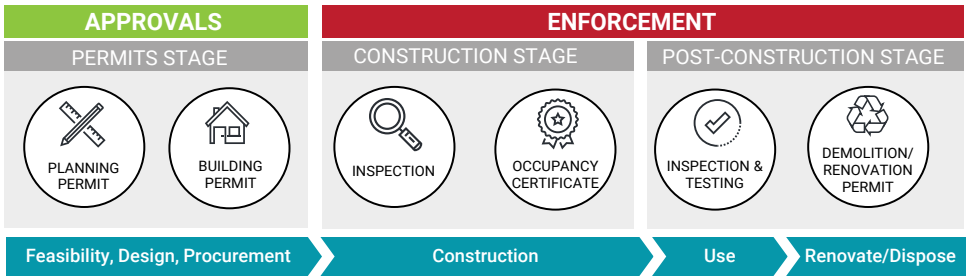
3.1.1 Control mechanisms: approvals and enforcement: This sub-topic refers to the rules and procedures for obtaining any planning or building permission and the protocols for inspections, and testing required to verify construction works are implemented in accordance with the conditions of relevant permits and regulations until the issuance of an Occupancy certificate or equivalent (as applicable); and subsequently that any mandatory testing and maintenance activities (e.g., fire safety system testing) are implemented during operation of the building; and finally that relevant permitting and procedures are followed for renovation or demolition and disposal of the building.

This should include identifying what systems are used (e.g., paper-based forms vs. online portals), what types of reviews are performed and based on which regulatory documents.

The analysis should consider all stages of approvals and enforcement, typically following the construction lifecycle as follows (figure 17).

This sub-topic also includes the analyses of dispute resolution mechanisms (if any) and how they are implemented in practice.

Figure 17. Typical Approvals and Enforcement throughout the Construction Lifecycle



The data and analyses presented in the BRCA 2.0 report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report. For all the sub-topics in this topic, example Detailed Questions are provided in Section D to aid data collection.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What component(s) of the regulatory framework define the legal basis and assign responsibility for planning and building control?
2. Who has a role or responsibility for planning or building control, and the associated approvals and compliance mechanisms?
3. To what extent is this information accessible and legible to the public, and how is it accessed? Include descriptions of digital submissions, and approval systems.

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to planning and building control processes. This will be the basis of formulating recommendations to address the issues identified.

The analysis under Topic 3.1 may refer to and/or consider recommendations to undertake a further assessment focusing on building control processes.

SECTION C.3.1

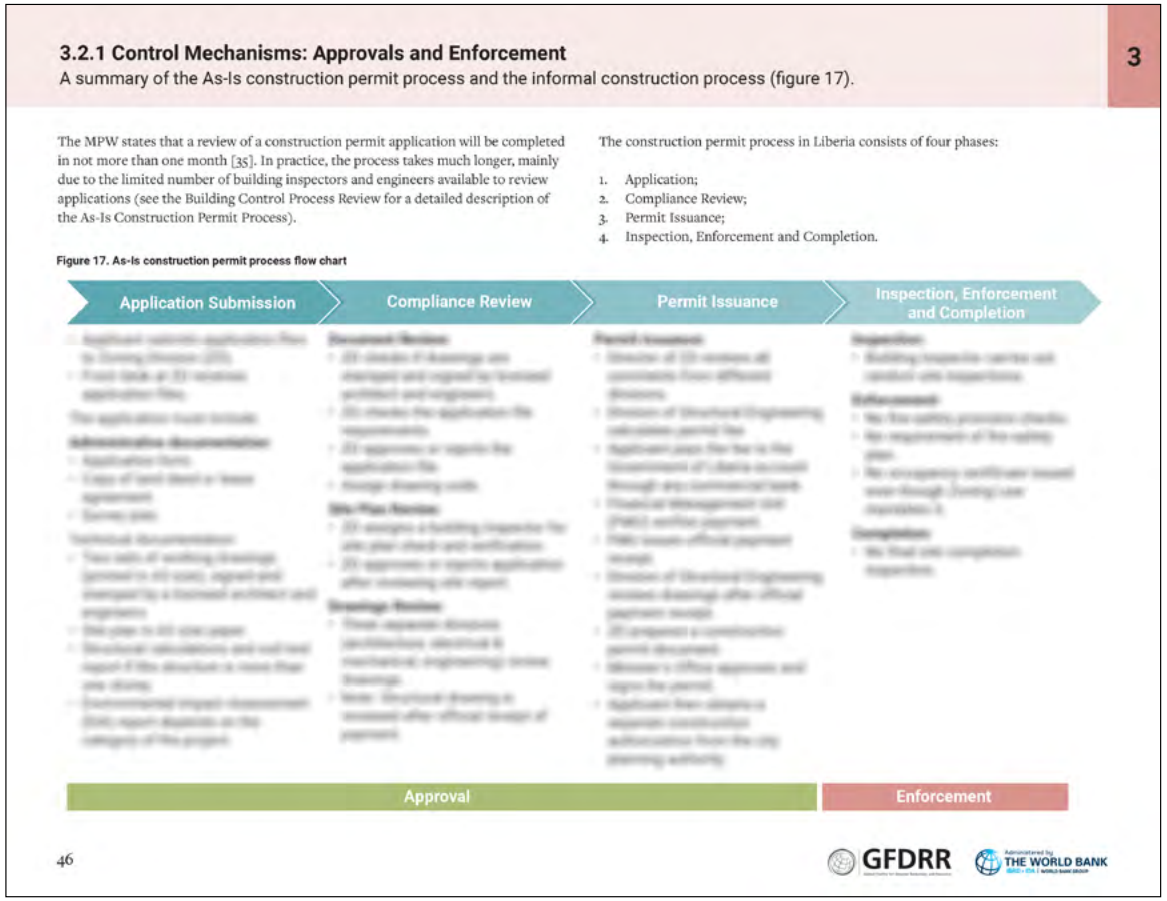
Topic 3.1: Urban Planning and Building Control Process

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 18), consider the following:

Using a summary diagram to capture key features of the processes:

Figure 18. Example of section display in a BRCA 2.0 Report.



3.2.1 Control Mechanisms: Approvals and Enforcement

A summary of the As-Is construction permit process and the informal construction process (figure 17).

3

The MPW states that a review of a construction permit application will be completed in not more than one month [35]. In practice, the process takes much longer, mainly due to the limited number of building inspectors and engineers available to review applications (see the Building Control Process Review for a detailed description of the As-Is Construction Permit Process).

The construction permit process in Liberia consists of four phases:

1. Application;
2. Compliance Review;
3. Permit Issuance;
4. Inspection, Enforcement and Completion.

Figure 17. As-Is construction permit process flow chart

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Tips:

1. The diagram should capture and describe the key steps.
2. The diagram should give an indication on the current level of implementation.

Source: Developed by the authors

SECTION C.3.1

Topic 3.1: Urban Planning and Building Control Process

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 19), consider the following:

Using a detailed diagram to illustrate the process that should be followed.

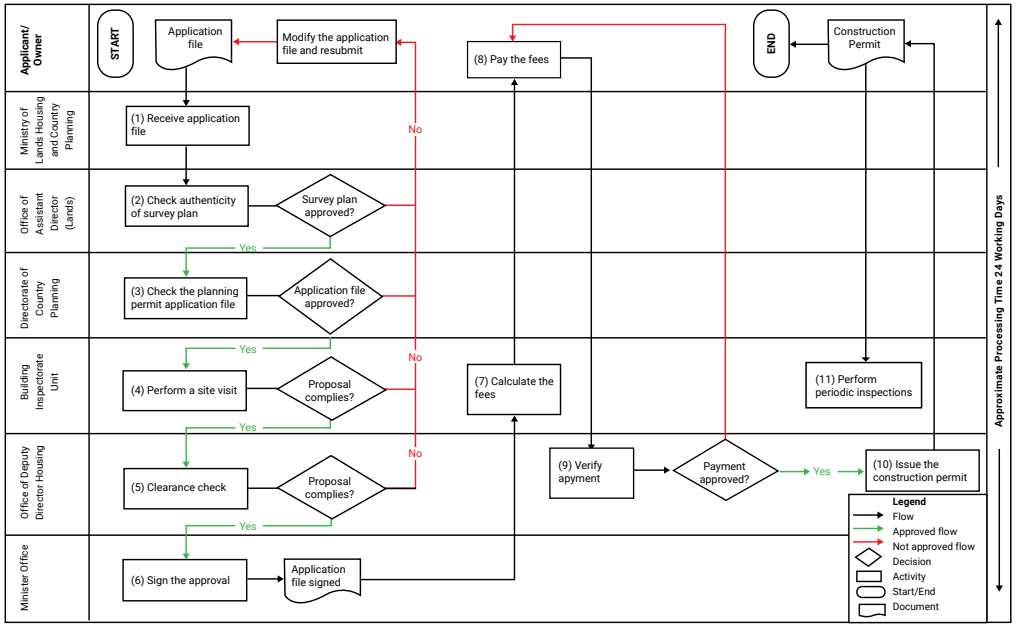
Figure 19. Example of detailed diagram for a BRCA 2.0 Report

3.1.1 Control Mechanisms: Approvals and Enforcement 3

As-Is Building Control Process–*[Insert description of the context in which this process applies]*

Develop a diagram showing the building approval and enforcement process, clearly indicating stakeholders in charge of different roles and their sequences

Figure 14. *[Insert caption]*



Source: [Insert source]

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Source: Developed by the authors

Tips for mapping:

1. The detailed process diagram should be produced using appropriate industry-recognized software such as Microsoft Visio.
2. Multiple versions of this diagram may be needed to capture how the required process might vary based on location or building/ development size or typology.

SECTION C.3.2

Topic 3.2: Institutional Capacity Assessment

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 seeks to identify the different institutional stakeholders involved in the urban planning and building control processes, their responsibilities, and their capacity and capability to deliver on their respective roles and responsibilities. The assessment should consider the following sub-topics:

3.2.1 Key ministries and departments regulating the built environment: This sub-topic focuses on the ministries and government departments with a role or responsibility in building regulations, the nature of their role, and their capacity to undertake it. The assessment should make a distinction between the entities with a legally mandated role or responsibility, and those whose role is not legally mandated.

3.2.2 Other governmental agencies and third parties involved (if any): This sub-topic focuses on all other parties with a role or responsibility in building regulation, the nature of their role, and their capacity to undertake it. The assessment should make a distinction between the entities with a legally mandated role or responsibility, and those whose role is not legally mandated.

To determine the applicability of the different entity categories, the assessment must first determine which levels of government have a role in planning and building control (i.e., national [centralized] or regional/local [decentralized]), and whether private sector entities also have a role. The capacity of all the relevant entities identified should then be assessed.

The data and analyses presented in the BRCA 2.0 report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report. For all the sub-topics in this topic, example Detailed Questions are provided in Section D to aid data collection.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. Describe the key ministries, governmental agencies, and third parties with a role or responsibility within the building regulatory framework, and the (legal) nature of their role or responsibilities.
2. What are the capacity and capability of these key ministries, governmental agencies, and third parties to implement their role and responsibilities within the building regulatory framework? (e.g., operational capacities, number of people, technical capability, required level of qualification [if any], etc.)
3. To what extent is this information accessible and legible to the public, and how is it accessed?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities relating to institutional capacity. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.3.2

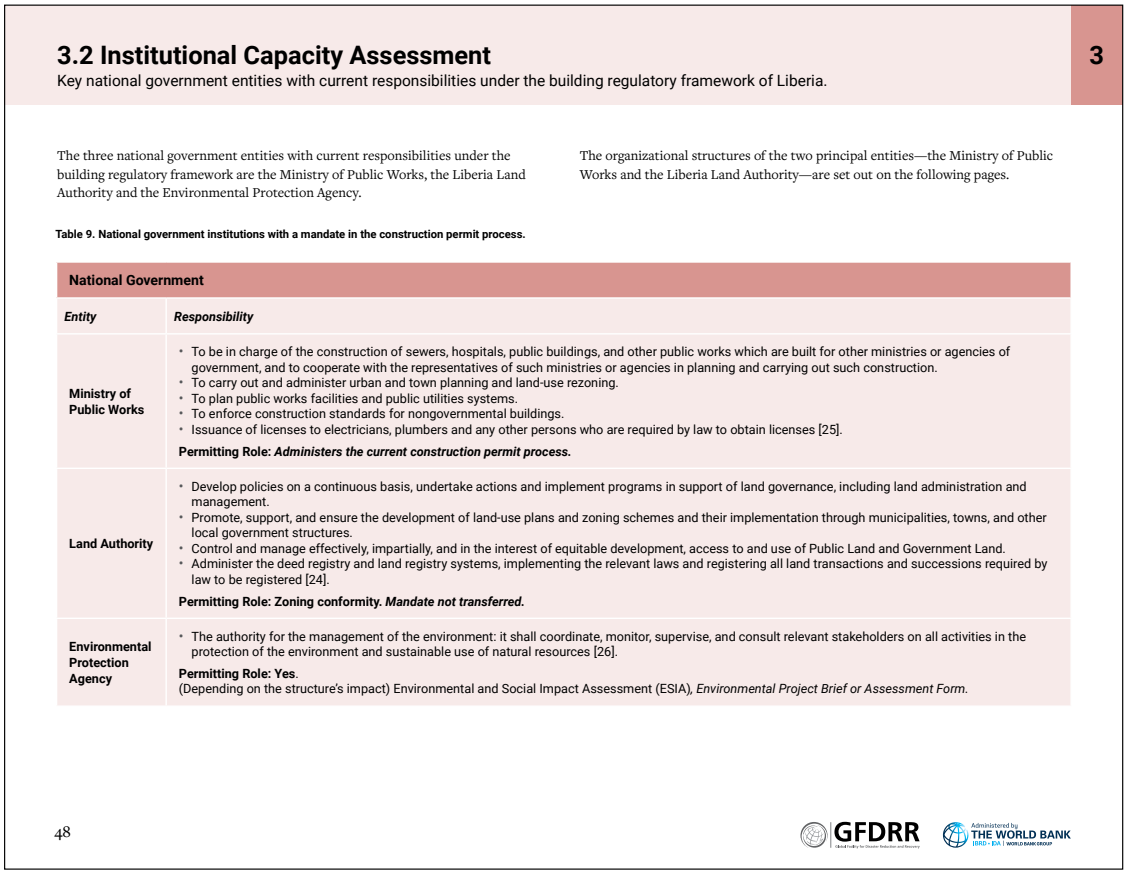
Topic 3.2: Institutional Capacity Assessment

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 20), consider the following:

Using a table to map out entities and their responsibilities:

Figure 20. Example of table displaying entities and responsibilities for a BRCA 2.0 Report.



3.2 Institutional Capacity Assessment

Key national government entities with current responsibilities under the building regulatory framework of Liberia.

3

The three national government entities with current responsibilities under the building regulatory framework are the Ministry of Public Works, the Liberia Land Authority and the Environmental Protection Agency.

The organizational structures of the two principal entities—the Ministry of Public Works and the Liberia Land Authority—are set out on the following pages.

Table 9. National government institutions with a mandate in the construction permit process.

