

Integrating climate change adaptation into municipal planning and governance

> A guideline <



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Guideline for integrating climate change adaptation into municipal planning and governance

Guideline aims and structure

This guideline offers local government officers and local politicians **process-oriented assistance for integrating climate change adaptation within relevant sectors of municipal administration with the aim** of fostering sustainable urban development. It is thus an instrument to support leadership of this integration process. The levels and areas where integration of climate change adaptation is relevant are systematically presented. This permits the planning and evaluation of potential interventions and measures.

The structure of the guideline is based on the levels relevant for the integration of climate change adaptation:

- I. The local level (i.e., operative measures on the ground)
- II. The institutional level (i.e., strategic measures within the municipal administration)
- III. The inter-institutional level (i.e., strategic measures regarding the municipality's cooperation with external actors). See illustration below.

Based on this, the fourth section of the guideline features an analysis table, which allows assessment of the measures taken at levels I-III. Thus, the guideline is a sort of model or grid which can be used to review municipalities' work in order to identify where progress has already been achieved and where there is still need for action. Based on the identified needs and gaps, a second analysis table serves to support systematic planning of the necessary measures for further integration of climate change adaptation within municipal planning and governance.

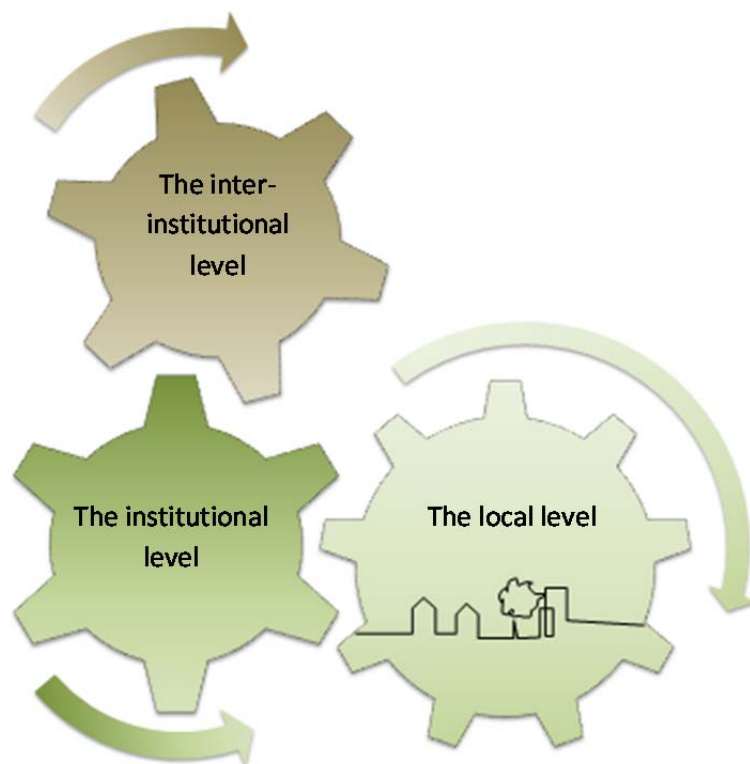


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I OPERATIVE measures: local level

1 Measures on the ground (city – city areas – objects)

Key question: Which climate change adaptation measures are already implemented on the ground by the municipality or are in planning?

⇒ Orientation values

Step 1

- Climate change adaptation generally receives low attention within the city's on-the-ground operations.

Step 2

- Some sporadic climate change adaptation measures are implemented on the ground. However, there is still no systematic or comprehensive implementation of climate change adaptation measures.

Step 3

- Climate change adaptation is taken into account within all on-the-ground operations.
- The integration of climate change adaptation within concrete measures on the ground is implemented systematically and with consideration for all relevant aspects (i.e. comprehensive consideration of existing climate risks, different planning approaches, etc.; see section 9).

II STRATEGIC measures: institutional level

2 General planning strategies and visions

Key question: Are there general urban planning strategies or visions within the municipality that support the integration and implementation of climate change adaptation measures at the local and administrative levels?

⇒ Orientation values

Step 1

- Climate change adaptation receives only limited attention within general urban planning strategies and visions (and is only seldom or superficially addressed within related texts and statements).

Step 2

- There are initial attempts to integrate climate change adaptation: at the municipal level in planning strategies and visions; at the level of individual departments and units within their strategic aims and areas of operation.
- The subject of climate change adaptation is not yet approached in a comprehensive way and is thus inadequately addressed within urban planning strategies and visions.

