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WORKSHOP

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AGREEMENT

ICS

English version

City Resilience Development - Operational Guidance

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European foreword

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Introduction

This CEN Workshop Agreement (CWA) is based on the results of the Smart Mature Resilience (SMR) research project, funded under the Horizon2020 framework programme of the European Union. SMR was a multi-disciplinary research project working for more resilient cities in Europe. As Europe's cities continue to grow, there is an urgent need for far-reaching and holistic approaches to enhance their capacity to resist, absorb, adapt to and recover from the potentially critical effects of climate change. Furthermore, today's high level of interdependence among cities and their systems can lead to cascading effects and crisis escalation from local to regional, national or even international level. This is the main reason why cities should not be considered as isolated entities in the resilience-building process. Supporting and building key resilient cities across Europe will create a strong *European Resilience Backbone* for all of Europe's cities, helping them support each other in overcoming future challenges.

Within the SMR project, researchers and representatives from cities came together to develop, implement and validate a city-focused European Resilience Management Guideline (ERMG) – this Guideline served as the basis for the operational framework defined in this document. This framework serves to direct available resources towards defined goals, while at the same time ensuring transparency and democratic principles for city resilience development and planning. Five strategic resilience-building tools are used in five operational steps, thus forming an iterative, systematic resilience-building process in which cities can begin at different starting points, depending on their resilience maturity. The cities can then improve their resilience maturity throughout the process.

The five operational steps of the framework are:

- 1) Baseline review;
- 2) Risk awareness;
- 3) Resilience strategy;
- 4) Implementation and monitoring;
- 5) Evaluation and reporting.

The framework includes a holistic approach to city resilience development, and refers to the five tools developed in the SMR project:

- Maturity Model (MM);
- Risk Systemicity Questionnaire (RSQ);
- Resilience Information Portal (RP);
- City Resilience Dynamics Tool (CRD); and
- Resilience Building Policies tool (RBP).

The tools were co-created with municipal employees and consultants from several European cities. This co-creational approach enabled the identification of requirements and an understanding of the expectations cities have regarding an integrated resilience management.

CWA series – City Resilience Development

The CEN Workshop Agreement is part of the *City Resilience Development* standards series, which intends to support cities in becoming more resilient against various kinds of threats. The series consists of the following other two CWAs:

- CWA 17301:2018 City Resilience Development – Maturity Model; and
- CWA 17302:2018 City Resilience Development – Information Portal.

The CWA on Operational Guidance is the overarching document that refers to the CWA 17301:2018 *City Resilience Development - Maturity Model*, CWA 17302:2018 *City Resilience Development - Information Portal*, as well as to other supporting tools.

International initiatives on city resilience

Taking into consideration international initiatives such as the *United Nations Sustainable Development Goals* (specifically Goal 11), the *Sendai Framework for Disaster Risk Reduction 2015-2030*, and the *Paris Climate Agreement of 2015*, it is important for cities to work on resilience in coordinated action, with the ultimate goal of creating a resilient city. By implementing actions in this field a city will be able to respond to the above-mentioned initiatives because city resilience:

- supports livelihoods and improves the quality of life;
- enhances poverty reduction;
- enhances land use planning that integrates disaster risk assessment;
- helps to manage and protect (critical) infrastructures;
- promotes the continuous productivity of development investments;
- promotes education and capacity building among the population;
- protects housing and ensures social and economic stability; and
- supports social equality and security.

United Nations Sustainable Development Goal 11

The *United Nations Sustainable Development Goal 11* aims to "make cities and human settlements inclusive, safe, resilient and sustainable". The target for 2030 is to ensure access to safe and affordable housing. The indicator that measures progress toward this target is the proportion of urban population living in slums or informal settlements. Between 2000 and 2014, the proportion fell from 39% to 30%. The absolute number of people living in slums went from 792 million in 2000 to an estimated 880 million in 2014. Movement from rural to urban areas has accelerated as the population has grown and better housing alternatives are available [1].