National Government	
Entity	***Responsibility***
Ministry of Public Works	• To be in charge of the construction of sewers, hospitals, public buildings, and other public works which are built for other ministries or agencies of government, and to cooperate with the representatives of such ministries or agencies in planning and carrying out such construction. • To carry out and administer urban and town planning and land-use rezoning. • To plan public works facilities and public utilities systems. • To enforce construction standards for nongovernmental buildings. • Issuance of licenses to electricians, plumbers and any other persons who are required by law to obtain licenses [25]. **Permitting Role: *Administers the current construction permit process.***
Land Authority	• Develop policies on a continuous basis, undertake actions and implement programs in support of land governance, including land administration and management. • Promote, support, and ensure the development of land-use plans and zoning schemes and their implementation through municipalities, towns, and other local government structures. • Control and manage effectively, impartially, and in the interest of equitable development, access to and use of Public Land and Government Land. • Administer the deed registry and land registry systems, implementing the relevant laws and registering all land transactions and successions required by law to be registered [24]. **Permitting Role: Zoning conformity. *Mandate not transferred.***
Environmental Protection Agency	• The authority for the management of the environment: it shall coordinate, monitor, supervise, and consult relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources [26]. **Permitting Role: Yes**. (Depending on the structure's impact) Environmental and Social Impact Assessment (ESIA), *Environmental Project Brief or Assessment Form.*

Tips:

1. The table should clearly name the entity and describe its responsibility.
2. The table can organize the entities according to their "type", e.g., central government, local government, and other bodies.

Source: Developed by the authors

SECTION C.3.2

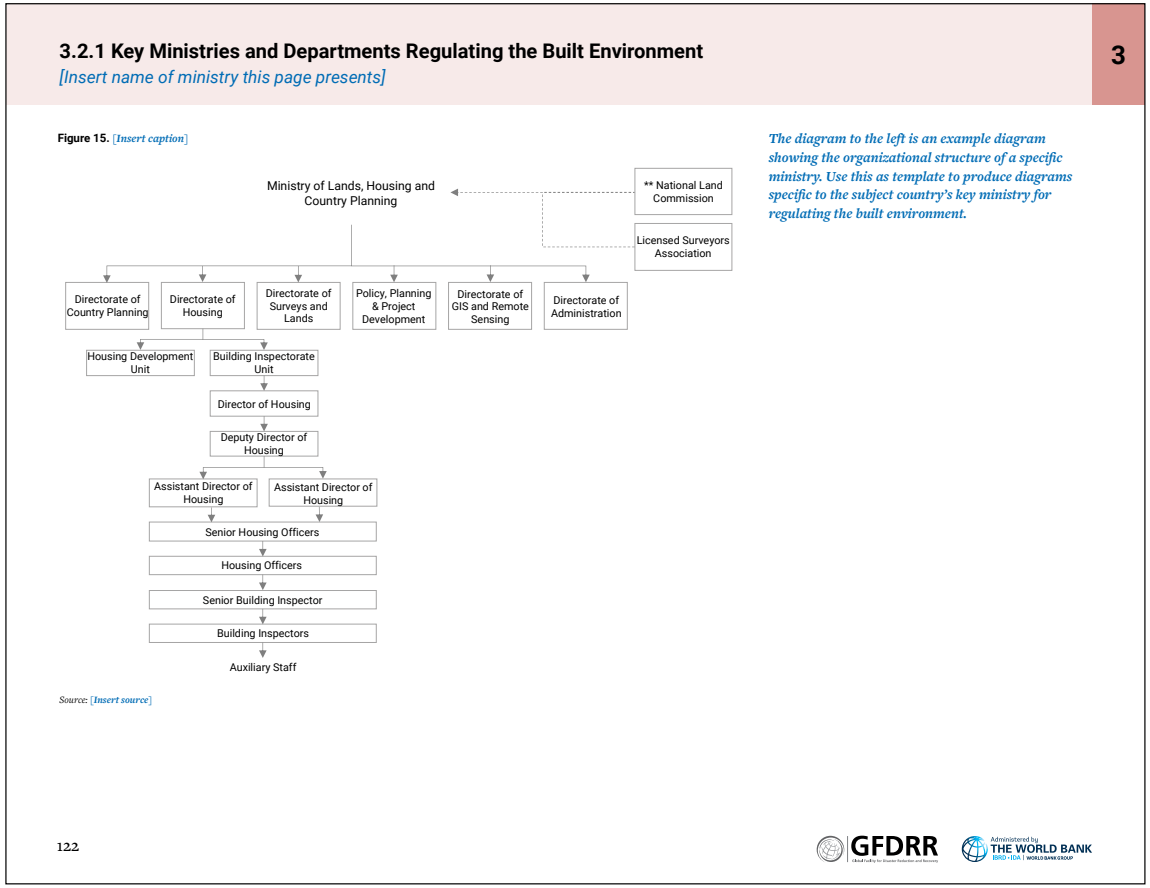
Topic 3.2: Institutional Capacity Assessment

REPORT GUIDANCE

When presenting the findings of this topic in the BRCA 2.0 report (figure 21), consider the following:

Using an organizational structure diagram to describe a particular entity:

Figure 21. Example of diagram to describe a key entity in a BRCA 2.0 Report.



Source: Developed by the authors

Tips for illustration:

1. Key departments and sub-groups, and how they relate to each other should be clearly shown.
2. Color-coding and a legend can be used to show further layers of information. In this case, color-coding is used to indicate if a position is filled or vacant.
3. Captions should include a clear description and the information source.

SECTION C.3.3

Topic 3.3: Construction Industry Capacity Assessment

ASSESSMENT GUIDANCE

Sub-topics Description:

This topic of the BRCA 2.0 focuses on understanding the technical capability and operational capacity of the construction industry. This understanding will inform development of regulations in a manner that nurtures development of the industry through ambitious but achievable standards that can be incrementally improved. The assessment considers the following sub-topics related to building regulatory frameworks:

3.3.1 Education environment: This sub-topic refers to a high-level understanding of the education environment available in the country, rather than a discipline specific accreditation/curriculum analysis (which is covered in sub-topic 3.3.4). This is to give context to the capacity assessment.

3.3.2 Design professionals: This sub-topic refers to professionals such as architects, engineers, and surveyors who have responsibilities relating to regulatory compliance and therefore the need to understand which areas of professional discipline are represented and how this aligns with the areas of knowledge and skill required by the relevant regulations, and to what extent those professions understand and comply with their regulatory obligations.

3.3.3 Builders or contractors: This sub-topic refers to understanding the capacity and capability to implement construction in compliance with the relevant regulatory requirements.

3.3.4 Education and certification: This sub-topic refers to the discipline specific educational framework in place in the country, such as the types of related university curricula available, or technical and vocational training programs. This also includes certification mechanisms and/or qualification requirements for design and construction professionals and trades.

The data and analyses presented in the BRCA report under this topic should address each of the Topic Assessment Questions to the right, and consider each of the sub-topics above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report. For all the sub-topics in this topic, example Detailed Questions are provided in Section D to aid data collection.

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. What are the roles and responsibilities within the building regulatory framework for each category of construction industry professionals?
2. What are the capacity and capability of each category of construction industry professionals to implement their roles and responsibilities within the building regulatory framework? (e.g., operational capacities, number of people, technical capability, etc.)
3. To what extent does the education sector provide training in built environment subjects, and what is the process to become certified for each discipline?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to industry capacity. This will be the basis of formulating recommendations to address the issues identified.

SECTION C.3.4

Topic 3.4: Insurance and Liability System Overview

ASSESSMENT GUIDANCE

Sub-topic Description:

This topic assesses the insurance and liabilities in place, and the legal requirements for them. This is covered through the following sub-topic:

3.4.1 Summary of insurance and liability systems for professionals: This sub-topic refers to the existence and characteristics of an insurance system and liabilities management framework for different construction industry professionals, such as architects, surveyors, engineers, formal and informal contractors, and builders. The topic should cover liability regime, penalties, and insurance requirements with respect to both individual built environment practitioners and firms.

In-depth understanding of the Insurance and Liability System in the country being assessed, is key to develop and enhance a building regulatory framework. Through the BRCA 2.0, it is fundamental to outline the type of liability regime existing in the country, the parties involved that are held liable by law, and the existence (if any) of insurance products (decennial or latent defect liability insurance) to cover such liability (either mandated by law or being obtained in practice).

Topic Assessment Questions:

These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics:

1. To what extent are there legal requirements for insurance and liability in relation to government and the private sector?
2. To what extent is this information accessible and legible to the public, and how is it accessed?

Analyses across these sub-topics must clearly describe the gaps, challenges, and opportunities for building regulatory reform, specific to insurance and liability systems. This will be the basis of formulating recommendations to address the issues identified.

The data and analysis presented in the BRCA report under this topic should address each of the Topic Assessment Questions to the right, and consider the sub-topic above. This information should be presented clearly in the relevant report section. If sufficient information cannot be found to respond to a question, the consultant should explain this limitation in the report. For all the sub-topics in this topic, example Detailed Questions are provided in Section D to aid data collection.

SECTION D

ASSESSMENT QUESTIONS SUMMARY AND EXAMPLE DETAILED QUESTIONS

This section provides tables to summarize the Topic Assessment Questions presented throughout Section C and offers example Detailed Questions for certain sub-topics that can be used to aid detailed data collection. The answers to these questions will build the evidence for analyses and findings for each topic assessment and may also inform some specific recommendations. The Detailed Questions are examples of the typical questions to be addressed, but are not exhaustive and should be reviewed and adapted based on contextual understanding to create country-specific detailed question lists for each BRCA. Consultants should share their proposed list with the Client team for agreement prior to conducting the associated assessment. The BRCA 2.0 report should include clear reporting on the findings under each detailed question (e.g., the questions and answers may be presented in a table). This may include explanatory notes where constraints in the available data resulted in limitations to the completeness of the answers.

An Excel version of these tables can be provided on request.

SECTION D1

PILLAR 1: COUNTRY CHARACTERISTICS

Topic Assessment Questions Summary

The **Topic Assessment Questions** in the table below are a summary of those presented in Section C. These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics. For further guidance on these questions and the sub-topics that should be considered, refer to the relevant topic in Section C.

Topic 1.1 Country Context
1. What are the defining features of the country context?
2. What is the impact of the defining country features on the built environment, people, and nature?
3. How do these defining country features support or impede the building regulatory framework?
Topic 1.2 Risk Profile
1. What are the principal hazards (chronic and acute) impacting the country?
2. What is the impact of these principal hazards on the built environment, people, and nature?
3. To what extent does the building regulatory framework and the main documents available (policies, investment priorities, etc.) in the main area of concerns respond to these principal hazards?
4. What sources of information are available and how reliable are they in terms of accuracy and completeness?
Topic 1.3 Urbanization Profile
1. What are the defining features of the country urbanization profile?
2. To what extent does the building regulatory framework respond to or guide urban development/the urbanization profile/defining urbanization features?
3. To what extent does the building regulatory framework integrate and is adapted to the main realities of the urbanization profile?
Topic 1.4 Construction Materials and Methods
1. What are the common materials and methods used in the construction industry?
2. What kind of construction materials, methods, and typologies commonly utilized in the built environment influence vulnerability, and what measures can be taken to enhance the resilience of buildings through improved building regulations and guidance?
3. To what extent does the building regulatory framework respond to these common construction materials and methods?

SECTION D1

PILLAR 1: COUNTRY CHARACTERISTICS

Topic Assessment Questions Summary

Topic 1.5 Fragile and Conflict-Affected Situations
1. If the BRCA applies to an FCS country: Are there any additional challenges derived from the fragile or conflict situation?
2. Are there specific constraints in terms of access to financing, operation, and maintenance of buildings caused by FCS factors?
Detailed Questions: sub-topic 1.5.1: Fragile and conflict-affected situations
1. Which are the additional challenges derived from the specific fragile or conflict situation?
2. Are there specific constraints in term of access to financing, operation, and maintenance of buildings caused by FCS factors?
3. What sources of information are available and how reliable are they in terms of accuracy and completeness?
4. What are the challenges in accessing reliable information on the built environment, including construction activities, infrastructure damage, and population displacement?
5. How does the conflict or fragility situation affect property rights and tenure security, and what are the implications for spatial planning and land use regulations?
6. How do conflict situations and/or institutional fragility affect the supply of materials, labor, and construction systems?
7. What are the main challenges in ensuring construction quality and affordability amidst conflict-related disruptions?
8. How do security concerns and transportation costs impact material sourcing and construction practices in conflict-affected areas?
Topic 1.6 Drivers of Risk in the Built Environment
1. Based on the data collected so far in Pillar 1, what are the principal and contextually specific risk factors in the built environment?

SECTION D2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

Topic Assessment Questions Summary and Example Detailed Questions

The **Topic Assessment Questions** in the table below are a summary of those presented in Section C. These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics. For further guidance on these questions and the sub-topics that should be considered, refer to the relevant topic in Section C. Some sub-topics are also included in the table below to offer example Detailed Questions specific to these sub-topics.

Topic 2.1 Legislative Framework Overview
1. To what extent is there a legal framework governing the built environment, and what primary and secondary legislation, policy, plans and other relevant instruments does it consist of?
2. To what extent is there a legal requirement or a process for developing, enabling, and maintaining the document that constitutes this legal framework?
3. To what extent is there a lead entity with a clear mandate for developing, promulgating, and maintaining each document within this legal framework, and are they carrying out the mandate?
4. To what extent is this information accessible and legible to the public, and how is it accessed?
Topic 2.2 Spatial Planning Requirements
1. What is the quality and coverage of the components of the legal framework that relate to the sub-topics in this topic?
2. To what extent is there a legal requirement or a process for developing, enabling, and maintaining these components?
3. To what extent is there a lead entity with a clear mandate for developing, promulgating, and maintaining these components, and are they carrying out the mandate?
4. To what extent is this information accessible and legible to the public, and how is it accessed?
Detailed Questions: sub-topic 2.2.1: Risk-Sensitive Land Use and Physical Planning
1. What type of development plans exist and at which level (national, regional, local)?
2. What is the degree of coverage of these plans? In the case of regional or local development plans, evaluate the percentage of cities covered by these plans (to the extent possible).
3. Are spatial plans, zoning requirements, and hazard information available to all stakeholders from the central information data source/digital platform such as the Geographic Information System (GIS)/national spatial data management platform? If not, what is the current setup?
4. What kind of risks are integrated in the land use and physical planning development plans (zoning, hazards, infrastructure, suitable areas for physical developments, etc.); what are their levels of integration/detail and are they publicly available?
5. Is there legislation in place that mandates the integration of risk and hazard considerations into spatial planning instruments?