Step 3

- Climate change adaptation is an explicit component of the municipality's planning strategies and vision as well as of the strategic aims and areas of operation of all relevant departments and units. Related documents emphasize the importance of climate change adaptation to achieve sustainable urban development and indicate pathways towards systematic integration of the topic at local and institutional levels, which are implemented within urban planning practice (see section 9).

3 Climate change adaptation strategy/ strategies

Key question: Is there an existing strategy for the integration of climate change adaptation within municipal planning and governance?

⇒ Orientation values

Step 1

- Existing climate change adaptation measures take place on an ad-hoc basis.
- The importance of a strategic approach towards climate risk reduction is recognized only to a small degree.

Step 2

- The subject of climate change adaptation has not yet been conceptualized in a far-reaching manner or only receives recognition within the context of climate change mitigation strategies.
- There are initial attempts towards creating a municipal adaptation strategy or towards its implementation.

Step 3

- A comprehensive municipal adaptation strategy exists that indicates pathways towards systematic integration of climate change adaptation at local and institutional levels (see section 9).
- The adaptation strategy is accepted, supported, and implemented at all levels.

4 Formal planning frameworks and related instruments

Key question: Is a formal planning framework (i.e., detailed and comprehensive planning) in place which supports the integration and implementation of climate change adaptation measures at the local level?

⇒ Orientation values

Step 1

- There is little awareness regarding the linkages between climate change adaptation and comprehensive and detailed planning.
- There is only limited interest in integrating the subject of climate change adaptation within the instruments of comprehensive and detailed planning.

Step 2

- There are initial ideas or attempts to integrate climate change adaptation within comprehensive and/or detailed planning.
- The municipality works on creating a process for the systematic integration of climate change adaptation within future comprehensive and detailed planning.

Step 3

- The subject of climate change adaptation is an explicit component of all comprehensive and detailed planning, is based on adequate risk analyses and is addressed comprehensively (see section 9). Both the influence of climate impacts on projects/measures and the influence of projects/measures on climate risk are taken into consideration.

5 Informal planning frameworks and related instruments

Key question: Are there any informal planning frameworks or instruments in place that support the integration and implementation of climate change adaptation measures at the local level?

⇒ Orientation values

Step 1

- There is very little interest in integrating the subject of climate change adaptation within informal planning frameworks and instruments.

Step 2

- There are initial ideas or attempts towards integrating climate change adaptation within informal planning frameworks and instruments.
- The municipality works on creating a process for the systematic integration of climate change adaptation within informal planning instruments.

Step 3

- The subject of climate change adaptation is an explicit component of all informal planning frameworks and instruments, is based on adequate risk analyses and is addressed comprehensively (see section 9).
- The results of regular monitoring of related processes and projects are considered in the ongoing revisions of existing planning approaches.

6 Internal organizational structure

Key question: Is there an organizational structure in place that supports the integration and the implementation of climate change adaptation measures at local and institutional levels (e.g., through appropriate cooperation, networking, operational procedures and communication)?

⇒ Orientation values

Step 1

- The existing organizational structure does not sufficiently support systematic integration of climate change adaptation within municipal governance and planning.

Step 2

- The city works on creating an organizational structure that permits systematic integration of climate change adaptation within municipal governance and planning.
- Initial measures to enable improved cooperation and networking or communication around the subject of climate adaptation have taken place.

Step 3

- An organizational structure is in place that fosters the integration and implementation of comprehensive climate change adaptation measures at local and institutional levels (see section 9).

7 Personnel and financial assets

Key question: Are there human and financial resources in place that can support the integration and implementation of climate change adaptation measures at local and institutional levels?

⇒ Orientation values

Step 1

- The municipal administration has only limited human and financial resources to integrate the subject of climate change adaptation within municipal governance and planning.
- There is only limited knowledge or awareness of the importance of integrating climate change adaptation within municipal governance and planning.

Step 2

- The municipal administration has made initial efforts regarding staff and funding to support climate change adaptation.
- Officers have opportunities for further training in the field of climate change adaptation.

Step 3

- Clearly defined and sufficient human and financial resources exist for integrating climate change adaptation within municipal governance and planning in a comprehensive way (see section 9).
- The responsible staff receive support from their colleagues within and outside of their department or unit.

III STRATEGIC measures: inter-institutional level

8 Cooperation and networking with external actors

Key question: Are there external cooperation and networks that support the integration and implementation of climate change adaptation measures at local and institutional levels?

