

Toolbox Climate-Proof Integrated Urban Planning

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Good Governance and Human Rights Section

Friedrich-Ebert-Allee 36 + 40

53113 Bonn, Germany

T +49 228 4460-37 62

F +49 228 4460-17 66

E info@giz.de

I www.giz.de

Project

The Cities Fit for Climate Change project formed part of the International Climate Initiative (IKI). The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supported this initiative on the basis of a decision adopted by the German Bundestag. The project also cooperated with the German Federal Ministry of the Interior, Building and Community (BMI).

Responsible

Dr Daphne Frank

Head of Cities Fit for Climate Change project

T +49 228 60 33 62

E daphne.frank@giz.de

Design and layout (tools)

Isabel de la Fuente, Santiago, Chile

Design and layout (publication)

EYES-OPEN, Berlin

Photos

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Authors

Andrea Palma Pérez, Dr Daphne Frank

Coordinator in Chile

María Ignacia Jiménez

Consultants

José Pedro Urzúa Pettinelli, Camila Urzúa Concha

Contributors

María Ignacia Jiménez, Jochen Gaulty, Diana Ramírez, Philipp Kühl, Anja Lamche

Cities Fit for Climate Change team

Philipp Kühl, Amina Schild, Lea Kulick, Andrea Palma, Zane Abdul, Sudhakar Krishnan Sripathy, Karen Pacheco

Translated from the Spanish

Jayne Cotgreave, Lisa Simson

English editing

Ben Kern, Iris Gleichmann

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List of abbreviations

BMI	German Federal Ministry of the Interior, Building and Community
BMU	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BMZ	German Federal Ministry for Economic Cooperation and Development
CFCC	Cities Fit for Climate Change
CNDU	National Urban Development Council (Chile)
FoA	Field of Action
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
IKI	International Climate Initiative
M01, M02, etc.	‘Milestone’ tools
NDC	Nationally Determined Contribution (2015 Paris Agreement)
P01, P02	‘Principle’ tools
S01, S02, etc.	‘Support’ tools
SDG	Sustainable Development Goal
SWOT	Strengths, weaknesses, opportunities and threats
UNFCCC	United Nations Framework Convention on Climate Change
UN Hábitat III	United Nations Conference on Housing and Sustainable Urban Development

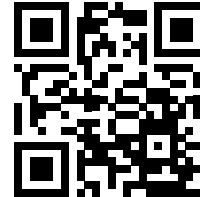
1 About the Cities Fit for Climate Change project

The Cities Fit for Climate Change (CFCC) project was part of the International Climate Initiative (IKI) supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) on a decision of the German Federal Parliament. The project also cooperated with the German Federal Ministry of the Interior, Building and Community (BMI). It was implemented between 2015 and 2019 by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Its aim was to strengthen cities as key actors in sustainable development. The project was implemented in collaboration with three partner cities, Santiago in Chile, Chennai in India and eThekweni (Durban) in South Africa. These cities were supported in developing specific climate-friendly strategies suited to their particular circumstances. Besides supporting the implementation of climate-proofing activities in the partner cities and strengthening global exchanges on low-carbon and resilient urban development the project developed a new climate-proof urban development approach. The toolbox is part of this new approach.

Lessons learned from the project and the ideas that emerged were shared at international conferences and formed part of a global exchange.

Because there is no one-size-fits-all solution, we analysed the CFCC partner city cases, and fostered exchanges with German cities in order to examine existing climate-resilient, low-carbon urban development concepts. The findings of these analyses were compiled in a sourcebook.¹

Link to the CFCC project video:





PART 1:

Background information

2 Introduction

The rapid pace of climate change and the reality of its effects are becoming increasingly apparent every day. The scientific community recently warned that the target of limiting global warming to 1.5 °C (the target set in the 2015 Paris Climate Agreement) is now practically unachievable. To tackle this, the New Urban Agenda of the UN Habitat III process² establishes that sustainable cities must play a leading role in reducing emissions from power generation and promoting climate-resilient development. While climate change is being debated in international forums, often in abstract terms, it is becoming increasingly visible to people, particularly city dwellers, who face problems such as extreme heat and flooded streets that affect their daily lives.

Since the Leipzig Charter on Sustainable European Cities (2007) was adopted,³ the integrated urban development approach has become the overarching focus of development efforts. Europe has established a consensus on the need to ensure that the future development of cities is aligned with guiding principles for sustainable integrated urban development. The basic principles of the Leipzig Charter include the importance of participation, the responsibility of cities in addressing climate change, good governance and the value of historic city centres.

The 17th Ibero-American Forum of Ministers and Senior Officials for Housing and Urban Development, which took place in 2007, recognised in the *Declaración de Santiago*⁴ that the ‘right to the city’ and integrated urban development policies are strategic priorities for poverty reduction and the equitable distribution of the benefits of growth. A report

on the findings of research into integrated urban planning models and good practices,⁵ prepared for Chile’s National Urban Development Council (CNDU), recommends establishing a city vision as the first step in any integrated planning process. This vision should have a long-term horizon so that urban development goals, actions and targets can be formulated.

The proposal is that climate change considerations should be mainstreamed into integrated urban planning based on guiding principles, or *Leitbild* in German (from *Leiten* meaning to guide or steer, and *Bild* meaning image, concept or principle), with a view to developing a **Climate-Proof Integrated Urban Development Concept** that is shared by everyone involved in its design and implementation. The toolbox described in this document aims to complement traditional planning processes by incorporating within them climate change adaptation and mitigation criteria. The first time that a toolbox such as this successfully incorporated climate change criteria in a traditional urban planning process was in the Matadero–Franklin–Bio Bio district of Santiago while designing the National Inner-City Regeneration Programme (2018–2019), sponsored by Chile’s Ministry of Housing and Urban Development. The aim of this programme was to promote urban regeneration based on a holistic, multi-sector approach. A participatory process was developed through workshops and the use of the toolbox. These enabled multi-sector, multi-level coordination, incorporated climate change considerations into each step of the planning process and guided efforts to define a city vision and design strategies to set the regeneration process in motion. Based on this experience, the Chilean Ministry of Housing and Urban Development is now laying the groundwork to mainstream climate change into integrated urban planning as part of its formal funding processes.

This publication provides a description of climate-proof integrated urban planning and guidelines on the process we propose in order to design and implement an urban development concept. The toolbox is applied in three phases: (1) preparation, (2) concept design and (3) implementation. In the preparation phase, the actors are identified and the work plan is designed; in the concept design phase, the **Climate-Proof Integrated Urban Development Concept** is defined using a participatory process; and in the implementation phase, the actions defined in the concept are implemented. Each of the phases contains different steps and milestones, and the toolbox serves as a guide for practitioners and decision-makers during the process. The tools were designed on the basis of experiences in the cities of Leipzig and Halle an der Saale in Germany, and were adapted to the context of cities in emerging countries following an exchange with the municipalities of Providencia and Santiago in Chile.

3 Basic facts about the toolbox

What is it for?

The toolbox is a set of tools that help guide the process of incorporating climate change into integrated urban planning. The tools were designed following the work carried out as part of the *Cities Fit for Climate Change* project, which recorded methods that had proved to be useful in incorporating climate change adaptation and mitigation in urban planning in Santiago, Chile.

What is its objective?

The toolbox seeks to support the designing of an urban development concept for a specific area using a holistic approach incorporating climate change considerations throughout. It aims to complement integrated urban planning processes by mainstreaming climate change adaptation and mitigation criteria. The toolbox aims to facilitate a planning process, using a multisectoral approach that takes into account the different levels of government. The toolbox thereby aims to help practitioners develop a **Climate-Proof Integrated Urban Development Concept** that not only takes into account the challenges of integrated development, but also those of potential climate change impact.

Who is it intended for?

The methodology is mainly aimed at teams in the municipal, metropolitan, regional and national authorities working on urban planning, urban development, climate change and the environment. However, to ensure a holistic approach, the integrated planning process should also involve groups such as the staff of other governmental departments, politicians, representatives of civil society organisations and the private sector, etc.

How is it to be used?

The toolbox does not propose a one-size-fits-all solution because urban planning must adapt to the local context, and involves a broad set of variables that can produce more than one result in each instance. Political and cultural contexts must also be considered in the planning process. Therefore, rather than providing a series of instructions or rules to be followed or imposed, the toolbox is a guide to the process of designing an urban development concept. Users are invited to use the toolbox according to their particular circumstances, to design their own city development concept and to support its successful implementation with an integrated, holistic approach that incorporates climate change considerations, and to apply that approach at any project scale.



PART 2:

Climate-proof integrated urban planning process

4 Overview of the integrated urban planning process

An integrated urban planning process consists of preparing, developing and implementing different action plans in a specific area of a city with the aim of achieving set objectives and targets. Such planning can be short-term, medium-term or long-term (for example, 5, 10 or 20 years). An integrated urban development plan should include a vision for the future that contains set objectives and targets. This vision guides the process of implementing an integrated urban development concept and facilitates the understanding of the proposed developments.

Integrated planning should not be regarded simply as an administrative exercise that enables authorities to apply for resources. The plan and the concept underlying it, should be viewed as a development strategy that is useful in addressing challenges. It should consist of a system of interconnected activities that aim to ensure ongoing improvements in the economic, environmental, climatic, social and demographic conditions of an urban situation. It must be consistent with the policies in place in the particular context (country, region, city) and realistic in terms of implementation and resource management capacity.

Based on the vision of the future embodied in the Concept, time periods should be set out to establish relevant milestones to measure progress and to adjust or refocus the Concept in order to achieve the future vision it contains. Ideally, these time periods should last at least five years to allow for adjustments to be made to the Concept according to development trends and any change of conditions in the project area. Concept

updates should be timed so as not to coincide with elections in order to ensure that the Concept is not viewed as an exercise conducted by the authorities currently in power, and to help ensure its long-term sustainability. The Concept is the product of an extensive participatory process, which, although led or initiated by a political body, should not be identified with a particular government, but rather with a specific territory, and not be affected by changes of government. The concept should therefore include mechanisms to incorporate modifications and adjustments during the implementation phase.

The work plan must clearly set out how civil society and government actors will be involved. The design of the Concept must be a collective effort, as this will enhance the chances of an integrated approach being adopted, and facilitate its successful implementation. It is recommended that a Participation Strategy be drafted to support this process and reduce the challenges it might present to the authorities.