SECTION D2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

Topic Assessment Questions Summary

6. *What is the level of incorporation of hazard maps in formal land use planning/physical planning subsidiary legislation considering (not restrictive) the following aspects:*
   (g) Identification of areas in which building is not permitted due to natural hazards and in a broader way areas suitable or non-suitable for distinct types of development;
   (h) Minimum separation between residential and hazardous occupancies; and
   (i) Identification of areas in which buildings are not permitted in relation to natural resources?
7. *Do regulations incorporate specific building requirements or guidelines related to hazards like floods, for example, location, elevation, mitigation measures, ground coverage, etc., or any other requirements for infrastructure associated with building density, population, or related factors?*
8. *Who are the key stakeholders and what is the level of coordination with other policy domains (environment, agriculture, land property, transport, energy, etc.), and is there any obvious overlaps or contradictions between them?*

Detailed Questions: sub-topic 2.2.2: Risk Information Management

1. *Is there a clear mandate and delineation of responsibilities for the generation of risk information at the national, regional, and local levels?*
2. *What are the characteristics of risk information available (source, resolution, coverage, frequency, intensity, format, historical catalog)?*
3. *Are technical standards established for the generation of risk information?*
4. *What mechanisms are in place to ensure that hazard and risk information is regularly updated and accessible to inform approval decisions?*
5. *Is there any information available about the degree of exposure related with any particular hazard in the information available?*

Topic 2.3: Building Code Requirements

1. What is the quality and coverage of the components of the legal framework that relate to the sub-topics in this topic?
2. To what extent is there a legal requirement or a process for developing, enabling, and maintaining these components?
3. To what extent is there a lead entity with a clear mandate for developing, promulgating, and maintaining these components, and are they carrying out the mandate?
4. To what extent is this information accessible and legible to the public, and how is it accessed?

Detailed Questions: sub-topic 2.3.1: Structural and Geotechnical Design

1. *What is/are the main sources of standards referenced in the regulations? If standards from multiple countries/organizations are referenced, are they compatible among them?*

SECTION D2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

Topic Assessment Questions Summary and Example Detailed Questions

2.	*How are building uses/occupancy groups classified?*
3.	*What are the different load types defined in the subsidiary legislations, and were they adapted to the local environment (live and dead loads, snow, rain, wind, exposition to fire, thermal or earthquake actions)?*
4.	*Are there tables/simple compliance mechanisms for small/simple construction buildings? If so, do they adequately account for expected hazard loading?*
5.	*Are the requirements for each type of structure (concrete, composite steel and concrete, steel, timber, aluminum, and masonry structure) defined in the subsidiary legislation relevant, and do they integrate expected hazard loads?*
6.	*What are the analysis requirements for geotechnical design (ground investigation and testing), and what are the verification methods?*
7.	*What are the performance targets defined, and are they specific to specific building categories?*
8.	*What are the requirements for retrofit applications, including relevant structural analysis requirements?*
9.	*Are there any government-published rules of the thumb or safe construction guidelines for non-engineered buildings available to professionals that explain how to apply the legal framework regarding structural design aspects, and are they consistent with the local built environment?*
Detailed Questions: sub-topic 2.3.2 Fire Safety and Prevention	
1.	*What is/are the main sources of standards referenced in the regulations? If standards from multiple countries/organisations are referenced, are they compatible among them?*
2.	*How are building uses/occupancy groups classified?*
3.	*Are there any performance requirements regarding the following aspects: means of escape, fire resisting construction, means of access, fire safety management?*
4.	*What factors are considered to comply with the performance requirements (use of the building, occupant capacity, building height, building area, active fire safety, building location, fire hazard, fire service intervention, etc.)*
5.	*What are the requirements regarding resistance to fire/Fire Resistance Rating (FRR) for construction elements (loadbearing and non-loadbearing walls, floors, columns and beams, shafts, etc.) and per material type (concrete, timber, steel, etc.)?*
6.	*What are the requirements regarding means of escape for building users (occupancy capacity, exit routes, staircase, exits, travel distance, width of exit routes, ramps, universal accessibility, etc.); is there any specificity regarding special uses?*
7.	*What are the requirements regarding means of access for fire services to the building? (access staircases and window and other entries at various levels, dedicated lift, rescue stairway, etc.)?*

SECTION D2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

Topic Assessment Questions Summary and Example Detailed Questions

8. *What are the requirements regarding flame spread/fire properties of building interior surfaces (e.g., walls, ceilings, floors) and exterior surfaces (exterior cladding, roof, etc.)?*
9. *What are the requirements regarding fire safety management (maintenance, training, etc.)?*
10. *What are the requirements regarding active/automatic fire protection systems (detection, alarm, lighting, automatic fire suppression systems, smoke control/ventilation, emergency communication, etc.)?*
11. *What are the requirements for manual fire suppression systems (e.g., fire extinguishers, fire service hydrants, water mains, etc.)?*
12. *What are the requirements for control of hazardous materials in buildings?*
13. *What are the requirements for occupant evacuation and safety training?*

Detailed Questions: sub-topic 2.3.3 Universal Accessibility and Inclusive Design

1. *What is/are the main sources of standards referenced in the regulations? If standards from multiple countries/organizations are referenced, are they compatible among them?*
2. *What provisions exist (within the building regulatory framework or wider human rights–based legislation) that enable citizens to challenge a building owner to make the building accessible, or does legislation directly require the building to be accessible?*
3. *Do the regulations for accessibility include detailed specific technical design aspects depending on the type of use (commercial, assembly areas, medical care facilities, educational, residential, etc.) and on the type of work to undertake (new buildings, alterations, etc.)?*
4. *Do the regulations include detailed design conception aspects in terms of access and use of the buildings by the persons with reduced mobility (requirements for specific areas, accessible routes, general site requirements, building elements, plumbing elements and facilities, communication elements, signage, etc.)?*
5. *Do the regulations incorporate the concepts of universal design throughout the building (including door handles, wash basin heights and handles, sanitary facilities, etc.)?*
6. *Do the regulations include detailed design conception aspects in terms of access to public spaces by the persons with reduced mobility (parks, sidewalks, etc.)?*

Detailed Questions: sub-topic 2.3.4 Green Buildings

7. *What is/are the main sources of standards referenced in the regulations? If standards from multiple countries/organizations are referenced, are they compatible between them?*

SECTION D2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

Topic Assessment Questions Summary and Example Detailed Questions

2. *Identify and describe any regulatory requirement for assessing and certifying the energy and resource efficiency of buildings? This may include approved assessment methodologies, accreditation schemes for assessors, minimum certifications or ratings, and requirements to declare/display results.*
3. *What are the technical requirements regarding building envelope performance (specification of doors, glazing, insulation, airtightness, etc)?*
4. *What are the relevant technical requirements regarding the manufacture, construction and installation of building services (electrical, heating, ventilation, air conditioning, water supplies)? This may include minimum efficiencies of equipment and overall systems; conservation of water; use of renewables; limits with respect to pollution potential (e.g., refrigerants).*
5. *What type of work (additions, alterations, new construction, historic buildings, etc.) and uses (residential, nonresidential, industrial, etc.) are subject to energy and resource efficiency requirements?*

Detailed Questions: sub-topic 2.3.5 Climate Change Adaptation

1. *Identify and describe any existing guidelines or instruments available to help the designs to be more resilient to possible future events in relation with climate change (heatwaves, storm surges, droughts, and floods, etc.)*

Detailed Questions: sub-topic 2.3.6 Construction materials, products, and methods

1. *What processes are defined in the regulations concerning the regulation, certification, testing, and quality control of construction materials and products, including their contextual applicability/compatibility and the consideration of vernacular materials?*
2. *Are there government laboratories/facilities that have responsibility for construction materials and systems testing and approval, and if so, what are they and what are their scopes?*
3. *Are there private-sector laboratories/facilities (insurance-related or other) that have responsibility for construction materials and systems testing and approval, and if so, what are they and what are their scopes?*
4. *Which standards are used for construction materials and systems testing and approval?*
5. *Are laboratories/facilities that have responsibility for construction materials and systems testing and approval accredited, and if so, by what organization?*
6. *Are there any test/certification labels that are accepted, and if so, what are they (e.g., CE mark, UL mark, etc.)?*
7. *Are there conformity assessment approaches in place?*
8. *What are the requirements for safe dismantling and disposal (or recycling/reuse) of products and construction materials when a building is renovated or demolished?*

SECTION D2

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK

Topic Assessment Questions Summary and Example Detailed Questions

9.	*Who are the different stakeholders concerned by the regulations (manufacturer, importer, distributors, builder, etc.); what are their obligations (security, marking and information, control measures, etc.); and are there any challenges/barriers to compliance (e.g., capacity of testing/certification facilities, operational readiness of control systems and mechanisms)?*
Detailed Questions: sub-topic 2.3.7 Environmental Impacts Management during Construction and Operations	
1.	*What processes are defined in the regulations concerning the carrying out of environmental impact studies and for which types of project are those required?*
2.	*Is there a list of activities/project types for which environmental impact studies are required? How it is organized and are there any deficiencies?*
3.	*What are the requirements regarding environmental protection during the construction of the project and its operation in relation to used water treatment, subsoil contamination, etc.)?*
4.	*Are there conformity assessment approaches in place (e.g., periodic inspection framework)?*
5.	*Identify and describe any regulatory requirement for undertaking and certifying an environmental impact assessment of buildings? This may include approved assessment methodologies, accreditation schemes for assessors, minimum certifications or ratings, and requirements to undertake those kind of assessments and declare/display results.*
Detailed Questions: sub-topic 2.3.8 Heritage and Reuse	
1.	*Is there any specific regulatory mechanism and/or instruments implemented for addressing the needs of existing and heritage buildings (including specific building codes, engineering approaches for risk mitigation, and risk management and mitigation strategies)?*
2.	*Is there any classification and/or protection system in place concerning the historical built heritage?*
Detailed Questions: sub-topic 2.3.9 Health and Safety	
1.	*What is/are the main sources of standards referenced in the regulations? If standards from multiple countries/organizations are referenced, are they compatible between them?*
2.	*What processes are defined in the regulations concerning the regulation and application on building sites of health and safety measures?*
3.	*Are there conformity assessment approaches in place (e.g., periodic inspection framework)?*
4.	*Who are the main stakeholders involved in health and safety management–related tasks on construction sites and what are their main responsibilities?*

SECTION D3

PILLAR 3: IMPLEMENTATION MECHANISM AND CAPACITY

Topic Assessment Questions Summary and Example Detailed Questions

The **Topic Assessment Questions** in the table below are a summary of those presented in Section C. These questions identify the key information that should be established through the detailed data gathering and analyses organized under the sub-topics. For further guidance on these questions and the sub-topics that should be considered, refer to the relevant topic in Section C. Some sub-topics are also included in the table below to offer example Detailed Questions specific to these sub-topics.

Topic 3.1 Urban Planning and Building Control Process
1. What component(s) of the regulatory framework define the legal basis and assign responsibility for planning and building control?
2. Who has a role or responsibility for planning or building control, and the associated approvals and compliance mechanisms?
3. To what extent is this information accessible and legible to the public, and how is it accessed? Include description of digital submissions and approval systems.
Detailed Questions: sub-topic 3.1.1 Control Mechanisms: Approvals and Enforcement
1. Does the building regulatory framework clearly define approval criteria?
2. Is the building control framework based on a risk classification of buildings, and is there any risk information actively utilized during the approval process?
3. Is risk information available at the necessary level of detail to inform approval decisions?
4. Does the building control mechanism present specific requirements and processes for distinct types of works (new buildings, alteration, demolition, change of use, etc.)?
5. Does the building control framework include standards and procedures for appeals and reviews, infringements, exemptions, and dispute resolution mechanisms?
6. What incentives for compliance and penalties for noncompliance are in place, and to what extent are such incentives and penalties applied?
7. Are there policies, procedures, and checklists for plan reviews and inspections (e.g., requirements of on-site inspection at certain timing) at building sites?
8. Are there effective controls in place to enforce spatial planning and building regulations, considering some hazards that can be better managed through land use plans (e.g., landslides, floods)?
9. What are typical reasons for rejections or correction of designs?
10. What mechanisms exist to bring the benefits of safer construction to the informal sector?
11. Are there examples of innovative communication and outreach practices developed to bring the benefit of building regulatory frameworks for the public?
12. Are there user-friendly guidelines and communication materials that are easily accessible to the public, such as manuals on the application requirements and process guidelines for different types of development?

SECTION D3

PILLAR 3: IMPLEMENTATION MECHANISM AND CAPACITY

Topic Assessment Questions Summary and Example Detailed Questions

Topic 3.2 Institutional Capacity Assessment	
1.	Describe the key ministries, governmental agencies, and third parties with a role or responsibility within the building regulatory framework, and the (legal) nature of their role or responsibilities.
2.	What are the capacity and capability of each category of construction industry professionals to implement their roles and responsibilities within the building regulatory framework (e.g., operational capacities, number of people, technical capability, etc.)?
3.	To what extent is this information accessible and legible to the public, and how is it accessed?
Detailed Questions: sub-topic 3.2.1 Key Ministries and Departments Regulating the Built Environment sub-topic 3.2.2 Other Governmental Agencies and Third Parties Involved (if any)	
1.	*What are the methods of hiring, training, and supervising building control officials?*
2.	*What are the requirements in terms of qualification/certification for building officials working in building control–related tasks ?*
3.	*What is the availability of relevant training programs at appropriate education level (e.g., specific courses, vocational training, university programs with relevant curricula)?*
4.	*Are there education, experience, and training requirements for performing post-disaster assessments and making substantial damage determinations in earthquake, flood, or storm hazard areas?*
5.	*What is the capacity of the entity(ies) in charge or involved in building control–related tasks (number of staff; qualifications of staff; access to hardware, software, and adequate working spaces, etc.)?*
6.	*Is there oversight on the quality and efficiency of building control services by a department or an authority that monitors the performance of building control bodies with defined Key Performance Indicators (KPIs)?*
7.	*What tools are available to perform daily tasks and are they appropriate (e-permit system, specific hardware and software, illegal construction monitoring, etc.)?*
8.	*How are fees or levies collected during the building control processes utilized, are they sufficient to sustain building control services, and are the fee schedules publicly available?*
9.	*Do the institutional framework and procedures ensure the professional independence of building controllers (e.g., building officials, inspectors); is there a code of conduct and an implemented mechanism that allows reporting and addressing attempts to influence professional independence?*

SECTION D3

PILLAR 3: IMPLEMENTATION MECHANISM AND CAPACITY

Topic Assessment Questions Summary and Example Detailed Questions

	Topic 3.3 Construction Industry Capacity Assessment
1.	What are the roles and responsibilities within the building regulatory framework for each category of construction industry professionals?
2.	What are the capacity and capability of each category of construction industry professionals to implement their roles and responsibilities within the building regulatory framework (e.g., operational capacities, number of people, technical capability)?
3.	To what extent does the education sector provide training in built environment subjects, and what is the process to become certified for each discipline?
	Detailed Questions: ***sub-topic 3.3.1 Education Environment*** ***sub-topic 3.3.2 Design Professionals*** ***sub-topic 3.3.3 Builders or Contractors*** ***sub-topic 3.3.4 Education and Certification***
1.	*What are the requirements in terms of qualification, certification, licensing, and training for practitioners?*
2.	*What entity is responsible for certification (if required under the regulatory framework), and what is the level of coordination between certifying authorities and related ministries?*
3.	*What institutional (college, university, apprenticeship) educational programs exist locally, and how is the quality of the curricula validated?*
4.	*Do the curricula of industry training programs (academic and vocational) include a topic related with existing building regulations?*
5.	*What are the different types of trainings and/or continuous professional development programs available, and are they carried out by the government, associations of engineers/architects, or other training institutions, and what level of expertise do they have in the topic areas?*
6.	*What professional councils exist and how do they validate and monitor eligibility for membership/accreditation, promote continuous development, and watch over the quality of the design of their members (if any of these tasks are performed by professional councils)?*
7.	*What forms of penalty do exist in the legal framework in terms of malpractice of practitioners?*

SECTION D3

PILLAR 3: IMPLEMENTATION MECHANISM AND CAPACITY

Topic Assessment Questions Summary and Example Detailed Questions

Topic 3.4 Insurance and Liability System Overview
1. To what extent are there legal requirements for insurance and liability in relation to government and the private sector?
2. To what extent is this information accessible and legible to the public, and how is it accessed?
Detailed Questions: sub-topic 3.4.1 Summary of Insurance and Liability systems for professionals
1. Is there any applicable liability and/or insurance regime? If so: *(a) What main aspects does it take into account (duration of liability, civil or penal penalties, etc.)?* *(b) What is the form of liability (joint and several or proportionate liability)?*
2. What kind of insurance products related to the construction environment exist in the country of study (decennial or latent defect liability insurance)?
3. Is it mandatory for professionals related to the built environment (architects, engineers, builders, etc.) to take out insurance when carrying out design and construction work?