⇒ Orientation values

Step 1

- Climate change adaptation measures are mostly implemented independently, i.e., without active participation of or cooperation with other stakeholders (e.g., citizens).

Step 2

- All relevant stakeholders in the field of climate change adaptation have been identified (at national, regional, municipal and local levels) and initial contacts or collaboration projects have been established.

Step 3

- The city supports other relevant stakeholders and creates incentives for them to implement comprehensive climate change adaptation measures at all levels (see section 9).
- Climate change adaptation measures are implemented in close cooperation with all relevant actors, including impacted population groups.
- The municipality's public relations reflect its efforts and strategies in the field of climate change adaptation.

I-III ANALYSIS table: existing measures

The following table assists in analyzing existing measures in regard to their strengths and weaknesses. First, existing measures are identified on the basis of the previous sections I-III and classified according to eight categories (see below). Existing measures listed are then further detailed with information regarding their legal basis (e.g., city council decision) and the actors responsible for planning and implementing them (e.g. specific staff, units or departments). In the following, the measures listed can be evaluated according to different aspects (see section 9: classification and evaluation of measures).

I OPERATIVE measures: local level			
1 Measures on the ground (city – city areas - objects)			
List of existing adaptation measures (including implementation timeframe)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 1)</i>
• ...			
• ...			
II STRATEGIC measures: institutional / administrative level			
2 General planning strategies and visions			
List of relevant planning strategies and visions (including issue date)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 2)</i>
• ...			
• ...			

3 Climate change adaptation strategy (explicit strategy/ strategies for the integration of climate change adaptation)			
List of existing climate change adaptation strategies (including issue date)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 3)</i>
• ...			
• ...			
4 Formal planning frameworks and related instruments			
List of all relevant formal planning frameworks and related instruments (including issue date)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 4)</i>
• ...			
• ...			
5 Informal planning frameworks and instruments			
List of relevant informal planning frameworks and instruments (including issue date)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 5)</i>
• ...			
• ...			
6 Internal organizational structure			
List of all relevant organizational structures and operations (including revision date if applicable)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 6)</i>
• ...			
• ...			

7 Personnel and financial assets			
List of all relevant human and financial resources/assets (including revision date if applicable)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 7)</i>
• ...			
• ...			
III STRATEGIC measures: inter-institutional level			
8 Cooperation and networking with external actors			
List of relevant cooperation and networking activities with external actors (including revision dates if applicable)	Legal basis	Responsibility	Evaluation <i>(Individual and total evaluation of category 8)</i>
• ...			
• ...			

9 Classification and evaluation of measures

The identification of weaknesses and strengths of existing measures begins with classifying them in the three levels and eight categories described in sections I-III and shown in the previous analysis table. Measures may not be present in all categories or the categorization may indicate an unbalanced focus on current initiatives. This initial analysis is important in order to define future areas of action.

In the following, the three-tier orientation values for systematic integration of climate change adaptation within municipal governance and planning (see sections 1-8) serve to support evaluation of the identified measures. Step 3 always requires comprehensive consideration of the climate change adaptation concept. This comprehensive view relates to the following aspects:

- A. Climate aspect: all potential climate impacts are considered.
- B. Climate risk aspect: all risk aspects are covered.
- C. Levels: all geographic and institutional levels are included (city – city areas – and object level as well as unit or department level).
- D. Planning approach: constructive/structural, ecosystem-based, social and financial measures are integrated.
- E. Work aspect: separate-explicit and integrated-implicit implementation of measures complements each other. The emphasis is, however, on improving existing core work to ensure sustainable urban development

Note: not all aspects A-E are relevant for every type of measure.

A Climate aspect

Evaluation question: Is the adaptation measure only focused on particular climate impacts (e.g., flood, heat, etc.) or are all potential climate impacts sufficiently covered?

The following codes can be used for the evaluation of the measures within the analysis table(s). The measure is:

- Hazard-specific
 - Flood. Code: F
 - Heat. Code: H
 - Cold. Code: C
 - Storms. Code: S
 - Other climate impact types. Code: O
- Non-hazard-specific. Code: N

B Climate risk aspect

Evaluation question: What is the goal of the climate change adaptation measure? What risk factors are addressed?