A monitoring process will facilitate the introduction of changes during the Concept implementation phase. The Concept will need to be updated and the appropriate timing for this must be set. Updates will allow the inclusion of new projects or areas of action in order to respond to new challenges that are identified in terms of climate change and sustainable development. This flexibility is an added benefit of the planning model since it enables new actors, demands and objectives to be incorporated.

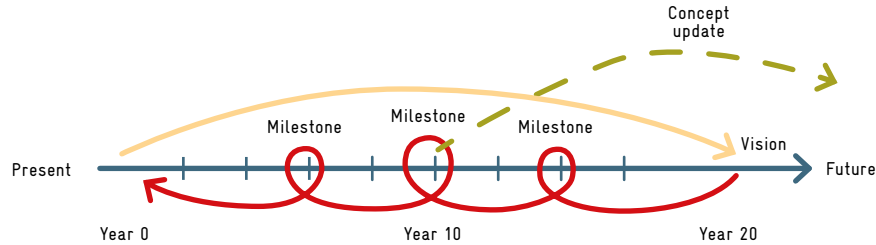


Figure 1: Diagram showing how the planning of an Integrated Urban Development Concept works

Figure 1 shows the planning process for the design of a **Climate-Proof Integrated Urban Development Concept**. In the Preparation Phase (Phase 1), it is recommended to build the vision of the future by establishing a timeline (yellow arrow). In the Concept Design phase (Phase 2), the vision is formulated from the analysis conducted and the milestones to be achieved at intervals of time (red spiral arrow). The actions required to achieve these milestones should also be determined. Ideally the implementation of a planning process should be at least five years long.

Integrated planning is a dynamic process that requires continuous monitoring, evaluation and updating. In order to update the vision, the process is repeated and a new vision of the future is made (green arrow). The degree to which the planning is defined differs according to its time frame, as spatial management processes are continuous and dynamic.

5 Climate-proof integrated urban planning

Urban planning can be approached from many different perspectives. Climate change criteria must be incorporated across all aspects of planning and requires multisectoral, multi-level coordination. A climate-proof city vision is therefore defined in order to establish common criteria to be considered by the range of actors involved. Climate change poses a challenge for spatial governance, but it offers an opportunity to improve urban planning by looking at a project area in a holistic way. Building a vision that reflects how climate change is to be addressed supports multi-sector, multi-level coordination by delivering a consensus on sector requirements and responses. This shared vision also incorporates citizens' demands and creates opportunities for private-sector contributions. As a result, a **Climate-Proof Integrated Urban Development Concept** will be a response to the vision agreed upon for the territory under consideration. The Concept's design arises from an analysis that examines such things as climate threats, demographics, economic, social and environmental factors, behavioural trends and the use of public spaces. The actions identified in the Concept should guide efforts towards achieving economic, environmental and social developments that are sustainable in the long-term.

When defining a city image, certain theoretical climate change and urban development models must be considered. The Cities Fit for Climate Change (CFCC) project carried out a study called *Guiding Urban Concepts and Climate Change in Germany's Urban Planning Practice* to guide the discussion and subsequent efforts to define the city image. The climate resilience criteria assessment table (**Tool P01**) is taken from this study. While the models mentioned in the study, such as the 'compact city' or the 'axial city', are not

the only types considered in the discourse, they provide sufficient material to define a combined strategy that meets the specific requirements of each case. Addressing climate change across all aspects of planning will ensure that cities are prepared for the threats they face, while maintaining their developmental efforts. This is an opportunity to promote urban development models that are the result of a multi-sector, multi-level consensus, and are therefore sustainable and integrated.

An approach to working holistically known as the Climate-Proof Urban Development Approach (ClimPUDA), is described in the CFCC publication *A Sourcebook for Climate-Proof Urban Development*⁷. This document points out that guiding principles and an integrated understanding of urban development can help planners, municipal employees and citizens to draft a vision for the sustainable development of their city. This approach provides cities with a solid framework to refer to in their efforts to become more climate-friendly. The approach emerged as the response to a key question: what are the most strategically important fields that cities need to engage with in tackling climate change? Based on this question, four fields of action (FoA) were identified: governance and management; policies and strategies; measures: from policy to action; and capacity development. These four FoAs are entry points that provide urban practitioners with guidance on developing, implementing and sustaining a *climate-proof* urban development approach.

This toolbox seeks to complement traditional planning processes by facilitating the designing of a city concept that incorporates climate change considerations in a shared holistic, multi-sector, multi-level vision.

6 Toolbox elements

Integrated urban planning: Integrated planning involves a participatory process with multisector, multilevel representation. It requires political leadership, a vision for the future and a commitment to sustained multidisciplinary collaboration throughout the process.

Climate-proof integrated urban planning: A target has been internationally agreed to limit global warming to 1.5 °C.⁸ In view of the effects of climate change on cities, it is necessary to incorporate vulnerabilities and threats into analysis processes and include specific climate change mitigation and adaptation measures in urban planning strategies. City planning processes have not traditionally taken climate change criteria into account: expert analysis is therefore required to incorporate aspects of climate change into urban planning in a concrete way.

Phases: The planning process consists of three consecutive phases: (1) preparation phase, (2) concept design phase and (3) implementation phase.

Steps: Seven consecutive steps are established to develop the strategy: (a) define actors and roles; (b) plan the design process; (c) carry out analysis and diagnosis of climate hazards; (d) develop the vision and objectives: city image; (e) define actions; (f) draw up the implementation plan; (g) monitor progress.

Milestones: Milestones are required for each of the steps in order that the concept design roadmap can be designed. The following milestones have been identified: M01 – working groups; M02 – work plan; M03 – strategic analysis by Field of Action (FoA); M04 – map of the vision and objectives; M05 – map of ‘The City We Want’; M06 – operational plan; and M07 – performance monitoring plan.

Tools: Nineteen tools were designed to assist the planning process.⁹ They were divided into three categories: Milestone tools (M), which help form the basis of an integrated plan, indicating the outputs to be generated in each step; Support tools (S), which help to generate the inputs for the milestone tools; and Climate Change Principles tools (P), which provide guidance on how to incorporate climate change considerations into integrated urban planning.

7 Description of the three phases of climate-proof integrated urban planning

This toolbox includes climate change considerations in each of the three phases of climate-proof integrated urban planning: (1) preparation, (2) concept design and (3) implementation. The aim is to guide efforts to mainstream climate change considerations into the whole integrated planning process.

- The preparation phase (1) identifies the challenges posed by climate change in the project area.
- The concept design phase (2) includes the climate change hazards across all the issues identified in the analysis and diagnosis step. Demands and needs are thus identified in order to generate responses to those hazards.
- The implementation phase (3) includes monitoring contributions to international agreements. The Concept will contain indicators for achieving the Sustainable Development Goals (SDGs) and Nationally Determined Contributions (NDCs).

Figure 2 shows the overall structure of the proposed climate-proof integrated planning process. This process is structured on the basis of three phases and their respective steps. The table shows the milestone tools (M), which reflect the outputs for each of the milestones. It also lists the support tools (S), which facilitate the process for achieving each milestone. Some of these milestone and support tools refer specifically to the different dimensions of climate change in this planning structure. For example, the tool listing guiding urban principles for climate-proofing (P01) summarises academic concepts,

guidance for steering development in the project area, city models, such as compact cities and axial cities, and so on. The tools for integrated planning are shown in white and those relating to climate change in blue.

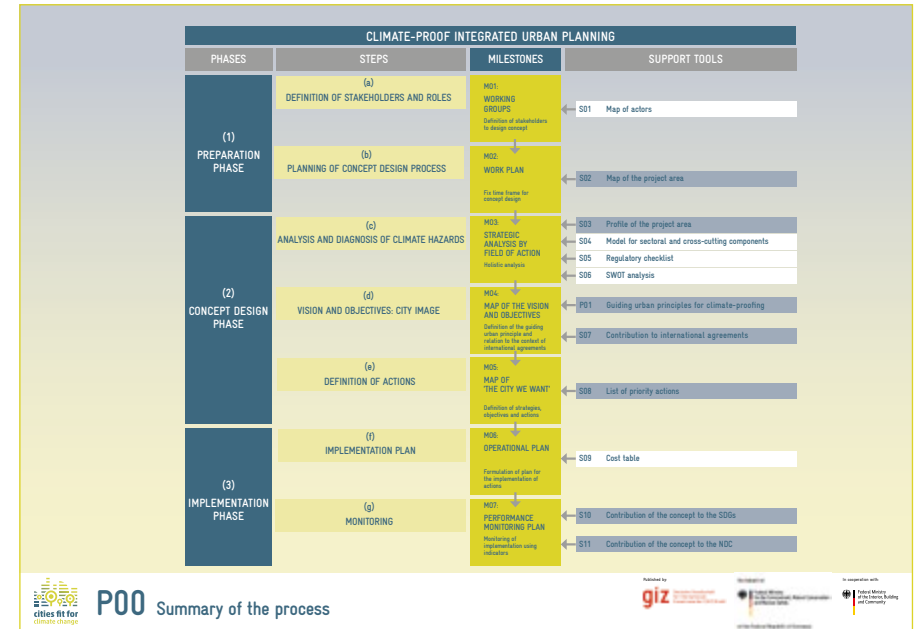


Figure 2: Overall structure of the climate-proof integrated urban planning process

8 Overview of Phase 2: the concept design process

In general terms, the purpose of the concept design phase is to determine how to move from the current situation in the project area to the desired future situation. This is done by undertaking an analysis that enables demands and needs to be identified through exchanges between decision-makers, practitioners, experts, citizens and political leaders.

Figure 3 illustrates the concept design phase (phase 2) of the integrated planning process indicating the three steps to be followed, which are shown in blue. These steps are: analysis and diagnosis (step c), definition of vision and objectives (step d) and definition of actions (step e). The yellow arrow shows the results obtained in each step and how climate change aspects (in grey) are incorporated. For example, in the first step – analysis and diagnosis – the steering group must pinpoint the climate hazards to be addressed in the urban development concept. Given that climate change is a cross-cutting issue in integrated urban planning, the steering group must identify vulnerabilities in the project area. When defining the vision and objectives, strategies need to be developed that take into account the demands and needs highlighted in the analysis process. Objectives will then be drafted that incorporate effective responses and the actions taken to achieve them.

Figure 3 also lists the players involved in each step, shown in yellow. The steering group leads the first step in the process. In the next step, the steering group is joined by experts, citizens and political leaders. Citizens, practitioners and the steering group are involved in the third step and define the actions required.