APPENDIX A
EXAMPLE RECOMMENDATIONS

A.1 The Essential Role of the Building Regulatory Framework

A.2 The Need for Assessment and the BRCA 2.0

APPENDIX A

Example Recommendations

This appendix consists of example **Recommendations** organized by Pillar. The guidance in Sections B.4 and B.5 should be followed to develop appropriate recommendations and intervention areas, while taking into consideration the specific challenges in each country. Recommendations should be very precise and clearly articulated (see Tips in B.4) to avoid ambiguity, and to ensure they are relevant, feasible, and aligned with stakeholders' priorities, perspectives, and local environment specificities.

PILLAR 2: LEGAL AND REGULATORY FRAMEWORK
R#. Undertake a detailed hazard assessment with a progressive strategy prioritizing areas of greater concern in order to generate hazard, vulnerability, and risk information for land use planning and policy making purposes (*or for other specific purpose).
R#. Develop strategic local plans and land use plans that define no-build zones and/or zones with conditional restrictions or specific requirements and integrate a considerations linked with environmental protection, hazards, and possible climate change–related risks.
R#. Complete and enact the Building Control Act.
R#. Finalize, approve, enact, maintain, and update a National Building Code.
R#. Develop simple construction guidelines for builders of small-scale buildings.
R#. Update the regulatory framework for land use and development control and introduce slope modification regulations.
R#. Ensure that legislation is in place that gives a clear mandate to an entity to develop, publish, and promote standards for construction materials, products, and systems, and access the resources needed to carry out the mandate.
R#. Adapt, adopt or create standards for construction materials, products, and systems that are appropriate for the country.
R#. Establish a system for certification that a material, product, or system conforms to a standard.
R#. Develop plans and guidance to define how functions will be devolved to local councils and how the scope of devolved functions may expand as local council capacity increases.
R#. Develop regulatory instruments to ensure that health and safety practices are applied consistently to the design of buildings and in the construction of buildings.
R#. Develop a digital land information management system in the subject country that is publicly accessible.
R#. Develop a fire regulation and accompanying guidelines for builders and design professionals and a plan to support effective implementation of the regulations and guidelines.
R#. Ensure that accessibility and inclusion provisions are integrated within the legislation and develop guidance on this topic for the public and professionals.
R#. Initiate assessment into the appropriate application of building-level renewable energy technologies and energy- and resource-efficient building practices to inform regulations and guidance.
R#. Complete the national land use planning and development legal framework.
R#. Develop instruments (Structure, Spatial and Zoning Plans, and Layouts) to guide and regulate urban growth.
R#. Adapt, adopt or create standards that are appropriate for the country.
R#. Develop regulatory instruments and guidance to ensure safe construction practice and safe buildings, including for fire prevention.

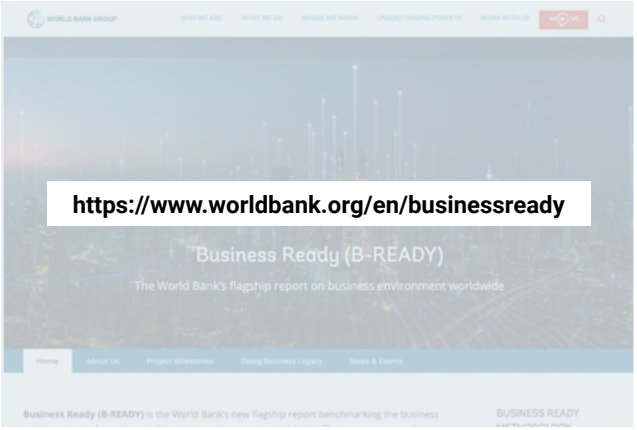
APPENDIX A

Example Recommendations

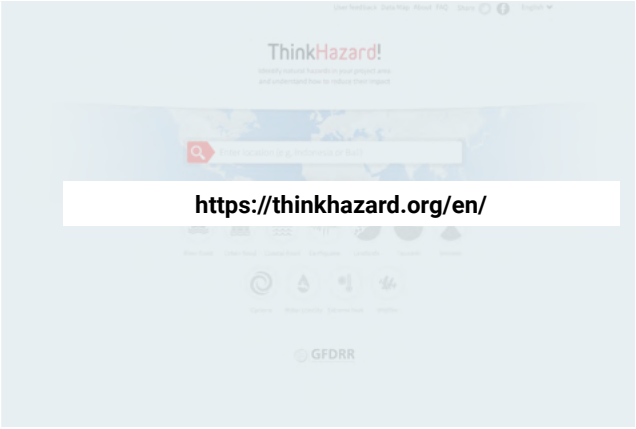
PILLAR 3: IMPLEMENTATION MECHANISM AND CAPACITY
R#. Mandate technical approval by suitably qualified professionals (e.g., civil and geotechnical engineers) for structures that are proposed to be built on slopes where the gradient is higher than a specified minimum.
R#. Support existing authorities to improve the efficiency and coverage of the construction permitting system.
R#. Set up a system to investigate, design, test, and implement incentives for public and professional engagement with new legislation, systems and processes, and penalties for noncompliance.
R#. Engage with the public and professionals to identify opportunities for combining environmental protection with local economic development and effective enforcement of laws covering land use planning and development and building control.
R#. Set up a technical committee to steer the development of a National Building Code.
R#. Increase coordination and data sharing between key built environment authorities, including district and local councils.
R#. Establish a body that has a mandate to promote health and safety in construction, to provide training and guidance to the construction industry, and to ensure that construction quality and safety standards are met.
R#. Develop higher education courses for urban planning and Masters-level degrees for engineering subjects.
R#. Mandate the involvement of qualified architects and engineers on projects over an agreed size and value.
R#. Develop guidance for a nontechnical audience on implementing small-scale buildings.
R#. Increase public awareness and accessibility of legislation applying to buildings and the responsible development of the built environment.
R#. Develop guidelines to establish a consistent basis for decision-making during the construction permit process.
R#. Clarify and disseminate the methodology to calculate the construction permit fees.
R#. Develop plans and guidance to define how functions will be devolved to local authorities and how the scope of devolved functions may expand as local authority capacity increases.
R#. Ensure that civil servants have access to the critical network infrastructure (internet, IT equipment, vehicles) they need to carry out their work.
R#. Improve and streamline the construction permit process.
R#. Digitize and automate the construction permit process—ensure that the public is aware of the change that is coming and that change is managed to allow for gradual adjustment to the new system.
R#. Evaluate the feasibility of introducing a system to register third parties to bolster the construction inspection workforce.
R#. Provide continuous training to officials working at national and local levels concerning the construction permit process; evaluate the needs for each position and the geographic distribution of personnel; and eventually evaluate the hiring requirements to support efficiencies and new initiatives.
R#. Strengthen the capacity of the relevant agencies to develop, publish, promote, and monitor conformity with standards for construction materials, products, and systems.
R#. Clarify which entity has the mandate to develop and maintain fire safety regulations and set up a technical committee to lead the development of a code that reflects current conditions in the subject country and provides the basis for effective monitoring and enforcement of fire regulations.
R#. Promote health and safety in construction by granting the mandate to an existing or to be established authority and providing industry training and guidance.
R#. Mandate quality assurance (QA) practices to ensure that construction quality and health and safety standards are met.
R#. Set up a system to investigate and design incentives for public and professionals engagement with new legislation, systems, and processes.

APPENDIX B

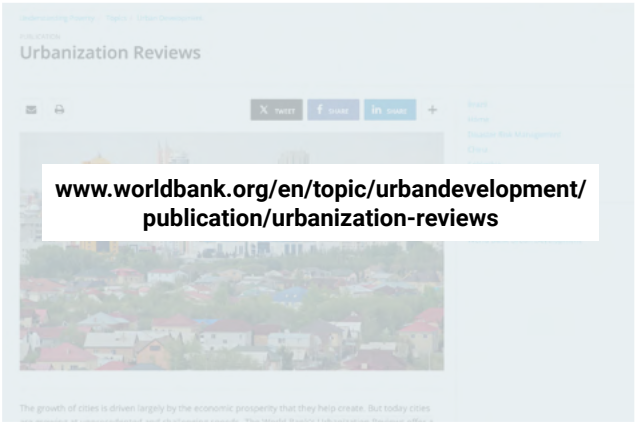
EXAMPLE INFORMATION SOURCES

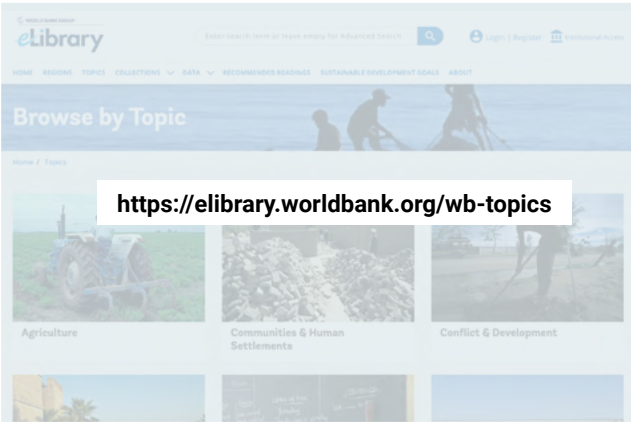

https://www.worldbank.org/en/businessready
Business Ready (B-READY)
The World Bank's flagship report on business environment worldwide


https://www.fao.org/faolex/en/
FAOLEX Database


https://thinkhazard.org/en/
ThinkHazard!

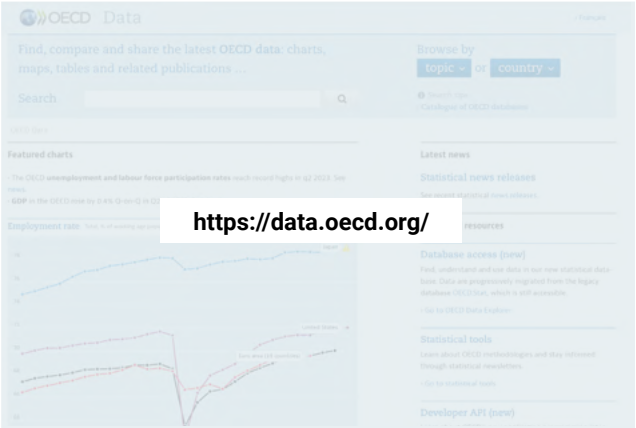

https://data.worldbank.org/
World Bank Open Data


www.worldbank.org/en/topic/urbandevelopment/publication/urbanization-reviews
Urbanization Reviews


https://elibrary.worldbank.org/wb-topics
eLibrary
Browse by Topic


https://www.lexadin.nl/wlg/
The World Law Guide
Law Firms
Courts & Cases
Law Schools
Indices
Organizations
Law Journals


www.gfdrr.org/en/building-regulation-for-resilience
Building Regulation for Resilience
Promoting Resilient, Green, and Inclusive Built Environ


https://data.oecd.org/
OECD Data

APPENDIX C

BRCA 2.0 REPORT TEMPLATE

Editable version of this template can be provided on request.

HOW TO USE THIS TEMPLATE:

1. All instructions are written in blue italics. Areas related to the instructions are highlighted using a dashed blue box. For example:

> *Insert logos here*

Where instructions are part of a portion of text that should remain, they are separated from the text using square brackets. For example:

Building Regulatory Capacity Assessment for [*insert subject country*]

2. All blue text and blue boxes should be removed from the final report. Where text has been inserted, the font should be non-italicized and the color should be black, unless otherwise stated. For example, the above example, when used in Sierra Leone should become:

Building Regulatory Capacity Assessment for *Sierra Leone*

NOT

Building Regulatory Capacity Assessment for [*Sierra Leone*]

3. Where more space/pages are required, please duplicate the page in the relevant sub-section and follow the template accordingly.
4. Please delete this page from the final report.
5. Please review all figure numbers and source references throughout the document.
6. Text marked in **orange** should be reviewed with regard to applicability to the context and assessment. If it is relevant, it should be kept or adapted, and the color should be black. If it is not relevant at all, it should be deleted. An example is the following sentence in section 0.2 of this template:

Task 1.2 Building Control Process Review for [*insert subject country*]

would need to be reviewed and adapted to reflect the project-specific tasks. The correct subject country name should also be inserted, and once complete, the text color should be black and the "insertion" brackets and italicization removed. For example:

Task 1.2 Building Control Process Review for Sierra Leone

Building Regulatory Capacity Assessment for *[insert subject country]*

[Insert subtitle]

Insert project cover image here

Insert version name and date. E.g. Final report, 12/05/2023]

Table of Contents

Acronyms

Insert acronym	*insert full name, e.g.:*
BRCA	Building Regulatory Capacity Assessment

Glossary

Delete definitions that are not used in your report, and add definitions of terms that are specific to your report/context.

Building – A structure that is intended for people, animals, goods or services.

Executive Summary

[*Describe topics of concern in a given country*]

[*Describe the context in which BRCA is undertaken, status of policy dialogue between governments and World Bank/development partners, and etc.*]

The current building regulatory context

[*Insert text summarizing current building regulatory context*]

Intervention Areas, Recommendations, and Implementation Plan

The recommendations that flow from an assessment of these needs were grouped under four intervention areas (IA), which are the priority areas within which to target reform action. These recommendations are listed below, under the relevant Intervention Area.

IA 1 [*insert Intervention Area 1*]

- [*insert list of recommendations under Intervention Area 1*]

IA 2 [*insert Intervention Area 2*]

- [*insert list of recommendations under Intervention Area 2*]

IA 3 [*insert Intervention Area 3*]

- [*insert list of recommendations under Intervention Area 3*]

IA 4 [*insert Intervention Area 4*]

- [*insert list of recommendations under Intervention Area 4*]

Actions to implement the recommendations and an Implementation Plan with a proposed sequence and timeframe for their realization, as well as the dependencies between them, are provided in Section 4 of the BRCA report.

SECTION 0

Introduction

Insert section image here

0.1 Background, Objective, and Audience

Country background and context

The *Building Regulatory Capacity Assessment* (BRCA) in [***insert country name***] was conducted to [***describe objective***]. It has been developed to strengthen the government capacity to identify the appropriate scope and priorities for reforms based on a consideration of international good practices and local needs and capacities. It is intended to serve and inform decision-making on potential investment activities of the government of [***insert country name***] , linked to existing World Bank-financed projects (see right).

Overarching objective

The BRCA for [***insert country name***] aims to provide a review of the existing building regulatory framework and identify intervention areas and priority actions that address gaps and optimize regulatory systems and processes [****adjust as necessary***].