Sendai Framework for Disaster Risk Reduction 2015-2030

The *Sendai Framework for Disaster Risk Reduction 2015-2030* was adopted by the UN Member States on the 18th of March 2015 at the third UN World Conference on Disaster Risk Reduction in Sendai, Japan. The Sendai Framework is a 15-year, voluntary, non-binding agreement which recognizes that although the state plays a primary role in reducing disaster risks, that responsibility should be shared with other stakeholders, including local governments. It aims for the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries [2].

Paris Climate Agreement of 2015

The *Paris Climate Agreement* is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gas emissions mitigation, adaptation, and finance starting in the year 2020. The language of the agreement was negotiated by representatives of 196 parties at the 21st Conference of the Parties of the UNFCCC in Paris and was adopted by consensus on 12 December 2015. As of May 2018, 195 UNFCCC members have signed the agreement, and 177 have become party to it. The Agreement has the long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels, and aims to limit the increase to 1,5°C, since this would significantly reduce risks and the impacts of climate change [3].

Importance of city resilience at local level

A resilient city is a city that:

- is prepared to identify, resist, absorb, adapt to and recover from any shock or chronic stress while maintaining its essential functions;
- involves all stakeholders, especially citizens, in disaster risk reduction through co-creation processes;
- reduces vulnerability and exposure to natural and man-made disasters while managing to thrive;
- increases its capacity to respond to climate change challenges, disasters, shocks, and other unforeseen chronic stresses, through enhanced emergency preparedness.

The following figure shows the relationship of resilience to climate change adaptation, mitigation and disaster risk reduction illustrating the fact that resilience leads to sustainable development in cities, towns and municipalities. To do this, cities need to safeguard and protect their (critical) infrastructures and assets, while also dealing with pressing chronic stresses that are related to societal issues connected to social dynamics.

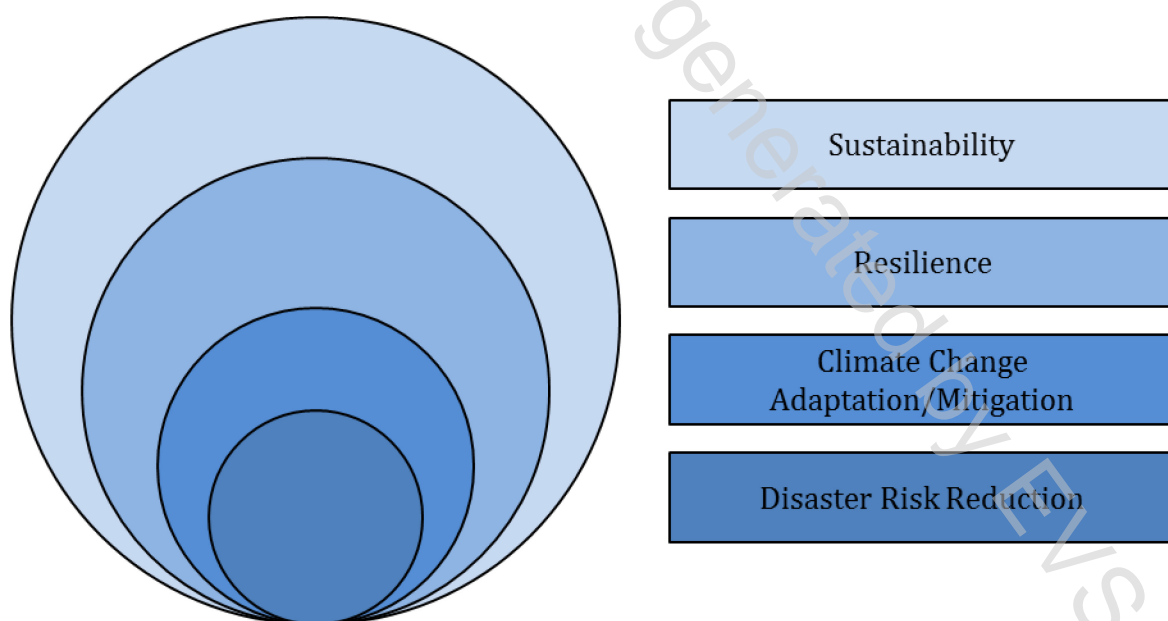


Figure 1 — Relation of resilience to sustainability, climate change adaptation/mitigation and disaster risk reduction [4]