This is a dynamic process, requiring regular updates at intervals that must be set in the Concept.

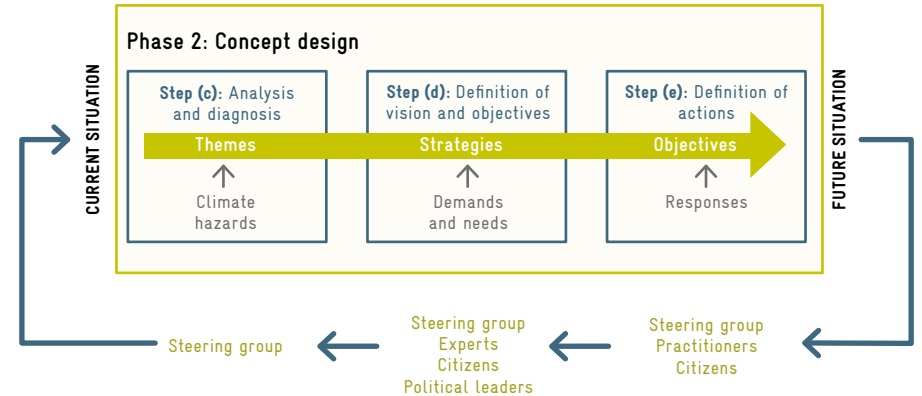


Figure 3: Overview of Phase 2: Concept design

9 Detailed description of the process: Climate-Proof Integrated Urban Development Concept

9.1 Phases and steps

The Climate-Proof Integrated Urban Development Concept planning process consists of three consecutive phases: (1) preparation phase, (2) concept design phase and (3) implementation phase. Each phase has various steps. Figure 4 summarises how climate change criteria are incorporated into integrated urban planning, showing the phases and steps referred to above.

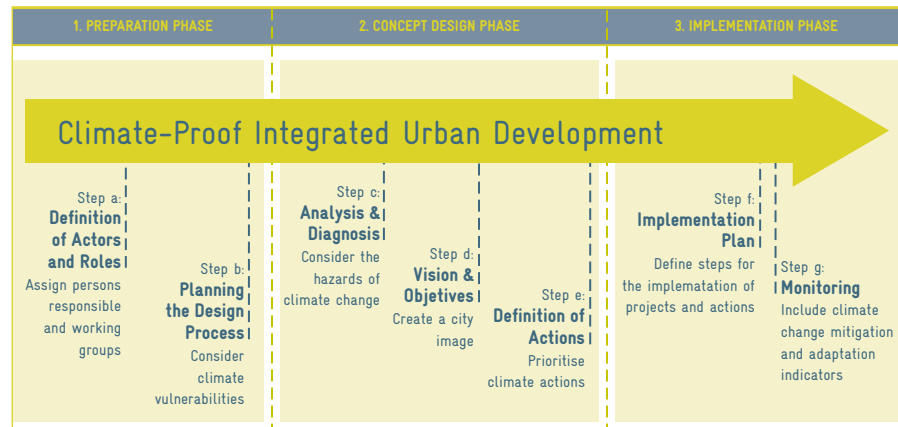


Figure 4: Overview of Climate-proof Integrated Urban Development

1 Preparation phase

An integrated planning process begins with the mandate or political will to generate a change in the development of a given area. It is necessary to start by identifying actors and defining roles. Then, it is recommended to identify and define the particular part of the area in which an intervention is to be made. This makes it possible to ascertain that, in the preparatory phase, the actions that are in development before the implementation of the Concept can be identified. Once the target area has been determined, it is necessary to identify the climate change challenges it faces.¹⁰

Step (a): Defining actors and roles

To coordinate the overall process, it is necessary to prepare a work plan, set up working groups, including a group to steer the process. This steering group must have the political backing of the authorities responsible for the area in question, and it must be multidisciplinary given the variety of issues the Concept will cover. It is also important to determine what expert advice will be required and at what points citizens should be involved in the process. Based on experiences in the City of Leipzig three working groups will be required: the steering group, an advisory group and a consulting group. The steering group leads the process, the advisory group, consisting of experts in the relevant fields, provides guidance, and the consulting group validates the proposals that make up the Concept.

Step (b): Planning the design process

This step involves determining who does what and establishing the preliminary requirements for drawing up a schedule of the actions needed to carry out the planning process, including the range of concerns to be addressed within the working groups and externally. It also entails organising the logistics for working on the steps required to develop the Concept.

2 Concept design phase

In this phase, the development Concept will be defined, identifying the strategies, objectives and actions that will enable the agreed-upon vision to be achieved.

Step (c): Conducting climate hazard analysis and diagnosis

An analysis is conducted to obtain a clear diagnostic assessment of the project area and to identify the demands and needs of each of the sectors and external players (civil society, private sector and local organisations). The analysis includes building a profile of the project area to determine its objective characteristics and complexities with a view to establishing a baseline. The legal and regulatory framework should be analysed to ensure that implementation of the Concept is feasible. The area's vulnerability to the effects of climate change should also be studied based on economic, social, physical and ecological factors. Vulnerability is defined as the inability to respond and adapt to climate change threats.⁸

It is proposed that a holistic analysis be carried out that focuses on four FoAs (Tool M03). These four FoAs are (i) governance and management; (ii) policies and strategies; (iii) measures: from policy to action; and (iv) capacity development.⁹ An analysis of the project area based on the FoAs will enable actions to be identified to successfully implement the Concept, complementing the assessment of demands and needs in the area. To complete the analysis, an evaluation is recommended of the Strengths, Weaknesses, Opportunities and Threats (called a SWOT analysis) at the sectoral level (Tool S06). The SWOT analysis tool is used to examine the situation in the project area to determine its current state and plan a strategy for the future. It is recommended that at this point in the concept design phase a SWOT analysis is applied to each sectoral component. The

findings of these analyses will determine the demands and needs that the urban development concept should address.

Step (d): Creating a vision and objectives: the city image

It is important to include a public launch event for the design process that brings together all the participants. Such an event would help to secure the commitment of the relevant players and political support, while at the same time, ensuring that the process is transparent. A concrete view of what climate-proof urban design entails should be provided and included as part of the development vision. The participants could draw on examples provided in a study of current urban design trends in German cities¹¹ and evaluate the options for the area with a view to choosing one or more design models, and producing strategies to promote the desired city image. The vision should refer to the SDGs¹² that the urban development concept can help to achieve. This contextualises the vision within the framework established by international agreements in addition to reflecting the complex set of objectives that will guide the concept.

The vision facilitates an understanding of the proposed development and provides legitimacy to its collective understanding. It should be worded clearly and concisely, should be forward-looking and focused specifically on the target area. It should also apply to the Urban Development Concept in general and not include specific actions. At least three variables should be taken into consideration when identifying the challenges facing the area: the response to climate change, the promotion of sustainable development, and the area's demands, needs and specific aims. The objectives should be consistent with the city's image according to the guiding urban principles for climate-proofing. The objectives must all be encompassed within the vision.

Step (e): Defining actions

Actions will be identified based on the results of the strategic analysis phase. Once the actions have been identified and grouped under the four FoA, the toolbox recommends delegating responsibility for their implementation to the relevant sector. At this point, projects that can encourage new initiatives by other actors that have not been considered initially should be considered. These projects can help achieve strategic objectives by promoting new urban developments such as property investments, social empowerment and economic improvement.

The authorities responsible for the area should formally approve these actions and their prioritisation. This will enable the Concept to be useable as an urban management instrument and roadmap for the development of legal and regulatory mechanisms in the project area. Political backing for the strategy should be ensured throughout the process.

3 Implementation phase

This phase considers the implementation of the Climate-Proof Integrated Urban Development Concept, when the actions and projects are executed. It entails identifying strategies and establishing performance indicators. Strategies and sustainable development indicators should be established to monitor the implementation of the objectives, goals and projects defined in the Concept.

Step (f): Implementation plan

In order to develop an implementation plan, it is necessary to find the means to carry out the agreed-upon actions. This involves, for example, structuring and securing financing, designing mechanisms for the effective use of these resources, and undertaking public procurement processes. The implementation plan must consider the need to secure technical approval, draft public policy and amend laws and regulations that could be contrary to the vision. It is also important to design and publish technical guidelines, hold workshops and promote training events.

Step (g): Monitoring

Strategy implementation requires performance control, monitoring of the budget implementation, and, in this case, monitoring of the contributions to the NDC and international sustainable development goals (SDGs).

9.2 Phases and milestones

The milestones define the outputs of each of the steps in the process of designing a Climate-Proof Integrated Urban Development Concept. Each milestone is the result of a technical process. Tools have been designed to enable each milestone to be reached. The following pages describe the milestones, indicating which tools can be used to achieve them.

1 Preparation phase

Milestone: Working groups (M01)

The first milestone is the definition of the working groups. These groups must be multi-sectoral to ensure that a holistic approach is adopted during the process. The groups are defined according to their role in the process. There are three groups: a steering group, an advisory group and a consulting group. The steering group will guide the whole process, setting up meetings, taking minutes and organising the results. This group must be approved by the political authorities responsible for the area and can be divided into three sub-groups, for policy steering, management steering and operational steering. The advisory group should consist of experts in different fields who are to provide support at different stages of the process. The role of the consulting group is to gather information on the external actors' demands, and it can also be a political group that should be included in certain decisions. These working groups are dynamic and can be adjusted to suit requirements at different points in the process, meaning that their members can change or participate intermittently, depending on their role.

Tools

The following tools should be used to define the working groups:

- **M01 Working groups:** this tool represents the milestone to be achieved; it identifies the participants and groups them according to their roles and tasks.
- **S01 Map of actors:** this tool identifies all the participants and groups them according to the issues and strategies identified in the planning process.
- **S04 Model for sectoral and cross-cutting components:** this tool checks that no sector is left out and ensures there is an intentional selection of relevant sectors for each working group.

Milestone: Work plan (M02)

It is recommended to start the planning process by identifying a specific area. The scale of the area may vary – metropolitan, municipal, district, neighbourhood, etc. The experience in Santiago demonstrated that identifying a specific area facilitates multisectoral work, allowing challenges to be determined and concrete solutions to be formulated. Once the area has been defined, the next step is to identify which participants will be involved from the outset and those that will need to join the process at a later stage. The work plan shows the time frame for implementing the Concept and how to schedule the activities to be carried out internally and externally. The internal processes are those aimed at defining institutional aspects, and the external processes involve public consultations, expert panels and approvals required to define the strategy.

