

ICS 03.100.01; 13.020.20
CCS A 90



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 154-2025

**Security and resilience - Urban resilience - Framework and
principles**

安全与韧性 城市韧性 框架和原则

(English Translation)

Issued on: December 3, 2025

Implemented on: December 3, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document is a report-type guidance technical document.

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document is a modified version of ISO /T R22370.2020 "Safety and Resilient Cities - Framework and Principles for Resilience". The document type has been changed from an ISO technical report.

The technical report has been adjusted to become a national standardization guiding technical document in my country.

This document has undergone the following structural adjustments compared to ISO /T R22370.2020.

---Added clauses 7.1 to 7.5, corresponding to paragraphs 1 to 5 of Chapter 7 in ISO /T

R22370.2020 respectively;

---Chapters 8, 9 and Appendix G of ISO /T R22370.2020 have been deleted.

The technical differences between this document and ISO /T R22370.2020, and the reasons therefor, are as follows.

---The scope has been changed (see Chapter 1) because the related background information is irrelevant to the technical content of this document;

---ISO 22300 (see Chapter 3) has been replaced with the normatively referenced GB/T 44483-2024 for ease of use in this document;

---Terms and definitions such as "civil society," "civil society organizations," and "decentralization" have been removed (see section 3.5 of ISO /T R22370.2020). (3.7, 3.9~3.11, 3.15~3.18, 3.20 and 3.25), to conform to my country's national conditions;

---The references to "new urban agenda" and "Sendai framework" have been removed (see 6.3.4.3 and 6.4.3.2 of ISO /T R22370.2020) to conform to... my country's national conditions.

The following editorial changes have been made to this document.

---Added source information or notes for terms such as "impact" (see 3.5-3.7, 3.9, 3.11);

---The setting of "Four layers" in "Built Environment" has been changed to "Three layers" (see 6.3.4.1);

---The relevant content, including "Evaluation of Relevant International Standards and Frameworks," in Chapters 8, 9, and Appendix G has been deleted;

---The secondary classification of "drought" has been changed (see Appendix E, Table E.1).

Introduction

Currently, the construction of resilient cities has become a mainstream global trend in addressing climate change, natural disasters, and public emergencies. The United Nations, through various initiatives.

China's "2030 Agenda for Sustainable Development" and "New Urban Agenda" have put forward the vision of accelerating the construction of resilient cities. my country's "14th Five-Year Plan"... Planning Outline, Five-Year Action Plan for Deepening the Implementation of the People-Centered New Urbanization Strategy, and Opinions on Promoting the Construction of New Urban Infrastructure The release of documents such as the "Opinions on Building Resilient Cities" marks the fact that building resilient cities has become a national strategy. 30 cities including Beijing, Shanghai, Shenzhen, and Chengdu have already implemented this strategy.

Yucheng City has incorporated resilience building into its urban planning and formulated a

special resilience plan.

However, the imperfections in the standard system for building resilient cities and the lack of standards in key areas have become constraints on the city's comprehensive capabilities, risk prevention and control, and governance.

Key factors for enhancing urban resilience. This document proposes an urban resilience framework aimed at addressing the urgent need to improve urban safety and comprehensive disaster resilience.

This framework provides government departments and stakeholders with analytical tools to measure urban resilience and develop response strategies, thereby enhancing the city's ability to meet various needs.

The ability to prepare for, respond to, and recover from potential shocks, pressures, and challenges will drive the transformation of cities into more resilient and livable spaces.

This framework positions urban resilience as an integration of dimensions such as risk mitigation, sustainable development, and governance optimization. Its innovation lies in establishing... A resilience assessment system applicable to different human settlement environments; a methodology for constructing resilience baselines ("resilience profiles"); and the development of diagnostic tools and action plans.

Use guidelines; and establish a real-time dynamic monitoring mechanism.

The framework underwent empirical testing and model validation in multiple cities worldwide during its early development phase, and its data collection and application have been continuously optimized. Its core path package... This includes. First, establishing a resilience baseline ("resilience profile") based on multidimensional resilience evaluation indicators; evaluating the resilience of the city in various dimensions; and identifying the strengths and weaknesses of the urban system.

Identify strengths and weaknesses; then formulate a resilience enhancement action plan with clearly defined priorities. The framework adopts multi-departmental collaboration, multi-risk coverage, and multi-scale approaches.

The core concept of this integrated analytical approach is that, regardless of size, culture, location, economic or political environment, the city always functions as an interconnected whole. Organic systems exist.

The implementation process of this framework is shown in Figure 1.

1 Scope

This document provides principles, characteristics, a framework for urban resilience based on system models and indicator systems, and resilience action plans for building urban resilience. Action suggestion.

This document applies to planning, development, and governance activities aimed at enhancing urban resilience by relevant urban management departments or organizations.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 44483-2024 Safety and Resilience Terminology (ISO 22300:2021, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 44483-2024, as well as the following terms and definitions, apply to this document.

3.1 Resilience

The ability to withstand and adapt to environmental changes.

Note: In the context of urban resilience (3.2), the ability to withstand and adapt to changing environments is comprised of capabilities such as the ability to predict, prepare for, and recover from threats, as well as the urban system.

The capabilities of each part of the system (3.3) are determined comprehensively.

[Source: GB/T 44483-2024, 3.1.203]

3.2 Urban resilience

In a changing environment, any urban system (3.3) and its inhabitants must anticipate, prepare for, respond to, and absorb shocks (3.5) and face pressures (3.6).

The ability to adapt and transform proactively in the face of challenges (3.7) while promoting inclusive and sustainable development.

Note 1: A more resilient urban system is characterized by its ability to sustainably cope with disturbances in the short to medium term, while also being able to mitigate stress and adapt to change and wind.

Urban resilience depends not only on the city's ability to cope with shocks, but also on its capacity to withstand long-term pressures and challenges. ability.

Note 2: Urban resilience depends on the individual and combined resilience of the various components of a complex urban system. Although urban areas, towns, or communities within an