Challenges to sustainability and resilience management in cities

Cities, and thereby their local governments, are confronted daily with the same challenges to sustainability and resilience management. Cities could face the following challenges:

- lack of data availability;
- lack of knowledge on the costs and benefits of adaptation and resilience activities at local or regional level;
- lack of indicators that measure the success of these activities;
- absence of coordination between the different tiers of governance;
- lack of cross-silo collaboration;
- failure to gain political commitment and secure mandate for action;
- difficulties in gaining financing for relevant projects; and
- failure of mainstreaming resilience into traditional city practices.

In practice, cities are political organizations. They need to regularly plan their activities, engage with citizens and provide them with public services. Therefore, a detailed planning approach is needed which considers the political element, involves stakeholders and follows up on communication for resilience-building activities.

Work with municipal employees and consultants at local level throughout the SMR research project has shown that, when dealing with cities, managing tasks individually and sectorally is often inefficient and leads to increased workload and weak results.

Benefits of using this document

The use of this document will improve the channelling of resources towards defined goals, and ensure commitment and accountability in decision-making, thus helping cities to meet the challenges described above. By using an integrated, systematic approach to city resilience development, any inefficiency due to running several parallel management systems and processes will be replaced by robustness and sustainability.

Re-organizing and integrating existing practices, plans and strategies under one guiding principle for resilience planning processes will systemize work, boost efficiency and provide a multitude of positive outcomes. These will include:

- greater awareness regarding city resilience and sustainability;
- improved support for decision-making at local level in cities;
- increased transparency and advanced monitoring;
- enhanced trust in local and regional governance;
- activation and mobilization of citizens through co-creation activities;
- contribution to a sustainable and resilient economy and society that respects the environment;
- better perspectives for bottom-up, inclusive resource governance at local level;
- mainstreaming of resilience strategies into local plans; and
- prioritization of interventions when evaluating potential impacts.

Document structure

This document first discusses the strategic governance awareness that needs to be considered before implementing the proposed framework. The framework itself is then described: For each of the five steps, a brief description is given, the requirements for successful implementation are laid down, and recommendations for implementation are given. Tools which should be used in each step are also listed, with the each tool being described in more detail in the Annexes. Finally, good practices taken from real life show how the Operational Guidance framework could be implemented at city level and the document concludes with a list of potential stakeholders who should be involved in each iteration.

1 Scope

This CEN Workshop Agreement (CWA) defines an operational framework for cities which will provide guidance on local resilience planning and support their efforts in building resilience.

This document is intended to be used by policy and decision-makers at city level and councilors working on climate change adaptation and resilience in their city, as well as by any other city stakeholder working on resilience (for example, but not limited to: critical infrastructure managers, service providers, emergency services, the media, civil society associations, non-governmental organizations, academic and research institutions as well as consultancies).

2 Normative references

The following documents are referred to in the text in such a way that some or all their content constitutes requirements of this document.

CWA 17301:2018 *City Resilience Development – Maturity Model*

CWA 17302:2018 *City Resilience Development – Information Portal*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

cascading effect

failure in one system causes failures in another system

Note 1 to entry: This failure is due to interdependencies between different urban technical networks considered to be critical in the risk context.

3.2

case study

description of an actual situation, commonly involving a decision, a challenge, an opportunity, a problem or an issue

3.3

chronic stress

slow-moving disasters that weaken the fabric of a city

EXAMPLE High unemployment, overtaxed or inefficient public transportation system, endemic violence or chronic food or electric and water shortages.