The expected impact from implementation of the recommendations, relying on historic data from previous disasters, reveals very positive projections in terms of safety and [***describe potential implementation opportunities for recommended actions***].

Intended Audience

This report has been mainly conceived to support government's decision-makers who are in charge of defining the priority and scope of legal, policy, and institutional reforms related to urban development.

World Bank–Financed Projects in [*insert subject country*]

[***insert project name and project details***]

Development Objective:
[*insert project development objectives*]

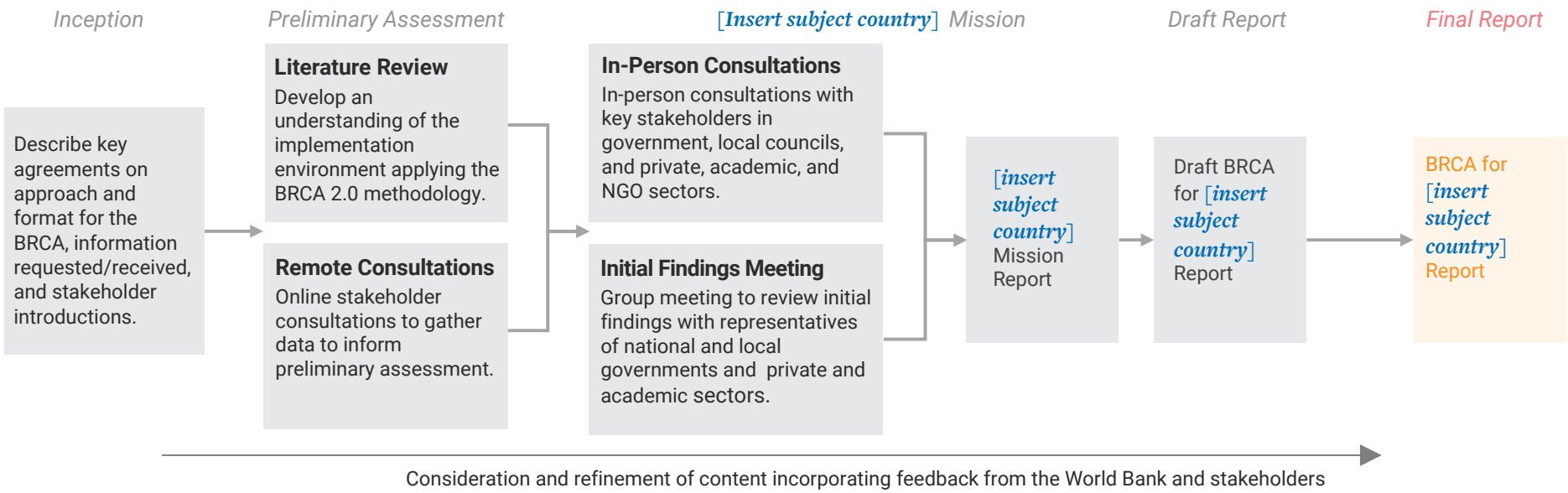
If World Bank-financed projects are not relevant to this context, please use this area to include other relevant contextual information or images.

0.2 Methodology

This assessment was undertaken initially through desktop study and remote consultations. In-person consultations held in [*insert subject country*] between [*insert dates*] provided additional information and addressed gaps in the consultant team's understanding.

Insert section image here

Figure 1. Project Methodology and Deliverables [*Develop a diagram to show the process followed, like in the example below*]



0.3 Report Structure

The body of this report follows the three *Pillar* structure defined in the BRCA 2.0 Methodology prepared by the World Bank.

As shown below, each of the three pillars forms a section of the report and covers a specific assessment focus: key contextual factors (Pillar 1), the scope and coherence of the legislative and regulatory framework (Pillar 2), and the organizational structures and processes in place to administer and enforce rules and regulations and manage quality in the built environment (Pillar 3). The final section sets out key recommendations for enhanced regulatory compliance mechanisms and includes an implementation plan that summarizes the principal actions that may be taken to enhance [*insert subject country*]'s building regulatory framework.

Section		Summary
0	**Introduction**	An explanation of the overall project context, the specific tasks, and aims of the BRCA for [*insert subject country*], the methodology applied, and the report structure.
1	**Pillar 1 Country Characteristics**	A description of the key features of the country context, including a hazard profile, urbanization profile, and the principal construction methods in [*insert subject country*].
2	**Pillar 2 Legal and Regulatory Framework**	An overview of the legislative framework and a review of the coverage, quality, and appropriateness of relevant legislative instruments.
3	**Pillar 3 Implementation Mechanism and Capacity**	A description of current implementation mechanisms and processes and an assessment of the capacity and capability of national and local government authorities, built environment professionals, academic and training institutions, and other relevant stakeholders.
4	**Intervention Areas, Recommendations, and Implementation Plan**	The recommendations that flow from the assessment are classified by Intervention Area and organized in an Implementation Plan that proposes a sequence and timeframe for their realization. For each group of recommendations, priority actions are proposed. These are the actions taken to implement the recommendations.

SECTION 1

Pillar 1 Country Characteristics

Insert section image here

1.0 Section Outline

The Pillar 1 Country Characteristics section provides summary information on the topics listed below, including principal risk factors for the built environment sector. This information sets the context for the analyses of the legal and regulatory framework and implementation mechanism and capacity in Pillars 2 and 3, respectively.

Topic		Sub-topic
1.1	Country Context	1.1.1 Natural geography and topography 1.1.2 Climate 1.1.3 Political system and administrative divisions 1.1.4 Critical infrastructure networks 1.1.5 Socio-economic factors
1.2	Risk Profile	1.2.1 Hazards 1.2.2 Historical hazard events and future impact of climate change 1.2.3 Risk information availability 1.2.4 Recent initiatives 1.2.5 Challenges and compounding factors
1.3	Urbanization Profile	1.3.1 Urbanization trends, effects, and challenges 1.3.2. Access to land, property registration, and basic services
1.4	Construction Materials and Methods	1.4.1 Typical materials, building typologies, and construction methods 1.4.2 Implications of current practices
1.5	Fragile and Conflict-Affected Situations	1.5.1 Fragile and conflict-affected situations
1.6	Drivers of Risk in the Built Environment	1.6.1 A summary of the principal drivers of risk.

Insert section image here

1.1. Country Context

Natural, physical, climate, and political characteristics

Natural Geography and Topography and Climate

[*Insert subject country*] is a nation in [*insert country region*]. The country is [*describe geographic context*]. The topography of [*insert subject country*] [*describe topography, including variation across the country and key geographic features such as mountain ranges and rivers*].

[Insert subject country] has a [*insert climate type*] climate. [*Describe climatic context including variation across the country, average temperatures, rainfall, and any key climatic features, e.g., an annual rainy or monsoon season*].

Political System and Administrative Divisions

[*Insert subject country*] is a [*Insert government system, e.g., presidential republic*] *consisting of* [*describe key governmental categories*]. [*Describe the key features of the political system, such as number of district councils*].

[*Describe key features of the country's administrative divisions and any key contextual information, such as notable differences between divisions*].

Critical infrastructure networks

[*Describe key features of the country's critical infrastructure networks, and any key contextual related information*].

Figure 2. [*Insert image caption and copyright*]

Insert images/diagrams/maps to describe location

1.1. Country Context

Social, economic and historical context

Summary Socioeconomic Factors

Disability: [*Insert summary of data outlining percentage of disability in population, any key analysis, and data references*].

School Attendance and Literacy: [*Insert summary of data outlining school attendance and literacy rates in population, any key analysis, and data references*].

Employment: [*Insert summary of data outlining employment rates and type in population, any key analysis, and data references*].

Health and Disease: [*Insert summary of data outlining any key health and disease statistics, noting specific diseases that are impacting the country, any key analysis, and data references*].

Historical Context

[*Describe relevant historical context, particularly any political or institutional transformation, and any key analysis on how this impacts the current regulatory context, and information references*].

Population [*insert reference*]
[*Insert country population*]
Gross Domestic Product (GDP) [*insert reference*]
[*Insert country GDP*]
Per Capita GDP [*insert reference*]
[*Insert country Per Capita GDP*]

Table 3. Country population and GDP data

Region	Industry	%
[*Insert subject country*]		
[*Insert sub-region name*]		
[*Insert sub-region name*]		
[*Insert sub-region name*]		
[*Insert sub-region name*]		

Source: [*insert references*], [*insert references*]

1.2 Risk Profile

[Insert 1–2-line summary of hazard profile]

[Describe relevant geological and climatic hazards that the country is exposed to, such as flooding, landslides, sea-level rise, storms, or seismic hazard. Make note of both high hazards and notable low hazards].

[Describe changes in hazard over time, noting any key hazardous events and their impacts, amd past preset and projected hazard risks].

Refer to Annex 2 for a [*Insert subject country*] Hazard Data and Assessment Summary.

Figure 3: [*Insert image caption and copyright*]

Insert images/diagrams/maps to describe location

Table 5: Natural hazards that pose a threat to the populations of [*Insert list of regions shown in table above*]

Fill out table to summarize key hazards	[*Insert region*]	[*Insert region*]	[*Insert region*]
Flooding	✓ / ✖		
Landslides			
Sea level rise			
Coastal erosion			

Source: [*Insert source*]

Table 6. Chronic and acute hazards in [*Insert subject country*].

Significant Hazards [*Insert subject country*]	**Chronic (Stress) or Acute (Shock)**
Fill in table to capture significant hazards and type	

Source: [*Insert source*]

1.3 Urbanization Profile

[Insert 1–2-line summary of urbanization profile]

[*Describe key data and analyses of the country's urbanization profile, including urbanization rates, key changes, and impacts. Highlight key development trends and challenges in the country's main cities, e.g., informal settlements. Include references*].

[*Describe key population data and differences across the country's main cities. Include references*].

[*Describe key settlement types in main cities. Include references*].

Use subsections to highlight key urbanization challenges/features and describe in more detail, e.g.:

Informal Settlements

[*Insert additional information*].

Table 7. Population for the four largest cities.

City	2015 Population
[*Insert city*]	[*Insert population data*]
[*Insert city*]	[*Insert population data*]
[*Insert city*]	[*Insert population data*]
[*Insert city*]	[*Insert population data*]

Source: [*Insert source*]

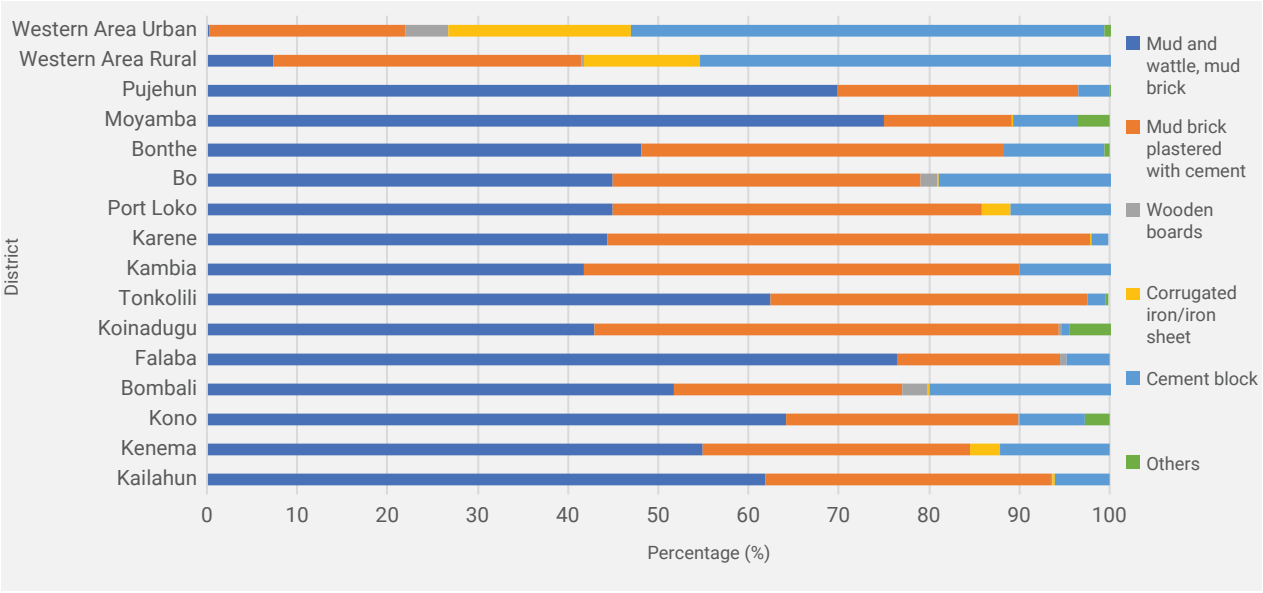
1.4 Construction Materials and Methods

[INSERT 1–2-LINE SUMMARY OF CONSTRUCTION CONTEXT]

[Describe key construction types, quality, materials, and methods in the country, and any key building codes, standards, or certification systems (or lack thereof). Include references].

Produce a table that summarizes key construction types by location across the country. This should replace the example table below:

Figure 4. Percentage of common construction materials used for walls of residential buildings.



Source: [Insert source]

Figure 5. *[Insert image caption]*

Insert image showing a key construction type

Source: [Insert source]

1.5 Fragile and Conflict-Affected Situation

To be developed in countries considered by the World Bank as Fragile and Conflict-Affected Situations (FCS)

Contextual Analysis of the FCS Conditions:

[*Insert a summary of the factors that characterize FCS dynamics in the country (e.g., political disputes, civil war, displacements, etc.*].

FCS-Specific Urbanization Patterns:

[*Insert summary of the constraints affecting urban planning and decision-making, property rights, land use, potential land dispossession, and disputes over land ownership, etc., in the country*].

Conflict and institutional fragility often disrupt urban planning processes and decision-making mechanisms, leading to inadequate infrastructure and haphazard urban growth. This can result in forced displacement, insufficient housing stock, and underserviced urban areas. Urban planning plays a crucial role in post-conflict reconstruction but can also exacerbate vulnerabilities if not properly enacted.

Access to Finance in FCS Countries:

[*Insert summary of factors that hinder the finance sector's development, affecting the construction and reconstruction of resilient buildings, in the country*].

High levels of corruption can lead to misdirected investments and poor-quality infrastructure, particularly in public facilities like schools and hospitals. Instability and uncertainty from conflict can also hamper credit availability for developers and household borrowers, leading to unaffordable formal houses. Integrating a section on financial sector analysis is crucial.

Construction Materials, Methods, Operation, and Maintenance under FCS Conditions:

[*Insert summary of how the conflict, violence, and/or institutional fragility affect the supply of material, labor, and construction systems, as well as how this impacts the operation and maintenance of buildings*].

Conflicts disrupt construction technology, labor markets, and supply chains. Displacement and migration lead to a shortage of skilled laborers, while supply chain disruptions and restricted access to materials increase costs and scarcity. This not only compromises construction quality but also leads to increased costs and shortage of buildings. Conflicts can also restrict access to resources (financial, material, and workforce) and expertise needed for effective property management to maintain and improve buildings resilience. A lack of maintenance can result in weakened physical structures, deteriorated infrastructure, and compromised safety measures, increasing the exposure and vulnerability of buildings to disasters.

Information Availability and Reliability in FCS Countries:

[*Insert summary of the constraints affecting availability and reliability of information related to the construction and maintenance of the built environment*].