Tools

The following tools should be used to prepare the work plan:

- **M02 Work plan:** this tool provides a table showing the activities that need to be planned to facilitate the preparation of the work plan.
- **M01 Working groups:** this tool supports the allocation of responsibilities for each of the tasks that have been planned.
- **S01 Map of actors:** this tool helps to identify and incorporate the key participants into the work plan.
- **S02 Map of the project area:** this tool shows a map of the exact project area, enabling identification of the areas of influence and their relationship to the context. It shows threats from climate change, the resulting vulnerabilities and lists the actions planned and in progress. It serves as a reference when drawing up the work plan.
- **S04 Model for sectoral and cross-cutting components:** this tool checks that no sector is left out and ensures there is an intentional selection of relevant sectors for each working group.

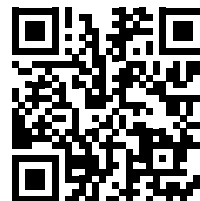
2 Concept design phase

Milestone: Strategic analysis by Field of Action (M03)

To ensure a holistic analysis when designing the Concept, the Climate-Proof Urban Development Approach (ClimPUDA) proposed in the CFCC project's *A Sourcebook for Climate-Proof Urban Development* is used. Conducting a strategic analysis based on the four FoAs suggested by the CFCC project – (i) governance and management; (ii) policies

and strategies; (iii) measures: from policy to action; and (iv) capacity development – helps to strategically plan and implement the measures required to mainstream climate change into integrated urban planning processes. As part of the process, the FoAs highlight existing activities that might contribute to achieving the vision established at the previous milestone. The FoAs also help to identify the actions required to achieve the described objectives.

Link to the CFCC ClimPUDA video:



To achieve this milestone (M03), information must be gathered to build a profile of the area, including population figures, data on economic development, etc. It entails identifying existing activities, associated legislation and regulations, the threats and effects of climate change and the resulting vulnerabilities, as well as the needs for sustainable development. This analysis will make it possible to validate the selection of the project area and ensure that all the area's sector components have been considered.

For a more detailed analysis of the area, it is recommended that a SWOT analysis be carried out for each sector to determine its situation in the project area. In this way, both levels of the FoAs are covered – the sectoral level and the holistic level – in order to help identify the actions, needs and demands to be addressed.

Tools

The following tools should be used to carry out the strategic analysis by Field of Action:

- **M03 Strategic analysis by Field of Action:** this tool is simple but very useful for organising the analysis.
- **S03 Profile of the project area:** this tool contains questions to help identify the information required to define the project area, such as population figures and economic data.
- **S04 Model for sectoral and cross-cutting components:** this tool checks that no sector is left out and ensures there is an intentional selection of relevant sectors for each working group.
- **S05 Regulatory checklist:** checks the applicable laws and regulations to determine the feasibility of implementing the previously defined vision and objectives. The vision can be adjusted to ensure that the Climate-Proof Integrated Urban Development Concept is achievable.
- **S06 SWOT analysis:** this analysis provides a detailed picture of the situation in each sector and how it might contribute to or hinder the implementation of the concept. The analysis highlights demands and the action needed in the project area to move towards the desired future situation.

- **P01 Guiding urban principles for climate-proofing:** this tool provides support for reassessing the vision and adjusting the actions in light of the available possibilities.
- **M04 Map of the vision and objectives:** this map serves as a reference for the strategic analysis.
- **S07 Contribution to international agreements:** this tool helps to keep sight of the need to contribute to international agreements.

Milestone: Map of the vision and objectives (M04)

Defining the guiding urban principle is a process involving an analysis of the options available in the area. The steering group must establish what type of guiding urban principle for climate-proofing it is going to promote as part of the implementation of the Concept. Whatever the scale of the planning initiative, it should encompass the entire project area (city, district, neighbourhood or street). Although climate change does not adhere to administrative boundaries, defining a specific area facilitates the task of establishing a climate-proof city vision. Based on an analysis, the Concept's objectives should be formulated from each sector's perspective. To this end, development issues will be highlighted, based on the existing actions identified and used to set objectives that promote climate-proof development, so that the issues that will be addressed in the concept are jointly defined.

The objectives should consider the targets set by the SDGs and NDCs in order to contextualise the Concept and measure its contribution towards meeting them. This international vision of the area puts the Concept into context and also facilitates access to potential sources of funding for the implementation phase.

Tools

The following tools should be used to define the “climate-proof” city vision and its objectives:

- **M04 Map of the vision and objectives:** this tool provides a map of the area showing the baseline information required to illustrate the city vision and the objectives that must be met to implement the Concept.
- **S02 Map of the project area:** this tool displays a map of the area showing the baseline information and provides the initial context for the analysis.
- **P01 Guiding urban principles for climate-proofing:** this tool summarises some of the guiding urban principles for climate-proofing. It includes a table showing the resilience criteria that will facilitate discussions in the steering group that determine the best combination of resilience criteria for the project area.
- **S07 Contribution to international agreements:** this tool identifies how the climate-proof city vision can contribute to national and international agreements, specifically the SDGs and NDCs.

Milestone: Map of ‘The City We Want’ (M05)

Once an in-depth analysis of the current state of the area has been carried out, work starts on defining the strategies, objectives and actions that will make up the *Climate-Proof Integrated Urban Development Concept*. For this process, a climate-proof city vision is needed to integrate the climate change perspective into the Concept. An exhaustive list of actions is generated as a result of the analysis conducted for the previous milestone and is used to identify the demands and needs that the Concept should address. Since

the aim here is to incorporate climate change considerations into the planning, it is important to look at the guiding principles put forward by academia and to review other practices to ascertain the best combination for the project area. These two approaches will help prioritise the actions and establish the objectives that will make up the Concept, defining ‘The City We Want’. To demonstrate more clearly how it relates to the project area, this milestone should be represented on a map showing the area and displaying the actions that will be carried out to implement the Concept. The map should clearly illustrate the city vision, the strategies and the objectives to be achieved by implementing the actions.

During this stage, it is important to define a vision with a timeline, specifying when the objectives are expected to be achieved. Once this date has been set, future scenarios can be developed for the project area. The content of each of the strategies should be mapped, showing how they meet the demands and needs identified in the analysis phase. The information for each strategy should be cross-referenced with all the information generated in previous steps. It is recommended that ambitious scenarios be developed that aim for the highest targets, with a view to generating an exhaustive list of actions. This will provide a comprehensive range of actions that can be used when refining the strategy in the next stage. These actions can be grouped under the four FoAs to ensure that the holistic approach is maintained during the implementation process.

It is necessary to consider the political validation required to put the proposal into practice. This will involve securing official approval(s) and backing from the relevant authorities. This approval will turn the Climate-Proof Integrated Urban Development Concept into a planning instrument for the future, which will guide climate-proof

urban development using a coordinated, multisector approach to achieve sustainable development.

Tools

The following tools should be used to develop the map of 'The City We Want':

- **M05 Map of 'The City We Want'**: this tool provides a map of the project area displaying the planned actions, ideally colour-coded according to strategy (assigning a colour to each strategy and showing the actions in the colour of the strategy they are associated with).
- **S08 List of prioritised actions**: this table provides scoring criteria to rank the actions based on their effectiveness and contribution to the Concept, the SDGs and the NDCs. It is used to select the actions that are feasible and establish the agreed order for implementing the concept.
- **M02 Work plan**: The work plan indicates the points in the process when consultations should be conducted and information on the milestones disseminated, which will help to secure approval for the Concept.

- **M03 Strategic analysis by Field of Action**: this analysis serves as a basis for the work required to develop scenarios and define 'The City We Want'.
- **S03 Profile of the project area**: provides information that reflects the realities of the context and is used to analyse the feasibility of the idea proposed in the Concept.
- **S05 Regulatory checklist**: provides information on the regulatory environment of the project area in order to assess feasibility and determine whether new laws or regulations need to be passed or existing ones amended.
- **S06 SWOT analysis**: this analysis provides a list of demands that must be considered when defining the Concept.
- **M04 Map of the vision and objectives**: this map is an aid to ensure that the design process moves forward, as planned. The issues displayed on the map will serve as the basis for developing the strategies to achieve 'The City We Want'.
- **P01 Urban guiding principles for climate-proofing**: this tool provides a reference for determining 'The City We Want' and establishing the Concept.
- **S07 Contribution to international agreements**: this tool helps to keep sight of the fact that, in implementing the concept, an explicit contribution must be made to fulfilling international agreements.

3 Implementation phase

Milestone: Operational plan (M06)

Once the Climate-Proof Integrated Urban Development Concept has been defined, work must start on outlining the strategies required to implement it. The plan must be practical and adapted to the realities of the project area, setting out in concrete terms how the priority actions will be implemented.

Tools

The following tools should be used to develop the operational plan:

- **M06 Operational plan:** this plan sets out the strategies, and the actions associated with each of them. It must include a work schedule and specify the allocation of responsibilities and resources.
- **S09 Cost table:** implementation costs should be estimated and referred to on a regular basis and annual implementation periods should be established.
- **S08 List of prioritised actions:** this list is used to design the operational plan.

Milestone: Performance monitoring plan (M07)

This milestone seeks to develop the instruments required to monitor and verify that the overall objectives and sub-objectives have been fulfilled, and to monitor progress in carrying out the actions established for each of the strategies. An instrument should be developed on an annual basis to plan the implementation of each of the steps, including the monitoring and checks on indicators. The ultimate aim is to monitor progress in undertaking and implementing the planned works and actions.

Tools

The following tools should be used to develop the monitoring plan:

- **M07 Performance monitoring plan:** this tool lists the indicators for measuring progress in achieving the objectives established in the Concept.
- **S10 Contribution of the Concept to the SDGs:** this tool determines how the Concept will contribute to achieving SDG targets.
- **S11 Contribution of the Concept to the NDC:** this tool determines how the Concept will contribute to achieving NDC targets.
- **M06 Operational plan:** this table is an aid for management.
- **M09 Cost table:** this table shows progress made in the investment to implement the actions established in the concept.
- **M08 List of prioritised actions:** this list provides an overall picture of the Concept.