The following codes can be used for the evaluation of the measures within the analysis table(s). The measure has the following goal(s):

- Reducing or avoiding existing hazards (to keep hazards outside the city). Code: RedH
- Reducing vulnerability to hazards (to enable the city to resist or live with hazard impacts). Code: RedV
- Improving response preparedness (to be able to respond to hazards adequately). Code: ResPrep
- Improving recovery preparedness (to be able to quickly recover after hazards and resume normal functions). Code: RecPrep
- Awareness building (to improve knowledge on climate change, climate change adaptation and related ecosystem-based approaches). Code: AB
- Risk assessment (to create an adequate knowledge base for the design of climate change adaptation measures). Code: RA

C Geographical and institutional levels

Evaluation question: Is the measure related to the municipal level or to a particular area (individual settlements or objects, units or departments)?

The following codes can be used for the evaluation of the measures within the analysis table(s). The measure relates to the:

- Overall municipal level. Code: ML
- Settlement/neighborhood level. Code: SL
- Object level. Code: OL
- And is implemented by a particular unit. Code: UI
- Or department level. Code: DI

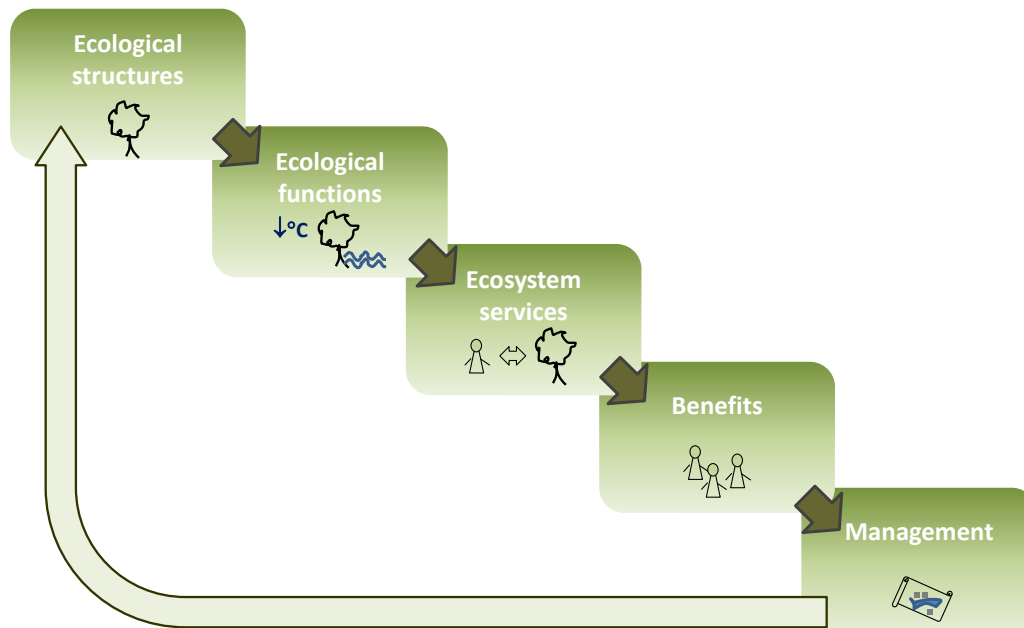
D Planning approach

Evaluation question: Is the adaptation measure predominantly constructive/structural, environmental, social or economic?

The following codes can be used for the evaluation of the measures within the analysis table(s). The measure focuses on improvements by means of:

- Grey infrastructure measures - structural planning approach. Code: SA

- Green and blue infrastructure measures - ecosystem-based planning approach (see illustration below*). Code: EbA
- Integrated or combined (grey, green and blue) infrastructure measures. Code: CA
- Other measures (socio-cultural, financial measures, etc.). Code: S, F, etc.



* Note: an integrated planning approach needs to consider existing ecosystems or ecosystems to be restored in the context of elaborating status analyses, planning, and implementation processes for climate change adaptation. All aspects illustrated above are subject to systematic examination.

E Work aspect

Evaluation question: How does the measure relate to the area of operations of the department responsible for implementation? Is the measure implemented independently of the department's core activities or is it integrated into other core activities and measures?

The following codes can be used for the evaluation of the measures within the analysis table(s). The measure is:

- A separate project or a separate project component that has the explicit goal of climate change adaptation. Code: S-EX
- Improvement of core areas of operation by increased attention being given to the topic of climate change adaptation. Dealing with climate-relevant aspects can take place implicitly as well as explicitly.
 - Integrated - implicit. Code: I-IM
 - Integrated - explicit. Code: I-EX

I-III ANALYSIS table: potential measures

The same analysis table (see preceding chapter) can be used for the identification and examination of planned or potential measures that are necessary to foster the integration of climate change adaptation within municipal governance and planning.

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