Understanding supply and demand dynamics, construction activities, infrastructure damage, and population displacement is crucial for informed decision-making and effective intervention strategies. However, FCS often presents significant obstacles to collect and analyze information. Conflict-related insecurity can impede access to affected areas, limiting the ability to gather accurate information on construction projects, infrastructure conditions, and population movements. Additionally, institutional fragility and governance challenges may lead to gaps in data availability and reliability.

1.6 Drivers of Risk in the Built Environment

A summary of key risk factors in *[insert subject country].*

[List and provide concise explanations of the relevant drivers of risk for your country. The topics listed here are indicative examples]

Natural Hazard

[Insert summary of natural hazards impacting country]. Gaps or weaknesses in the legislative framework overlap with hazard risk to increase the threat level for the population.

Building Control

[Insert summary of building control capability in the country]. Poor building control capability increases exposure to risk and reduces the overall safety of the built environment.

Terrain and Deforestation

[Insert summary of terrain and deforestation issues in the country and their impact on construction and buildings].

Population Growth and Urbanization

[Insert summary of population growth and urbanization in the country and their impact on development and construction].

Land Use and Urban Planning

[Insert summary of land use and urban planning in the country].

Informal Settlements

[Insert summary of informal settlement in the country].

Climate Change

[Insert summary of the impact of climate change on the country].

Construction Quality Control and Building Maintenance

[Insert summary of construction quality control and building maintenance in the country].

SECTION 2

Pillar 2 Legal and Regulatory Framework

*Each government will decide what their **specific societal needs** are and establish the **minimum** level of **building function and performance that is legally enforceable**.*

Source: Key, M., Building Regulations, Codes and Standards.

Insert section image here

2.0 Section Outline

The Pillar 2 Legal and Regulatory Framework section sets out an analysis of current legal and regulatory instruments in [*Insert subject country*], covering the topics listed in the table below. For each sub-topic, the analysis addresses four thematic areas of enquiry:

1. Legal responsibility for enabling the legislation.
2. Technical content of the legislation.
3. The extent to which the public has access to the legislation.
4. Gaps and opportunities for improvement.

This section equips the reader with a broad appreciation for the scope, consistency, and coverage of current legal instruments, and highlights where there are gaps that may be addressed through the introduction of new legislation and guidelines, amendments to existing legislation, establishing required systems, targeted assessment, or raising awareness of good practice.

Table 8. Pillar 2 topics and sub-topics

#	Topic	Sub-topic
2.1	Legislative Framework Overview	2.1.1 Legislative framework 2.1.2 Development and maintenance of regulations
2.2	Spatial Planning Requirements	2.2.1 Risk-sensitive land use and physical planning 2.2.2 Risk information management
2.3	Building Code Requirements	2.3.1 Structural and geotechnical design 2.3.2 Fire safety and prevention 2.3.3 Universal accessibility and inclusive design 2.3.4 Green buildings 2.3.5 Climate change adaptation 2.3.6 Construction materials, products, and methods 2.3.7 Environmental impacts management during construction and operations 2.3.8 Heritage and reuse 2.3.9 Health and safety

Insert section image here

2.1 Legislative Framework Overview

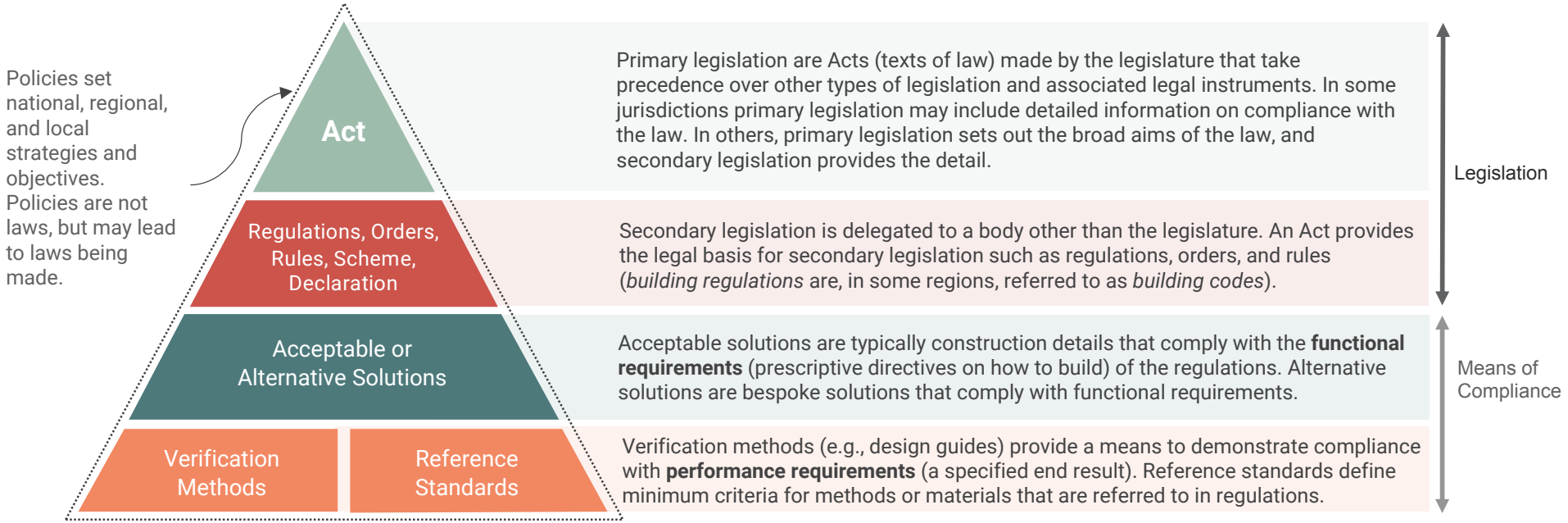
A legislative framework for the built environment establishes rules and standards for the siting, performance, and function of buildings, and the regulations to govern professional performance, addressing societal needs.

[Develop a brief introduction and explanation of the legislative framework for your country]

For the image below, please kindly insert blue text saying:

[This is just an example of typical structure. Develop a similar diagram to explain the regulatory structure of your country]

Figure 6: Typical components of a regulatory structure.



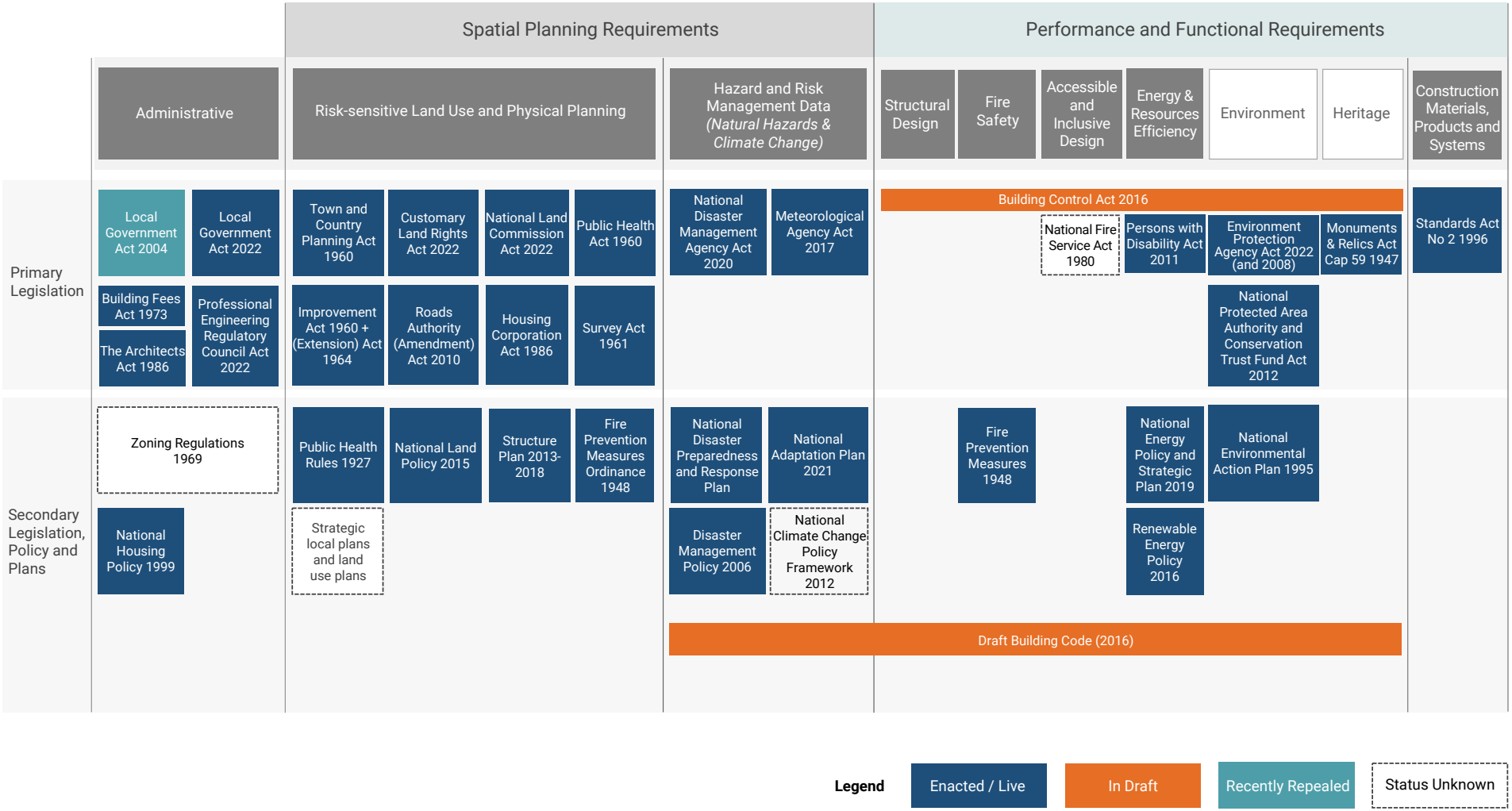
Source: Arup

2.1.1 The Legislative Framework in *[insert subject country]*

[Insert 1–2-line summary of legislative framework]

Develop a figure that explains a legislative framework of the country of assessment, using the following example:

Figure 7: The legislative framework in *[Insert subject country]*.



2.1.1 The Legislative Framework in *[insert subject country]*

[Insert 1–2-line summary of legislative framework]

Planning Legislation

[*Describe key planning legislation in the country. Highlight key developments and specific notable acts/regulations, etc. Include references*].

Construction/Building Legislation

[*Describe key construction/building legislation in the country. Highlight key developments and specific notable acts/regulations, etc. Include references*].

2.1.2 Development and Maintenance of Regulations

The Building Code should be maintained according to a regular schedule, but changes to the Code may be made outside of the regular maintenance cycle in response to major events or identification of a previously unappreciated hazard.

[*Summarize status of key acts and codes*].

Insert section image here

Table 9. Regulation maintenance cycles for different jurisdictions

Country	Responsible Authority	Maintenance Cycle
Kenya	National Construction Authority	5 years
US (International Building Code)	International Code Council	3 years
Turks and Caicos Islands	Department of Planning	6 years

2.2 Spatial Planning Requirements

[Insert 1–2-line summary of spatial planning requirements]

In relation to land use planning and development in [*Insert subject country*], [*summarize key factors contributing to risk in relation to land use planning and development*].

[*Describe in more detail the key factors contributing to risk in relation to land use planning and development*].

The adjacent box includes a list of the documents that were identified and reviewed for the BRCA analysis and notes key administrative bodies for land use planning.

Land Use and Physical Planning Legal Framework

- *List the relevant acts and policies that govern land use and physical planning*

Planning Instruments

- *List the relevant planning instruments, such as strategies and plans*

Administrative Bodies for Land Use Planning

- *List the relevant administrative bodies responsible for Land Use Planning*

2.2.1 Risk-Sensitive Land Use and Physical Planning

[Insert 1–2-line summary of risk-sensitive land use and physical planning]

Land Tenure

Land tenure rules define how rights to land are allocated, used, controlled, and transferred. [*Summarize how land tenure laws function in the country*].

[*Describe in more detail any key factors in relation to land tenure*].

The key findings are:

[*List the key assessment findings in relation to land tenure*].

Tenure Legal Framework

- *List the relevant Laws, Acts and Policies that describe the Legal Framework of land tenure in the subject country*

2.2.2 Risk Information Management

[Insert 1–2-line summary of hazard and risk management data]

[Describe and discuss the sources of natural hazard and risk data in the country. Include the references to these sources].

Figure 8. *[Insert caption]*

Insert graph or chart summarizing key hazard and risk data here

Source: [Insert source]

Figure 9. *[Insert caption]*

Insert graph or chart summarizing key hazard and risk data here

Source: [Insert source]

2.2.2 Risk Information Management

[Insert 1–2-line summary of hazard disaster and risk information management]

Existing Data Sets

[*Describe and discuss the existing data sets on natural hazard and risk information in the country. Include the references to these sources*].

Figure 10. [*Insert caption*]

Insert relevant image or series of images here

Source: [*Insert source*]

2.2.2 Risk Information Management

[Insert 1–2-line summary of hazard and risk management data]

Ongoing Data Collection

[*Describe and discuss ongoing data collection on natural hazard and risk data in the country. Include the references to these sources*].

Figure 11. [*Insert caption*]

Insert relevant image or series of images here

Source: [*Insert source*]

Relevant Legislation and Resources

- *List the relevant legislation and resources*

Other Relevant Agencies

- *Name and give a short description of other relevant agencies*

2.3 Building Code Requirements

The subsections that follow examine the legislative framework in [*Insert subject country*] as it concerns performance and functional requirements for buildings.

[*Recap and expand on previous points, including further discussion*].

The following subsections provide an overview of the draft codes and legislation for key performance and functional requirements.

Figure 12. [*Insert caption*]

Include a diagram that illustrates the legislative framework as it concerns performance and functional requirements for buildings.

Source: [*Insert source*]

2.3.1 Structural and Geotechnical Design

[Insert 1–2-line summary of structural and geotechnical design]

[Summarize and discuss the key legislation pertaining to structural and geotechnical design. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant].

© Insert image copyright

Insert section image here

Key Legislation

- *[List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly].*

2.3.2 Fire Safety and Prevention

[Insert 1–2-line summary of fire safety and prevention]

[Summarize and discuss the key legislation pertaining to fire safety and prevention. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant].

© Insert image copyright

Insert section image here

Key Legislation

- *[List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly].*

2.3.3 Universal Accessibility and Inclusive Design

[Insert 1–2-line summary of accessibility and inclusive design]

[*Summarize and discuss the key legislation pertaining to accessibility and inclusive design. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant*].

© Insert image copyright

Insert section image here

Key Legislation

- [*List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly*].

2.3.4 Green Buildings

[Insert 1–2-line summary of green buildings regulations]

[*Summarize and discuss the key legislation pertaining to green buildings regulations, including energy and resources efficiency. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant*].

Insert section image here

Key Legislation

- [*List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly*].

2.3.5 Climate Change Adaptation

[Insert 1–2-line summary on climate change adaptation]

[*Summarize and discuss the key legislation pertaining to climate change adaptation. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, guidelines, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant*].

Insert section image here

Key Legislation

- [*List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly*].