PART 3: Tools

10 Description of tools

A set of tools has been designed as a guide to developing a **Climate-Proof Integrated Urban Development Concept**. The purpose of these tools is to facilitate the task of defining a holistic development vision, along with the strategies, objectives and actions to be implemented, and monitoring their contribution to achieving the climate change mitigation and adaptation commitments set out in the Nationally Determined Contribution (NDC) submitted under the international agreement signed in Paris in 2015.

10.1 Format of tools

Some features of the tools should be noted. Firstly, they are not sequential; they are designated by a letter and number to facilitate identification during the collective work process (the letter indicates the category and the number the sequence). The tools are used in various steps and at different stages of the planning process. They are divided into three categories: tools that mark the milestones (M) in each step; tools that support the process followed in each step (S); and tools that provide content on principles for climate-proofing (P).

10.2 Instructions

On the rear side of the leaflet that describes the tool are three criteria and a listing:

- What is it?
- What is it for?
- How is it used?
- Sequence of work

P00 SUMMARY OF THE PROCESS

Toolbox
Climate-Proof
Integrated Urban
Planning

Published by **GIZ** in cooperation with the **German Federal Government** and the **German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)**.

What is it?

The table provides a summary of the climate-proof integrated urban development process. It shows how climate change should be mainstreamed into the process, which consists of three phases: (1) preparation, (2) concept design and (3) implementation. In the preparation phase, the relevant actors are identified and the work plan is designed; in the concept design phase, the Climate-Proof Integrated Urban Development Concept is defined using a participatory process; and in the implementation phase, the actions defined in the concept are implemented. The three phases are divided into seven steps. In the middle column, the milestones (M) are listed sequentially. These are the outputs of the steps shown in the column to the left. The right-hand column lists all the tools (M, S and P) used to complete the process. The tools for integrated planning appear in white and those relating to climate change in blue.

How is it used?

We recommend that you refer to this table throughout all the steps in the process.

Look up the milestones that you are going to complete in the middle column and ascertain which actions are required. We recommend that you check each milestone (M) to see which support tools (S) are needed given that the summary table (Tool P00) shows only the priority tools for each milestone and there are some support tools that are used for more than one of them, as explained in the description of the milestones and written on the back of each of the tools.

What is it for?

The table serves as a roadmap, providing an overview of the process such that when carrying out each step, one can see what has already been achieved and what is still needed to define the concept and maintain a multisectoral vision of the project area. The table also provides a summary of the tools required to achieve the objective in each step and shows the sequence in which the work is carried out.

As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

Responsible:
Deutscher Beauftragter für Internationale Zusammenarbeit (GIZ) GmbH

Regional offices:
Bonn and Eschborn, Germany
Good Governance and Human Rights Section
Friedrich-List-Str. 39-43
53113 Bonn, Germany
T +49 228 446 19 42
F +49 228 446 17 86
E www.giz.de

Project:
The Cities 21 for Climate Change project formed part of the International Climate Initiative (ICI) The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports the initiative on the basis of a decision adopted by the German Bundestag. The project also cooperates with the German Federal Ministry of the Interior, Building and Community (BMI).

Responsible:
Dr. Daphne Frank
Head of Cities 21 for Climate Change project
T +49 228 82 33 82
E dfrank@bzpf.de

Design and layout (leaflet):
HUBB de G. Torres, Santiago, Chile

Design and layout (publication):
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On behalf of:
German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Berlin

GIZ is responsible for the content of this publication

Administrative:
Authors:
Andrea Palma Pérez, Dr. Daphne Frank

Coordinator in Chile:
María Ingrid Jiménez

Contributors:
María Ingrid Jiménez, Jochen Beal, Diana Ramírez, Philipp Kahl, Anja Lathöfer

Cities 21 for Climate Change team:
Philipp Kahl, Anja Lathöfer, Lisa Rucka, Andrea Palma, Zane Abad, Subhrajit Krishna Srinivas, Karen Pacheco

Translated from the Spanish:
Alexa Longpreux, Lisa Simpson


English editing:
Ben Harv, Ole Glasemann

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10.3 Tools


The tools are designed to be printed on A3-size paper, although the font size used means that they can also be printed on A4 paper to make printing more accessible. The tools were developed to be used in participatory processes within institutions and with external actors. They therefore feature a box in which the details of the participants can be noted so that the completed form can serve as a record, if needed. The forms also have spaces in which the information needed in the process is to be entered.


Strategy	Action	Field of action (FA)	Addresses climate change threats and vulnerability	Includes climate change adaptation measures	Addresses the National Determined Contribution (NDC)	Addresses the Sustainable Development Goals (SDGs)	Contributes directly to the strategy	Cost	Availability of financing	Requires additional financing	Implementation period	Stage of planning	Public institutions	Private	Sector(s) responsible for implementation	Included in policies or other general plans	Feasibility
1																	
2																	
3																	
			<ul style="list-style-type: none"> Governance and management (G) Private and strategic (PS) Measure from policy to action (PA) Capacity development (C) 	<input type="checkbox"/> Yes <input type="checkbox"/> Neutral <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> Indirectly <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> Indirectly <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> Indirectly <input type="checkbox"/> No	Amount (€)	<input type="checkbox"/> Available <input type="checkbox"/> Possibly available <input type="checkbox"/> Unavailable	<input type="checkbox"/> Yes <input type="checkbox"/> Possibly <input type="checkbox"/> No	<input type="checkbox"/> Implementation <input type="checkbox"/> Planning <input type="checkbox"/> Idea	Check as applicable	<input type="checkbox"/> Yes <input type="checkbox"/> Possibly <input type="checkbox"/> No	Completed in progress (C), short-term (S), medium-term (M), long-term (L) under evaluation (E)			
Project details																	
Project area			Date and place of work			Team participants						Working group					




S08

List of priority actions

Sponsored by


Implemented by


In cooperation with


11 List of tools

P00 Summary of the climate-proof integrated urban planning process

M01 Working groups

S01 Map of actors

M02 Work plan

S02 Map of the project area

M03 Strategic analysis by field of action

S03 Profile of the project area

S04 Model for sectoral and cross-cutting components

S05 Regulatory checklist

S06 SWOT analysis

M04 Map of the vision and objectives

P01 Guiding urban principles for climate-proofing

S07 Contribution to international agreements

M05 Map of 'The City We Want'

S08 List of priority actions

M06 Operational plan

S09 Cost table

M07 Performance monitoring plan

S10 Contribution of the concept to the SDGs

S11 Contribution of the concept to the NDC



12 Glossary of terms

12th Ibero-American Forum of Ministers and Senior Officials for Housing and Urban Development	A forum held in 2007 by the group of ministers responsible for housing and urban development in Latin America and the Caribbean (MINURVI). Its conclusions are reflected in the Santiago Declaration. ¹³
Action	A voluntary activity to transform a current situation into future one. In this case, there are four fields of action (governance and management; policies and strategies; measures: from policy to action; and capacity development), which are intended to promote holistic approaches to integrated urban planning.
Actions	In this case, a set of activities, such as management, instruments, training, measures and projects, intended to put the planning into practice.
Activity	An event related to implementing the planning, for example, citizen participation and work sessions.
Advisory group	Group that provides guidance, as required, on specific planning content at different points in the process.
Axial city	A city featuring urban expansion along lines coordinated by the public authorities in conjunction with private entities and with a layered system of centres and sub-centres.

Climate-Proof Integrated Urban Development Concept	This is the toolbox's output. The concept is the city vision, along with the strategies, objectives and actions required to implement it in a given area. It is climate-proofed by incorporating climate change criteria into integrated urban planning. The process has three phases: 1) preparation, 2) concept design and 3) implementation.
Compact city	A model originating from a renewed appreciation of historic urban patterns, also known as a 'short-distance city' or 'European city'.
Concept	The term 'concept' is used in this document with the following meanings: a) in phase 2, 'concept design' refers to the city vision, along with the strategies, objectives and actions required to implement it in a given area; b) it is used as an abbreviation for the 'Climate-Proof Integrated Urban Development Concept'.
Concept design	This refers to phase 2 of the process which aims to define the Climate-Proof Integrated Urban Development Concept.
Consulting group	Group that provides valuable information to define the concept and that validates the process.
Expert panel	Group of external experts who provide expertise on a specific topic.
Feasibility	Fulfilling the conditions that enable implementation.

Fields of action ¹⁴	The proposed four fields of action (governance and management; policies and strategies; measures: from policy to action; and capacity development) that provide starting points for approaching city development in a holistic way.
Hazards	Adverse situations that an area may face and that affect the day-to-day lives of inhabitants and normal development. With reference to climate change, these include droughts, floods, heatwaves, etc.
Indicator	An indicator is a term or number used to measure the progress of an activity.
Key actors	Those who will be responsible for having a direct influence, whether positive or negative, on the implementation of the strategic planning process that has been designed.
Leipzig Charter	A document in which the European Union Member States have agreed common principles and strategies for an urban development policy.
<i>Leitbild</i>	A German compound word formed by <i>Leiten</i> meaning to guide or lead, and <i>Bild</i> meaning image, concept or principle.
Milestones	Markers signifying significant points on the timeline and showing the progress made in implementing the strategy.
Perforated city	A city that shrinks due to population exodus, leaving vast areas of unused infrastructure and housing.
Phases	In this context, successive stages in the planning process.

Planned city	A model in which the landscape is connected to the built environment. Connections can be concentric or axial, dividing the city into cells, with a centre that is representative rather than geographic.
Primary actors	Those who have a prominent decision-making role in the strategic planning process.
Project	An idea or action formulated with a view to implementing the concept. It may involve specific works (e.g. asphaltting a road), developing a capacity (retraining workshop), designing an instrument, etc.
Risk	Something creating a hazard that threatens development. In this context, it can be a risk faced in implementing a strategy or a risk arising from the effects of climate change. To safeguard development in areas affected by climate variability and climate change, risks associated with climate hazards must be managed. Climate variability leads to extreme events, such as floods, tidal waves, storms and extreme temperatures. ¹⁵
Secondary actors	Those who are involved in implementing the strategic planning process but who have a less influential role.
Steering group	Group that leads the entire process, calls meetings, records and processes the information collected and proposes strategies to be discussed.
Step	The unit used to establish the sequence of work in the climate-proof integrated urban planning process.

Strategy	The set of actions defined to achieve the concept's objective.
The City We Want	The vision, actions, objectives and sub-objectives set out in the planning strategy.
Tool	Aid that provides guidance on the planning process.
Validation	Approval of processes by civil society and political players.
Vulnerability	The inability to cope with a climate change hazard. It refers to the fragility (social, economic, environmental, etc.) of a given area or population.