2.3.6 Construction Materials, Products, and Methods

[Insert 1–2-line summary of construction materials, products, and systems]

[*Summarize and discuss the key legislation pertaining to construction materials, products, and systems. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant*].

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Insert section image here

Key Legislation

- [*List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly*].

2.3.7 Environmental Impacts Management during Construction and Operations

[Insert 1–2-line summary of environmental impacts during construction and operations]

[Summarize and discuss the key legislation pertaining to environmental impacts during construction and operations. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant].

© Insert image copyright

Insert section image here

Key Legislation

- *[List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly].*

2.3.8 Heritage and Reuse

[Insert 1–2-line summary of heritage and reuse]

[*Summarize and discuss the key legislation pertaining to heritage and reuse. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant*].

Insert section image here

Key Legislation

- [*List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly*].

2.3.9 Health and Safety

[Insert 1–2-line summary of health and safety]

[*Summarize and discuss the key legislation pertaining to health and safety. If there is an absence of key legislation, note this and discuss the most relevant documents, such as codes, standards, agencies, and reports. If these documents exist in addition to relevant legislation, include all relevant documents and discuss in more detail the most significant*].

© Insert image copyright

Insert section image here

Key Legislation

- [*List key legislation here—if there are key agencies, reports, standards, or codes to highlight, include them and adjust the title accordingly. If there is an absence of key legislation, note this and highlight the most relevant documents. Adjust the title accordingly*].

2.4 Pillar 2 Recommendations

[*List the recommendations that have been developed in response to the findings of the Pillar 2 Assessment. Underneath each pillar summarize the key findings on which the recommendation is based. See the BRCA methodology for instruction on how to formulate the recommendations*].

[*Insert recommendation, including its code*].

Key Finding: [*Insert text to explain the key finding that led to the recommendation*].

[*Insert recommendation, including its code*].

Key Finding: [*Insert text to explain the key finding that led to the recommendation*].

Add recommendations as necessary, following the same format.

SECTION 3

Pillar 3 Implementation Mechanism and Capacity

Insert section image here

3.0 Section Outline

The Pillar 3 Implementation Mechanism and Capacity section sets out an analysis of current government and industry structures that are in place to implement and enforce the control of land use planning and construction or ensure that a certain standard of practice is upheld.

This section equips the reader with a broad appreciation for the capacity and capability of the national government, local councils, technical agencies, private sector firms, design professionals, and builders, and highlights where there are gaps that may be addressed by strengthening control and enforcement systems and processes, clarifying mandates, improving coordination between critical agencies, and strengthening education and training.

Table 10. The Pillar 3 topics and sub-topics

Subsection No.	Topic	Sub-topic
3.1	Urban Planning and Building Control Process	3.1.1 Control mechanisms: approvals and enforcement
3.2	Institutional Capacity Assessment	3.2.1 Key ministries and departments regulating the built environment 3.2.2 Other governmental agencies and third parties involved (if any)
3.3	Construction Industry Capacity Assessment	3.3.1 Education environment 3.3.2 Design professionals 3.3.3 Builders or contractors 3.3.4 Education and certification
3.4	Insurance and Liability System Overview	3.4.1 Summary of insurance and liability systems for professionals

Insert section image here

3.1 Urban Planning and Building Control Process

[Insert 1–2-line summary of urban planning and building control process]

[*Summarize and discuss findings on the urban planning and building control process, including the role of relevant ministries, authorities, acts, initiatives, and other key features*].

The Interaction of Local Councils with Key National Authorities

[*Use this section to highlight a key theme. The title above is an example.*].

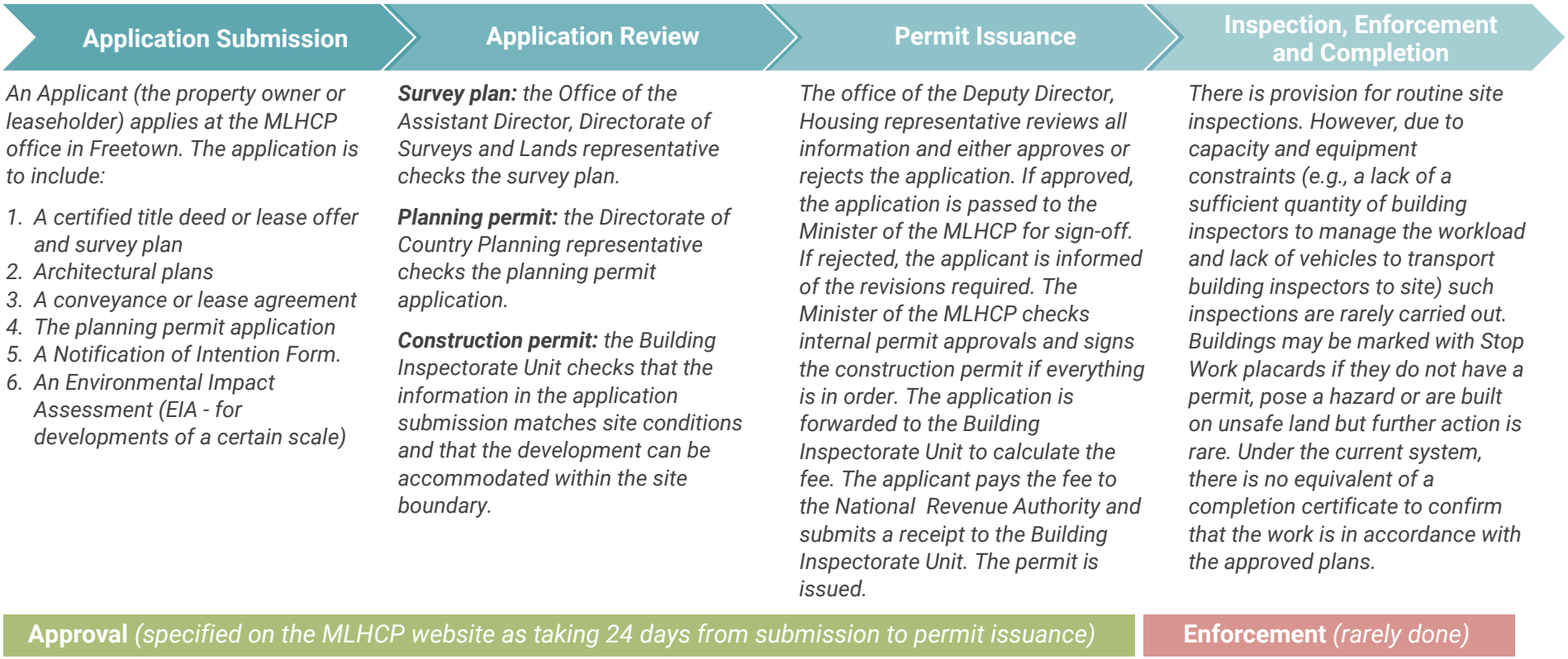
3.1.1 Control Mechanisms: Approvals and Enforcement

[Insert 1–2-line summary of approvals and enforcement]

[*Summarize and discuss findings on the approvals and enforcement process, including diagrams*].

The diagram below and on the next page are example diagrams summarizing the approvals and enforcement process. Use these as templates to produce diagrams specific to the subject country. Specify the context that each diagram applies to, e.g., countrywide/in a specific region, or specific type of development.

Figure 13. [*Insert caption*]

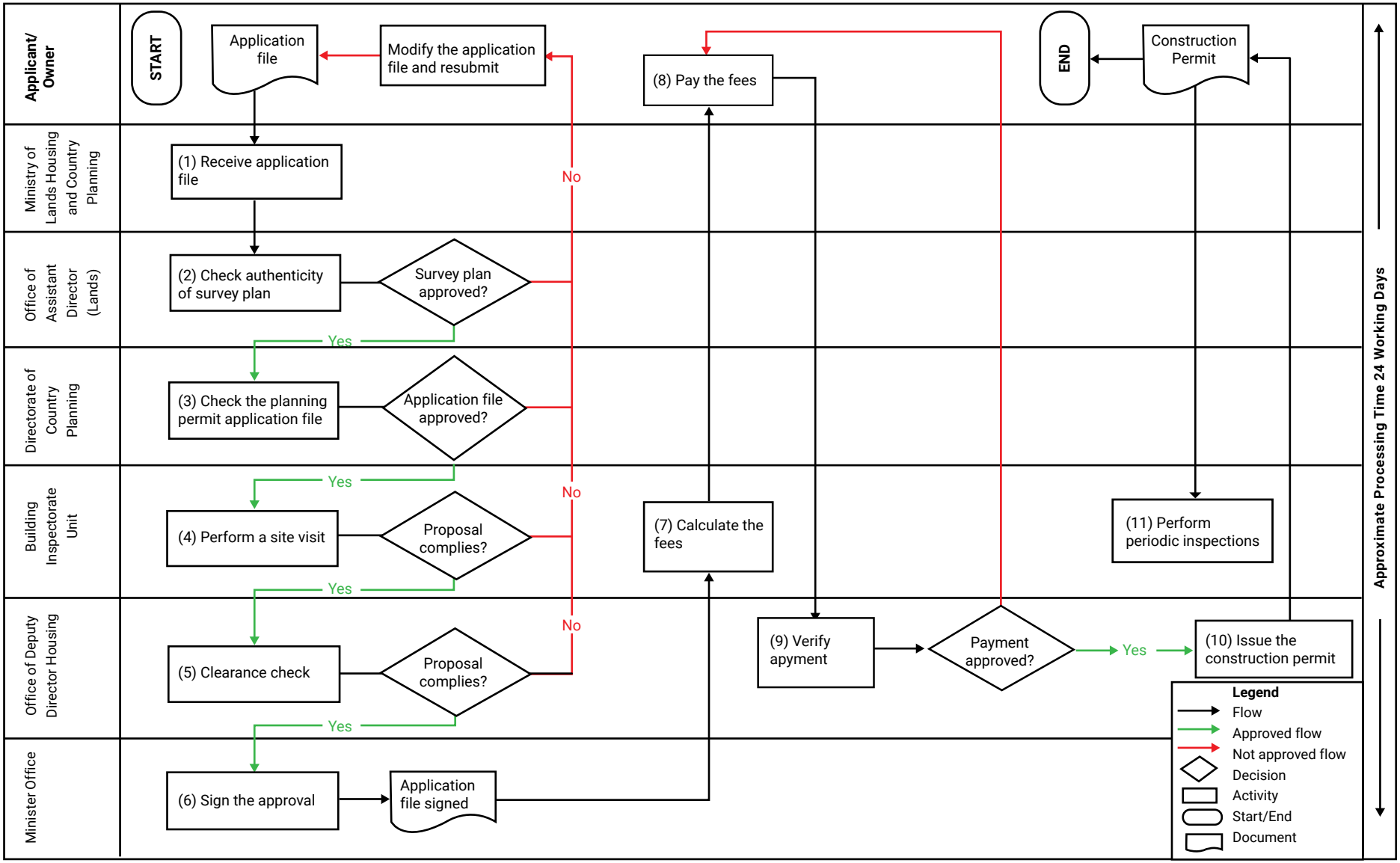


3.1.1 Control Mechanisms: Approvals and Enforcement

As-Is Building Control Process–*[Insert description of the context in which this process applies]*

Develop a diagram showing the building approval and enforcement process, clearly indicating stakeholders in charge of different roles and their sequences

Figure 14. *[Insert caption]*



Source: *[Insert source]*

3.2 Institutional Capacity Assessment

The table below lists the main government ministries, local councils, and other bodies with current or potential (e.g., in the event that some functions devolve to the local level in the future) responsibilities under the present building regulatory framework in *[Insert subject country].*

Central Government	
Entity	**Responsibility**
[Insert name of entity. Add rows if necessary].	*[Insert list of the entity's key responsibilities].*
Local Government	
Entity	**Responsibility**
[Insert name of entity. Add rows if necessary].	*[Insert list of the entity's key responsibilities].*
Other Bodies	
Entity	**Responsibility**
[Insert name of entity. Add rows if necessary].	*[Insert list of the entity's key responsibilities].*

3.2.1 Key Ministries and Departments Regulating the Built Environment

[Insert 1–2-line summary of key ministries for regulating the built environment]

[***Summarize and discuss findings on the structure, capacity, and capability of the key ministries that regulate the built environment***].

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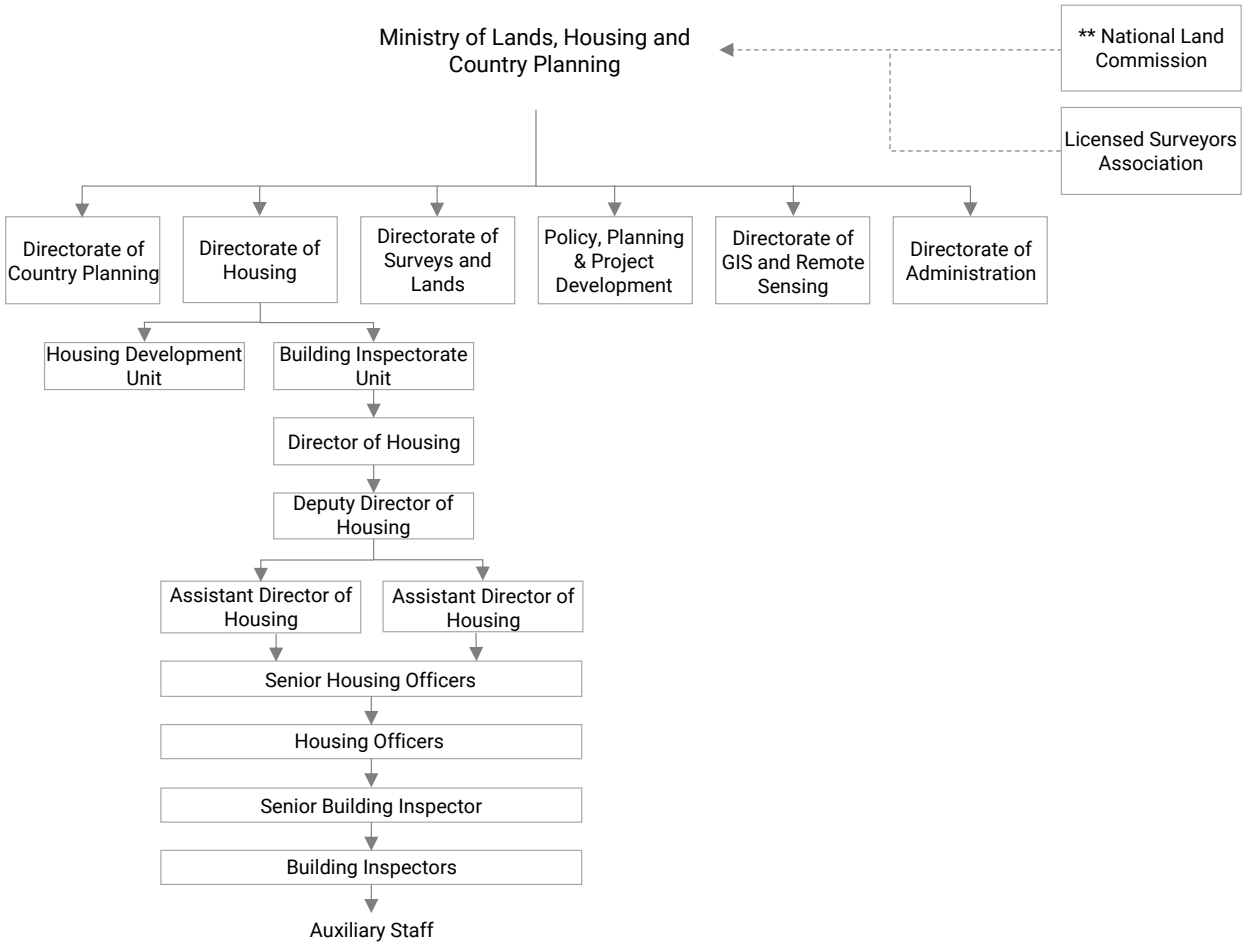
Insert section image here

3.2.1 Key Ministries and Departments Regulating the Built Environment

[Insert name of ministry this page presents]

Figure 15. [*Insert caption*]



Source: [*Insert source*]

The diagram to the left is an example diagram showing the organizational structure of a specific ministry. Use this as template to produce diagrams specific to the subject country's key ministry for regulating the built environment.