13 Footnotes

- 1 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, *A Sourcebook for Climate-Proof Urban Development*, GIZ, Bonn and Eschborn, 2019.
- 2 <http://habitat3.org/the-new-urban-agenda> (accessed 4 February 2019).
- 3 https://ec.europa.eu/regional_policy/archive/themes/urban/leipzig_charter.pdf (accessed 14 January 2019).
- 4 https://www.segib.org/wp-content/uploads/declaracion_santiago.pdf (accessed 16 January 2019) (in Spanish only).
- 5 <https://cndu.gob.cl/wp-content/uploads/2018/03/ANEXO-PLANIFICACION-URBANA-INTEGRADA-INVESTIGACION-DE-MODELOS-Y-BUENAS-PRACTICAS.pdf> (accessed 12 December 2018) (in Spanish only).
- 6 https://www.international-climate-initiative.com/en/infortheque/publications/publications-detail/article/guiding_urban_concepts_and_climate_change_in_germany%20%80%99s_urban_planning_practice/ (accessed 12 December 2018).
- 7 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, *A Sourcebook for Climate-Proof Urban Development*, GIZ, Bonn and Eschborn, 2019.
- 8 Federal Ministry for Economic Cooperation and Development (BMZ), *Disaster Risk Management: Contributions by German Development Cooperation*, Berlin and Bonn, 2010; Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, *Disaster risk management and adaptation to climate change: Experience from German development cooperation*, Bonn and Eschborn, 2012.
- 9 Based in part on Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, *Capacity Works*, Eschborn, 2009, pp. 39–125, in particular tools S01 (Map of actors), M06 (Operational plan), S08 (List of priority actions) and M07 (Performance monitoring plan).
- 10 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, *A Sourcebook for Climate-Proof Urban Development*, GIZ, Bonn and Eschborn, 2019.
- 11 https://www.international-climate-initiative.com/fileadmin/Dokumente/2018/180406_CFCC_Urban_Planning.pdf (accessed 12 December 2018).
- 12 <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> (accessed 4 March 2019).
- 13 https://www.segib.org/wp-content/uploads/declaracion_santiago.pdf (accessed 6 January 2019).
- 14 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, *A Sourcebook for Climate-Proof Urban Development*, GIZ, Bonn and Eschborn, 2019.
- 15 http://www.droughtmanagement.info/literature/UNDP_climate_risk_management_2010.pdf (accessed 12 April 2019).

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15 List of figures

Figure 1: Diagram showing how the integrated urban planning concept works

Figure 2: Overall structure of the climate-proof integrated urban planning process

Figure 3: Overview of Phase 2: concept design

Figure 4: Overview of climate-proof integrated urban development



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P00

SUMMARY OF THE PROCESS

Toolbox

Climate-Proof Integrated Urban Planning

Published by:



On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:



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of the Interior, Building
and Community

of the Federal Republic of Germany

How is it used?

We recommend that you refer to this table throughout all the steps in the process.

Look up the milestone that you are going to complete in the middle column and ascertain which actions are required. We recommend that you check each milestone (M) to see which support tools (S) are needed given that the summary table (Tool P00) shows only the priority tools for each milestone and there are some support tools that are used for more than one of them, as explained in the description of the milestones and written on the back of each of the tools.

What is it?

The table provides a summary of the climate-proof integrated urban development process. It shows how climate change should be mainstreamed into the process, which consists of three phases: (1) preparation, (2) concept design and (3) implementation. In the preparation phase, the relevant actors are identified and the work plan is designed; in the concept design phase, the Climate-Proof Integrated Urban Development Concept is defined using a participatory process; and in the implementation phase, the actions defined in the concept are implemented. The three phases are divided into seven steps. In the middle column, the milestones (M) are listed sequentially. These are the outputs of the steps shown in the column to the left. The right-hand column lists all the tools (M, S and P) used to complete the process. The tools for integrated planning appear in white and those relating to climate change in blue.

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Registered offices

Bonn and Eschborn, Germany

Good Governance and Human Rights Section

Friedrich-Ebert-Allee 36+40

53113 Bonn, Germany

T +49 228 4460 37 62

F +49 228 4460 17 66

E info@giz.de

I www.giz.de

Project

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Responsible

Dr Daphne Frank

Head of Cities Fit for Climate Change project

T +49 228 60 33 62

E daphne.frank@giz.de

Design and layout (tools)

Isabel de la Fuente, Santiago, Chile

Design and layout (publication)

EYES-OPEN, Berlin

What is it for?

The table serves as a roadmap, providing an overview of the process such that when carrying out each step, one can see what has already been achieved and what is still needed to define the concept and maintain a multisectoral vision of the project area. The table also provides a summary of the tools required to achieve the objective in each step and shows the sequence in which the work is carried out.

On behalf of

German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Berlin

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Authors

Andrea Palma Pérez, Dr Daphne Frank

Coordinator in Chile

María Ignacia Jiménez

Consultants

José Pedro Urzúa Pettinelli, Camila Urzúa Concha

Contributors

María Ignacia Jiménez, Jochen Gauly, Diana Ramírez, Philipp Kühl, Anja Lamche

Cities Fit for Climate Change team

Philipp Kühl, Amina Schild, Lea Kulick, Andrea Palma, Zane Abdul, Sudhakar Krishnan Sripathy, Karen Pacheco

Translated from the Spanish

Jayne Cotgreave, Lisa Simpson

English editing

Ben Kern, Iris Gleichmann

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M01

WORKING GROUPS

Toolbox

Climate-Proof Integrated Urban Planning

Published by:



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In cooperation with:



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How is it used?

The following tools are needed to use M01:

- S01 Map of actors: this tool is useful in identifying all the actors and groups them according to the issues and strategies identified in the planning process.
- S04 Model for sectoral and cross-cutting components: this tool checks that no sector is left out and ensures there is an intentional selection of relevant sectors for each working group.

What is it?

This tool is used to define the groups that will take part in the process to design the Climate-Proof Integrated Urban Development Concept. The map will show all those with responsibilities in the process and the influence they will have on the final outcome. It also groups the sectoral specialisations required to define each step. There are three working groups:

■ **Steering group:** this group will guide the whole process, call meetings, record and process the information collected and propose strategies to be discussed. It will be made up of three to four people, usually from the institution leading the process. They will be advised throughout by a representative from each sector.

● **Advisory group:** this group will provide guidance, as required, on specific planning content at different points in the process. It may include individual experts, institutions specialised in the subject for which advice is needed, people from municipal authorities with expertise in specific areas and external experts.

Sequence of work

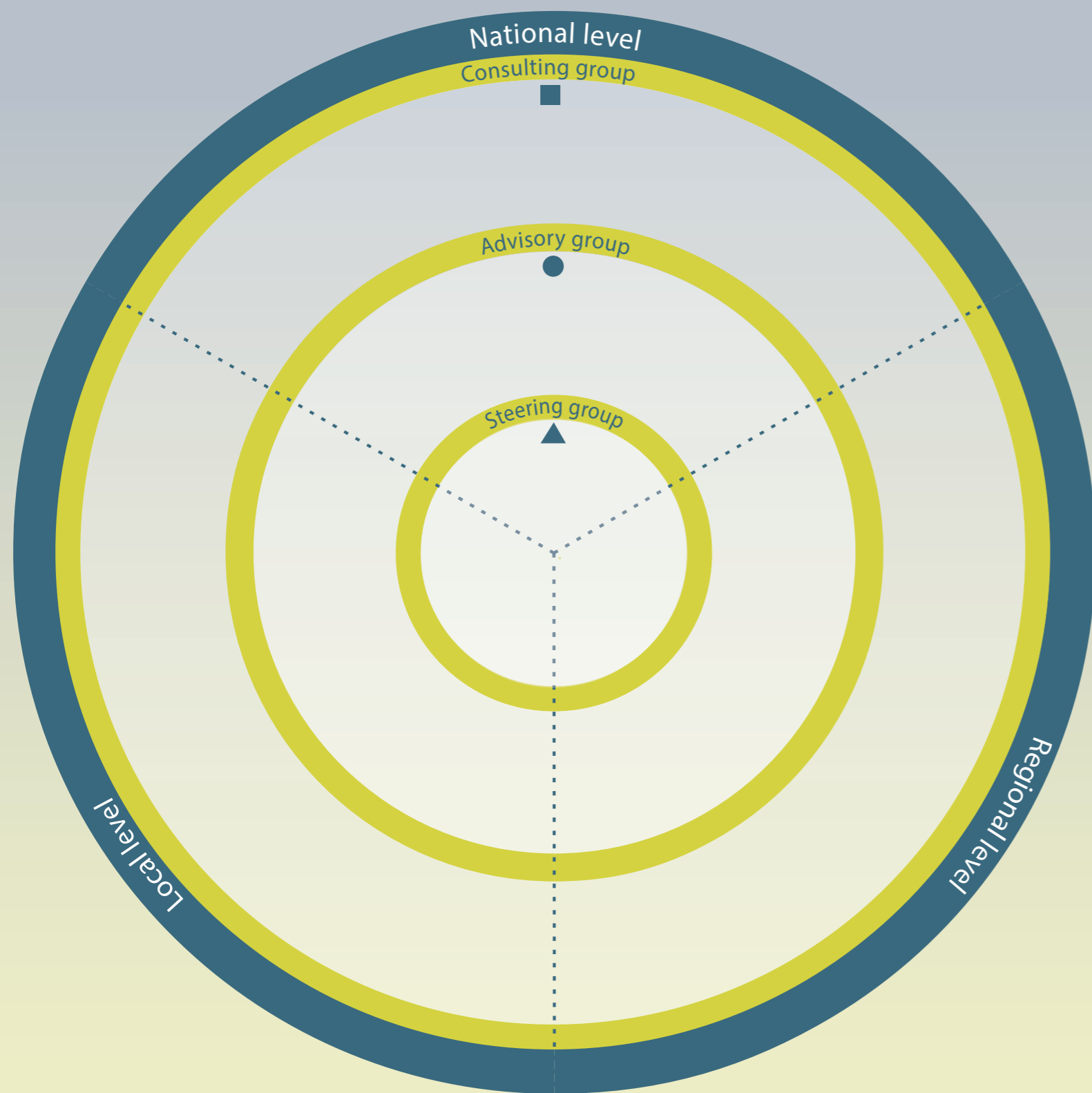
1. Form the steering group. Choose two to three people to provide leadership throughout the process.
2. Identify one person per sector who will advise the steering group on a permanent basis.
3. Identify the advisors according to the concept's requirements.
4. Identify who should be consulted for feedback on the concept and to validate the proposals.
5. Share the work of the groups at multisectoral events.
6. Have decision-makers validate the working groups. The groups can be adjusted to suit the requirements of the process. It is recommended that the steering group monitor the whole process.

▲ **Consulting group:** this is made up of groups such as neighbourhood and trade associations who will validate the proposals and share their experiences to develop the concept. It also includes groups that will validate the process politically and make it official. These could be people from the municipal authorities leading the process as well as beneficiaries, those who will be affected by the measures to be taken and interest groups and organisations. For example, a consulting group on transport would comprise a representative from a government transport department, residents affected by the project and representatives from transport unions, local transport companies, bike users' organisations, etc.

What is it for?

The purpose of this tool is to identify the citizens, practitioners, decision-makers, advisors and experts who will take part in the concept design process.





A large rectangular area with a light gray background and a fine grid of small dots, intended for handwritten notes or a checklist.

Project details

Project area	Date and place of work	Team participants	Working group

S01

MAP OF ACTORS

Toolbox

Climate-Proof Integrated Urban Planning

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How is it used?

The following tool is needed to use S01:

- Model for sectoral and cross-cutting components (S04).

What is it?

The map of actors is a tool designed to identify government agencies, institutions, associations, foundations, members of the private sector and civil society involved in the project area. The map can be presented in two different forms.

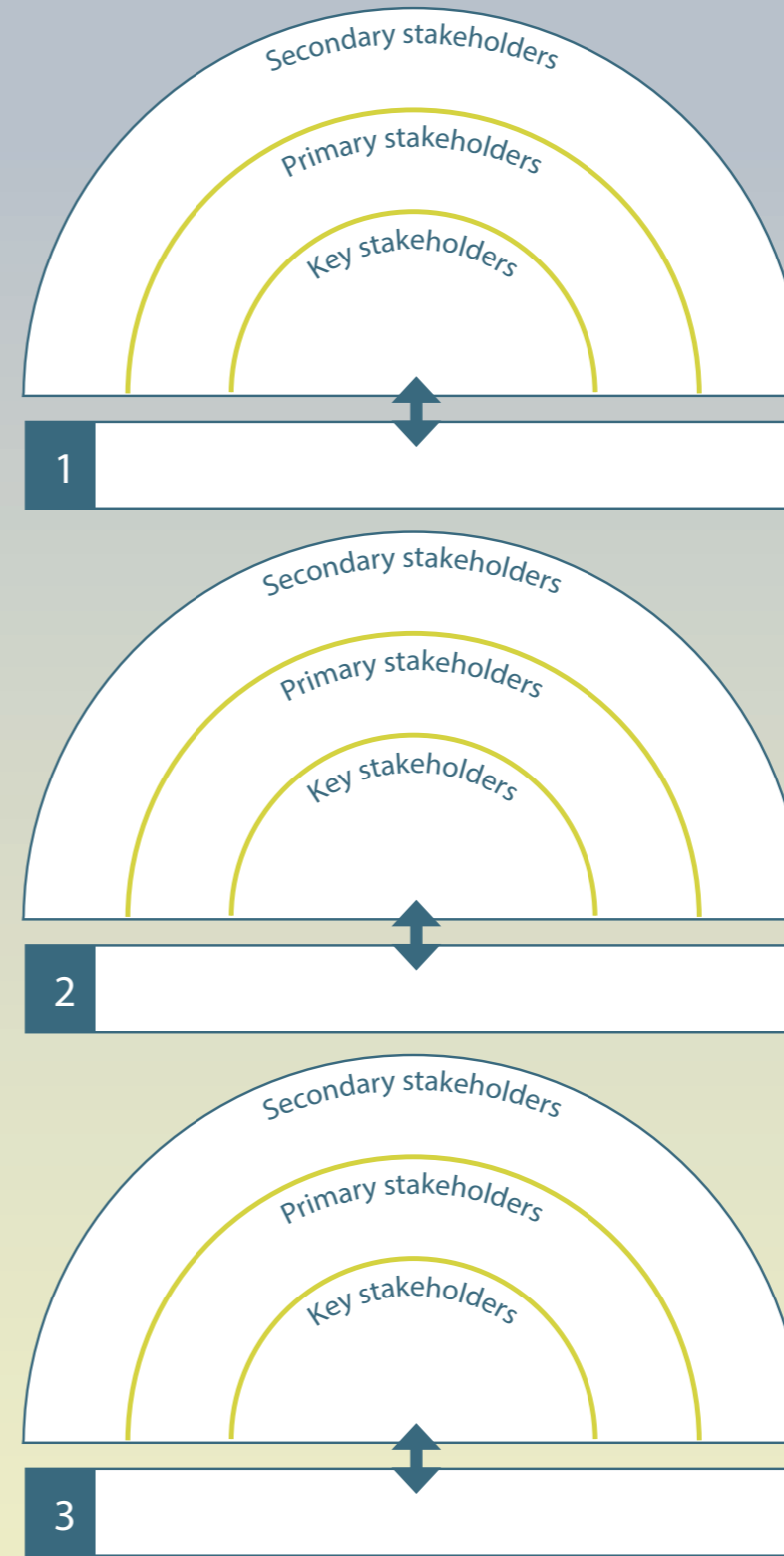
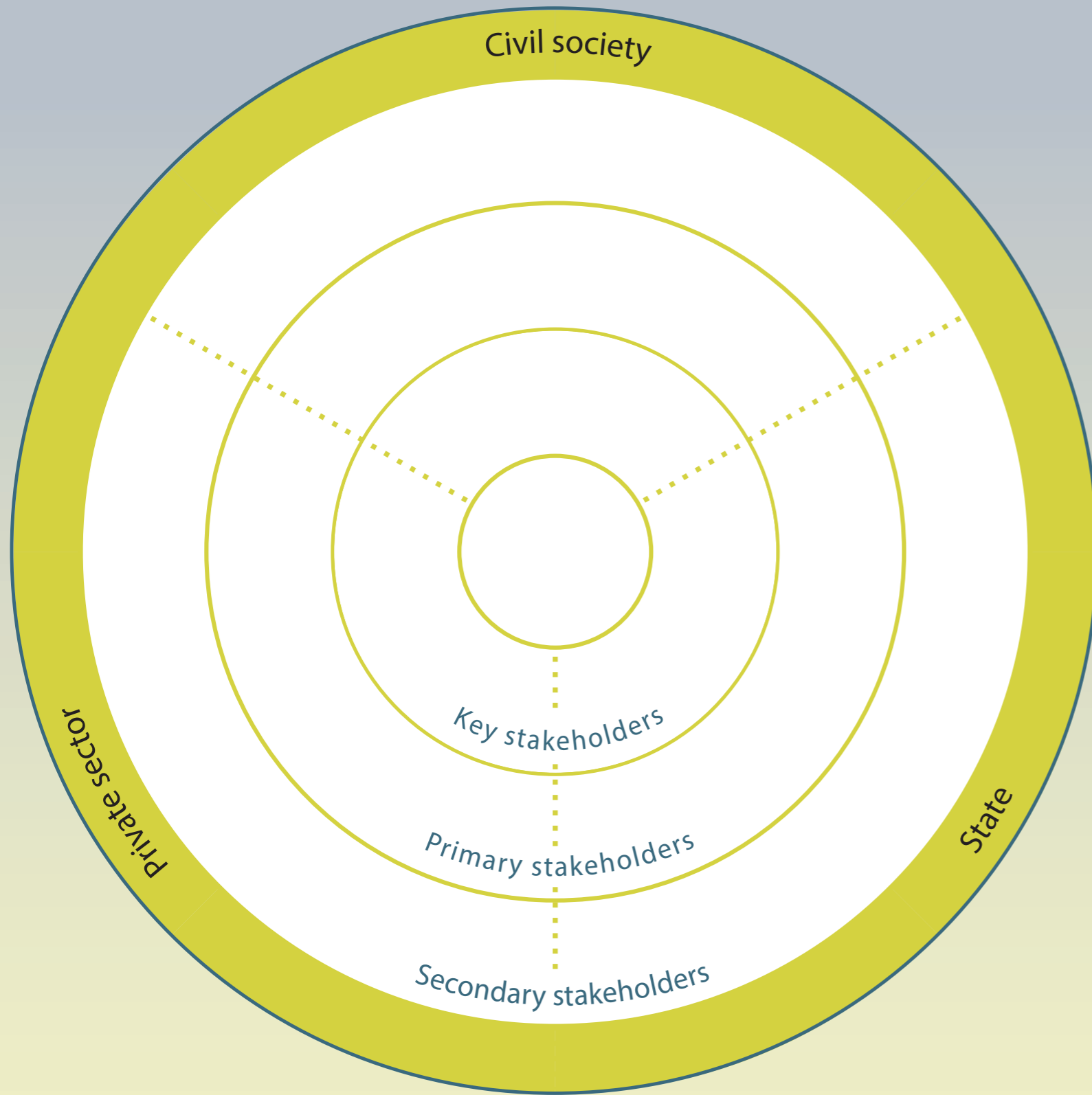
What is it for?

This map is used to identify the actors involved and their level of influence in the project area, grouping them as key, primary or secondary actors in the group as a whole. It shows the type of relationship between the actors and how these relationships might affect the development of the target area positively or negatively. The 'onion' map is used to display everyone involved, while the 'rainbow' map is used to group those with influence in a particular sphere.

Sequence of work

1. Write down the actors involved in developing/designing the strategy.
2. Position them on the 'rainbow' map according to their involvement with each of the issues identified.
3. Discuss this with the actors and validate the map.
4. Repeat the process for each of the strategies.
5. Discuss and examine all the 'rainbow' maps with the actors and construct the 'onion' map showing everyone involved.





Legend – actors	
○	Key or primary actor with little influence
◯	Key or primary actor with major influence
Ⓥ	Veto player
□	Secondary actor

Legend – relations	
—	Solid lines symbolise close relationships in terms of information exchange, frequency of contact, overlap of interests, coordination, mutual trust, etc.
?	Dotted lines symbolise weak or informal relationships. The question mark is added where the nature of the relationship is not yet clear.
==	Double lines symbolise alliances and cooperation partnerships that are formalised contractually or institutionally.
→	Arrows symbolise the dominance of one actor over another.
⚡	Lines crossed by a lightning bolt symbolise relationship marked by tension, conflicting interests or other forms of conflict.
⊥	Cross lines symbolise relationships that have been interrupted or damaged.