3.2.2 Other Governmental Agencies and Third Parties Involved (if any)

[Insert 1–2-line summary of other government entities and third parties]

[***Summarize and discuss findings on the role, responsibilities, capacity, and capabilities of other government entities and third parties***].

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Insert section image here

3.3 Construction Industry Capacity Assessment

[Insert 1–2-line summary of construction industry capacity assessment]

[***Summarize and discuss findings on the construction industry capacity assessment***].

Insert section image here

3.3.1 Education Environment

[Insert 1–2-line summary of education environment]

The list of education program in relation to the building and construction sector.

[***Summarize and discuss findings on the availability of education programs in relation to the building and construction sector***].

Table 12. [*Insert caption*]

Source: [*Insert source*]

3.3.2 Design Professionals

[Insert 1–2-line summary of design professionals related aspects]

The list of built environment design professionals includes: architects; civil, structural, mechanical, electrical and building services engineers; landscape designers; interior designers; and lighting designers.

[*Summarize and discuss findings on the role, responsibilities, capacity, and capabilities of key construction industry stakeholders, such as professional bodies*].

The table to the right is an example of key data and statistics to draw out. Use that section to highlight key information, based on data availability.

Table 13. [*Insert caption*]

Registered engineers by grade [39] – 2021			
Fellow		Graduate	
Corporate		Associate	

Registered engineers by discipline [39] – 2021	
Civil	
Mechanical	
Electrical	
Electrical / Electronic	
Electromechanical	
Environmental	
Architecture (architectural?)	
Telecommunications	
Petroleum	
Chemical	
Mining	
Transportation	
Others	
Registered architects [42] – January 2023	
	26

Source: [*Insert source*]

3.3.3 Builders or Contractors

[Insert 1–2-line summary of builders or contractors]

[Summarize and discuss findings on the role, responsibilities, capacity, and capabilities of builders or contractors in the subject country].

The table below is an example of key data and statistics to draw out. Use that section to highlight key information, based on data availability.

Table 14. *[Insert caption]*

Financial Class	Project Cost	Annual Fees	Requirements
Premier Class			
Financial Class I			
Financial Class II			
Financial Class III			
Financial Class IV			

Source: [Insert source]

Figure 16. *[Insert caption]*

Insert relevant image or series of images here

Source: [Insert source]

3.3.4 Education and Certification

[Insert 1–2-line summary of education and certification of built environment professionals]

Registration and Regulation of Built Environment Professionals

[*Summarize and discuss findings on registration and regulation of built environment professionals*].

Education and Training

[*Summarize and discuss findings on the education and training of built environment professionals*].

Figure 17. [*Insert caption*]

Insert relevant image or series of images here

Source: [*Insert source*]

3.4 Insurance and Liability System Overview

[Insert 1–2-line summary of insurance and liability]

[***Summarize and discuss findings on insurance and liability***].

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Insert image here

3.5 Pillar 3 Recommendations

[List the recommendations that have been developed in response to the findings of the Pillar 3 Assessment. Underneath each pillar summarize the key findings on which the recommendation is based. See the BRCA methodology for instruction on how to formulate the recommendations].

[Insert recommendation, including its code].

Key Finding: [Insert text to explain the key finding that led to the recommendation].

[Insert recommendation, including its code].

Key Finding: [Insert text to explain the key finding that led to the recommendation].

Add recommendations as necessary, following the same format.

SECTION 4

Intervention Areas, Recommendations, and Implementation Plan

Insert section image here

4.0 Section Outline

This section equips the reader with information to guide reform action. In subsection 4.2, the recommendations that are set out at the end of Section 2 and Section 3 are categorized by Intervention Area. For each recommendation, a lead entity is proposed (this may be a ministry or a department or a combination of public and private sector entities that are given the responsibility for implementing the recommendation—often working in collaboration with others) along with a timeframe for action. The timeframe is indicative (the actual timeframe may differ), and it reflects the following facts:

1. Some recommendations are critical and immediate action is required.
2. Some recommendations must be implemented before others can be.
3. Recommendations may be implemented in parallel with others.
4. Recommendations may require distinct actions over several years.

In subsection 4.3 there is a list of priority actions that may be taken to implement the recommendations. The actions are grouped under the relevant recommendations, and this information is supplemented with case studies that illustrate how reforms have been implemented in other jurisdictions. An Implementation Plan in subsection 4.4. maps the recommendations onto a timeline. In subsection 4.5 there is a summary of the assessment.

Table 15. The topics covered in Section 4.

Subsection No.	Topic
4.1	Intervention Areas and Associated Recommendations
4.2	Priority Actions to Implement Recommendations
4.3	Implementation Plan
4.4	Closing Comments

4.1 Intervention Areas and Associated Recommendations

		Proposed Lead Entities	Timeframe
IA 1	***[Insert text describing the Intervention Area]***		
[Insert code]	*[Insert text describing the recommendation. Add rows to add more recommendations as necessary, and ensure that the color-coding to the left is updated to reflect if it is a recommendations from Pillar 2 or Pillar 3.]*	*[Insert proposed lead entity]*	*[Insert timeframe]*
IA 2	***[Insert text describing the Intervention Area]***		
[Insert code]	*[Insert text describing the recommendation. Add rows to add more recommendations as necessary, and ensure that the color-coding to the left is updated to reflect if it is a recommendations from Pillar 2 or Pillar 3.]*	*[Insert proposed lead entity]*	*[Insert timeframe]*
IA 3	***[Insert text describing the Intervention Area]***		
[Insert code]	*[Insert text describing the recommendation. Add rows to add more recommendations as necessary, and ensure that the color-coding to the left is updated to reflect if it is a recommendations from Pillar 2 or Pillar 3.]*	*[Insert proposed lead entity]*	*[Insert timeframe]*
IA 4	***[Insert text describing the Intervention Area]***		
[Insert code]	*[Insert text describing the recommendation. Add rows to add more recommendations as necessary, and ensure that the color-coding to the left is updated to reflect if it is a recommendations from Pillar 2 or Pillar 3.]*	*[Insert proposed lead entity]*	*[Insert timeframe]*

Pillar 2 Legal and Regulatory Framework

Pillar 3 Implementation Mechanism and Capacity

R# [*Insert text describing the recommendation. Add more rows to include more recommendations as required*].

(*R# = Recommendation reference number*)

[*Insert text describing the Intervention Area*]

ACTION	1	*[Insert clear instructions describing the key action and how to carry it out. Add rows to add actions as required].*

Case Study 1

[*Insert text describing a relevant case study*].

4.2 Priority Actions to Implement the Recommendations

Intervention Area 2

R# [*Insert text describing the recommendation. Add more rows to include more recommendations as required*].

(*R# = Recommendation reference number*)

[*Insert text describing the Intervention Area*]

ACTION	1	*[Insert clear instructions describing the key action and how to carry it out. Add rows to add actions as required].*

Case Study 2

[*Insert text describing a relevant case study*].

R# [*Insert text describing the recommendation. Add more rows to include more recommendations as required*].

(*R# = Recommendation reference number*)

[*Insert text describing the Intervention Area*]

ACTION	1	*[Insert clear instructions describing the key action and how to carry it out. Add rows to add actions as required].*

Case Study 3

[*Insert text describing a relevant case study*].

R# [*Insert text describing the recommendation. Add more rows to include more recommendations as required*].

(*R# = Recommendation reference number*)

ACTION	1	*[Insert clear instructions describing the key action and how to carry it out. Add rows to add actions as required].*

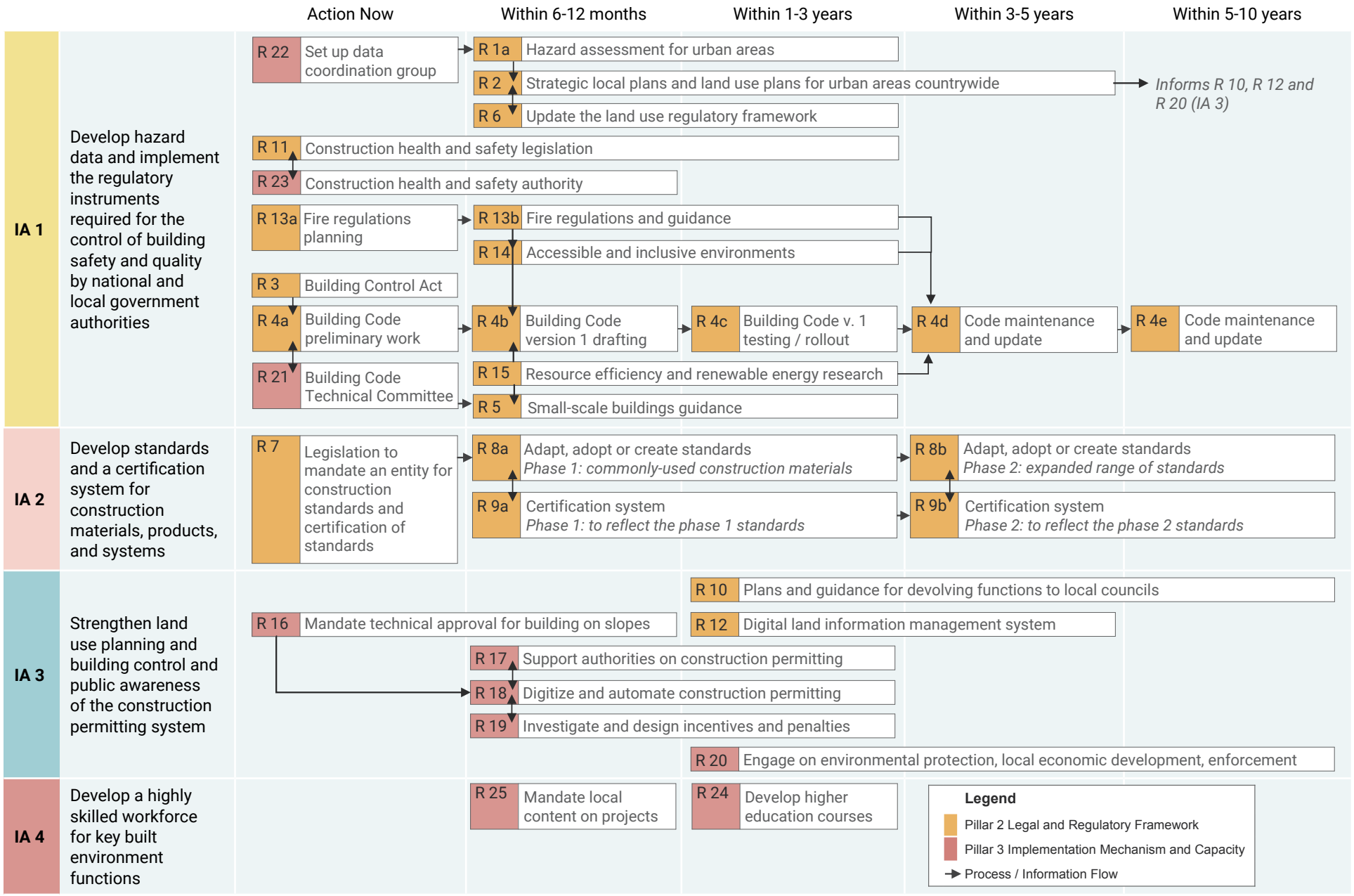
[Insert text describing the Intervention Area]

Case Study 4

[*Insert text describing a relevant case study*].

4.3 Implementation Plan

[Below is an example implementation plan. Use it as a template to complete one for the subject country].



4.4 Closing Comments

This report presents an overview assessment of the building regulatory context in [*insert subject country*] with the aim to identify gaps and priority actions for reform. The analysis is structured around three thematic areas, or Pillars:

- Pillar 1 Country Context
- Pillar 2 Legal and Regulatory Framework
- Pillar 3 Implementation Mechanism and Capacity

The data and information that inform the analysis were sourced via desktop study, online and in person consultations, and site visits in [*insert subject country*]. Contributions were provided by representatives of key national and local government authorities, built environment professionals, and industry organizations. The main gaps identified were:

- [*Insert list summarizing the main gaps identifies based on the assessment*]

An appraisal of this context highlighted four Intervention Areas (IA), which are the key areas within which to target reform efforts:

IA 1 [*Insert text summarizing the Intervention Area*]

IA 2 [*Insert text summarizing the Intervention Area*]

IA 3 [*Insert text summarizing the Intervention Area*]

IA 4 [*Insert text summarizing the Intervention Area*]

The recommendations that flow from the assessment were classified under these Intervention Areas and organized on an Implementation Plan that proposes a sequence and timeframe for their realization. For each group of recommendations, priority actions were proposed. These are the actions taken to implement the recommendations.

Collectively, the Intervention Areas, recommendations, and priority actions provide a structure for reform. As well as introducing new concepts, this structure highlights known issues that remain unresolved, broadens awareness of these issues, and focuses attention on what may be necessary to drive change. However, reform is not a simple or necessarily linear process. Accordingly, any plan shall, by necessity, be considered as a departure point rather than a destination. The sequence and timings in the Implementation Plan are indicative only and provided to inform planning and a consideration of national and local priorities concerning development and building control in [*insert subject country*].

Much work has been done in recent years to update and develop legislation and guidance to strengthen the planning and construction of buildings in [*insert subject-country*]. The work of the next decade is to complete the regulatory instruments needed to ensure public health and safety and to protect nature, to broaden awareness of and access to the legislation, and to strengthen capacity and capability within government and industry through enhanced education, training, and accreditation pathways at the national and local levels.

References

References

Insert a list of all references used in this report in the following format:

[1] Sierra Leone. (n.d.). Available at: http://www.imcg.net/media/download_gallery/gpd/africa/sierraleone.pdf.

Annexes

ANNEX 1

Common Construction Materials and Methods in *[insert subject country]*

Common Construction Materials and Methods in *[insert subject country]*

No	Construction Method	Examples	Advantages	Disadvantages	Usual max. Stories	Typical Location	Occupancy Type
1							
2							
3							

ANNEX 2

[Insert subject country] Hazard Data and Assessment Summary

ANNEX 3

Document Register

Document Register

Fill in the table to record documents

Ref #	Document Title	Document Date	Author	Website link
01				
02				
03				
04				
05				
06				
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ANNEX 4

Stakeholder Consultation Schedule

Schedule of Consultations

Fill in the table to record all consultations held to inform this assessment

No.	Date and time of Meeting (all times local)	Stakeholder Group	Format
1			
2			
3			
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