Project details

Project area	Date and place of work	Team participants	Working group

M02 WORK PLAN

Toolbox

Climate-Proof Integrated Urban Planning

Published by:



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How is it used?

The work plan is a support tool used by the steering group. It is recommended that advice be sought from the urban planning and citizen participation teams. The table shows the steps needed to design the concept. These steps are not intended to be exclusive but to serve as a guide that can be adapted or improved by each team. Follow the sequence of steps shown and identify the internal and external processes, which should also be run concurrently.

- (i) Start
- (ii) Analysis by field of action
- (iii) SWOT analysis
- (iv) Urban climate-proofing concept
- (v) Expert panel 1
- (vi) Draft objectives, sub-objectives and activities
- (vii) Expert panel 2/public discussion
- (viii) Draft Climate-Proof Integrated Urban Development Concept

What is it?

This tool is used to generate a planning schedule for the concept design phase. It distinguishes between internal and external processes, determining the timing of the activities and the form the work will take. Responsibilities are assigned for each step.

Internal process: the tasks and goals of the steering group are scheduled in this section, as well as the workshops to be held to design the concept.

External process: activities involving dialogue with the advisory group and the consulting group are scheduled in this section. They include activities such as presentations, citizen participation and dissemination.

- (ix) Validation
- (x) Climate-Proof Integrated Urban Development Concept.

The concept design phase should be planned so that the activities to be carried out internally and the events required for citizen participation and consultation take place concurrently, with a view to collecting information on needs and disseminating information on achievements and progress in designing the concept. The table has one section for internal processes, including sectoral work, multisectoral work and strategic forums, and another for external processes, which include dialogues, thematic forums and general forums. The process to design a concept generally takes between six months and two years. The tool is therefore useful in providing an overview of the work involved and setting dates to achieve the objectives and milestones. The plan should be shared with key actors to encourage their commitment and participation.

The following tools are recommended in formulating the work plan:

- M01 Working groups: this tool supports the allocation of responsibilities, showing who is responsible for implementing each of the tasks that have been planned.

What is it for?

The purpose of this tool is to produce the roadmap for the concept design phase. It is used to assign responsibilities to the actors and schedule meetings and workshops to determine the resources required for the planning process and the time it will take to complete it.

- M02 Work plan: this tool provides a table showing the activities that need to be planned to facilitate the formulation of the work plan.
- S01 Map of actors: this tool facilitates identification of the key actors and incorporates them into the work plan.
- S02 Map of the project area: this tool provides a map that shows the exact project area, helping to identify the areas of influence and their relationship to the context. It shows threats from climate change and the resulting vulnerabilities and lists the actions planned and in progress. It serves as a reference when drawing up the work plan.
- S04 Model for sectoral and cross-cutting components: this tool is used to check that no sector has been left out and ensures there is a conscious selection of relevant sectors for each working group.

CONCEPT DESIGN PHASE

Internal process	Time frame	
	Sectoral work	
	Multisectoral work	
	Strategic forum	

External process	Dialogue	
	Thematic forum	
	General forum	

Start	Analysis by field of action (FoA)	SWOT analysis	Urban climate-proofing concept	Expert panel 1	Draft objectives, subobjectives and activities	Expert panel 2/ public discussion	Draft Climate-Proof Integrated Urban Development Concept	Validation	Climate-Proof Integrated Urban Development Concept
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)

Project details

Project area	Date and place of work	Team participants	Working group

S02

MAP OF THE
PROJECT AREA

Toolbox

Climate-Proof Integrated Urban Planning

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How is it used?

The following tools are needed to use S02:

- a map of the project area and its surroundings, showing the area as clearly as possible;
- a profile of the project area (S03) and the model for sectoral and cross-cutting components (S04).

What is it?

The map of the project area reinforces the idea of basing the analysis on the actual site. This enhances the holistic perspective of climate-proof integrated urban planning and promotes multilevel participation. The map is designed to be used to identify initiatives in progress in each sector in the project area at the time of the analysis. It also shows climate change hazards, analyses the conditions in the project area and indicates the extent to which the area is exposed to these hazards. The threats from climate change listed in the tool are those used in the UNFCCC to classify a country's level of vulnerability. The effects of climate change included in the list refer to the impact on the project area, which may vary depending on the area's characteristics. The analysis should therefore consider economic, social, physical and environmental factors. Vulnerability is defined as difficulty in coping with climate hazards and adapting to the effects of climate change.

What is it for?

The purpose of this tool is to focus analysis on the project area through a multisectoral dialogue with the actors. Identifying the actions in each sector leads to a very valuable exchange of information that would not normally happen outside a strategic planning process and it helps to highlight synergies between projects and actions that could prove to be mutually enhancing.

Sequence of work

1. Write down the actions that are in progress in the project area and locate them on the map.
2. Identify the climate hazards and the project area's exposure. Then define the risk level and indicate it on the map.
3. Identify the effects of climate change that could affect the project area and tick them on the list.
4. Discuss synergies between the actions aimed at addressing hazards and the effects of climate change in the project area. Analyse the links between them to identify potential issues. These should be cross-cutting issues involving more than one sector. This is the first step in defining the strategies.
5. List the issues and group the actions associated with each one in the corresponding box.



M03 STRATEGIC ANALYSIS BY FIELD OF ACTION

Toolbox

Climate-Proof Integrated Urban Planning

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On behalf of:



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What is it?

The *Cities Fit for Climate Change* (CFCC) project identified four fields of action in which action is required to achieve climate-proof development in cities:

- (i) governance and management;
- (ii) policies and strategies;
- (iii) measures: from policy to action;
- (iv) capacity development.

These fields of action provide entry points for approaching city development in a holistic way, which is useful when planning specific strategies towards a climate-proof vision. This approach contributes to creating a holistic approach to developing cities and ensures that the whole spectrum of issues is covered at all levels and in all initiatives.

What is it for?

The fields of action are entry points that provide guidance for practitioners to develop and implement each city's own climate-proof urban development efforts. They have no hierarchy and do not follow any particular order; they indicate the areas that need to be considered to maintain a holistic approach to developing city during the planning process. They are a way of helping actors mainstream climate change into traditional urban planning activities. The fields of action were defined based on the experiences of three partner cities (Chennai in India, eThekweni (Durban) in South Africa and Santiago in Chile), also drawing on the knowledge and experience shared through the CFCC network and by partners in Germany and around the world.

How is it used?

The following tools are recommended to conduct a strategic analysis by field of action:

- S03 Profile of the project area: this tool contains questions to facilitate the compiling of information required to define the project area, such as population figures and economic data.
- S04 Model for sectoral and cross-cutting components: this tool is used to check that no sector has been left out and ensures there is a conscious selection of relevant sectors for each working group.
- S05 Regulatory checklist: checking the laws and regulations applicable in the project area to determine the feasibility of implementing the previously defined vision and objectives. The vision can be adjusted, if necessary, to ensure that the Climate-Proof Integrated Urban Development Concept is achievable.

- S06 SWOT analysis: this analysis provides a detailed picture of the situation in each sector and shows how it might contribute to or hinder the implementation of the concept. The analysis highlights demands and the action needed in the project area to move towards the desired future situation.
- P01 Guiding urban principles for climate-proofing: this tool provides support to reassess the vision and adjust the actions in light of the options available in the project area.
- S07 Contribution to international agreements: this tool helps to keep sight of the need to contribute to the international agreements.
- M04 Map of the vision and objectives: this map serves as a reference for the strategic analysis.

Sequence of work

1. Group actions according to the fields of action.
2. Analyse how these actions contribute to achieving the planning objectives. Identify gaps.
3. Complete the summary table with the results.
4. Write a report on the demand and need for action.

Fields of action

Governance and management

Grid for Governance and management

Policies and strategies

Grid for Policies and strategies

Measures: from policy to action

Grid for Measures: from policy to action

Capacity development

Grid for Capacity development

Issue

Project details

Issue no. ____ of ____

Project area

Date and place of work

Task force

Working group

Blank box for Issue no.

Blank box for Project area

Blank box for Date and place of work

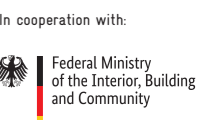
Blank box for Task force

Blank box for Working group

Includes explanatory report



M03 Strategic analysis by field of action



of the Federal Republic of Germany

S03

PROFILE OF THE
PROJECT AREA

Toolbox

Climate-Proof Integrated Urban Planning

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What is it?

This is a tool for compiling quantitative data on the project area provided by the different sectors. The data is then used to produce a report that will serve as the baseline for the project area and as an aid for subsequent action and stages. The questions and points included are based on those used in the initiative implemented in the city of Leipzig and serve as a guide for identifying aspects relevant to climate-proofing. The answers provide additional data to complement the general information required in any planning process.

What is it for?

A compilation of information from each sector will provide a more complete picture of the project area and a record of the most important facts. This summary will be useful when implementing the process. The information an accurate reflection of the context in which the concept is to be implemented and is useful for prioritising and selecting actions.

How is it used?

The following tools are needed to use S03:

- Map of the vision and objectives (M04).
- Model for sectoral and cross-cutting components (S04).
- Existing documentation describing the area in question.

Sequence of work

1. Validate the list of questions and add any others that are relevant to establish the desired baseline (remember that the questions are intended simply as a guide).
2. Collect the information required.
3. Validate the information with the actors.



<h3>Ecology and environment</h3> <ul style="list-style-type: none"> • What are the prevailing conditions in the area? • What is the area of green spaces per inhabitant? • Have plant and tree species been mapped? • What is the main energy source? • What renewable energy sources are available (solar, photovoltaic, etc.)? • Are there city ordinances on air pollution, noise pollution and green spaces? • What hazards have threatened the area in the last ten years (drought, heat waves, floods, etc.)? • What events have affected the area in the last ten years? 	<h3>Buildings (public/private)</h3> <ul style="list-style-type: none"> • What is the purpose of existing buildings (residential, commercial, services, etc.)? • Identify existing buildings, indicating their purpose or use. • What public services are available? Identify the type of services on offer and their location. • Regulations on building height and density. • Register of listed buildings and potentially listable buildings. • Register of building materials and quality. • Description of the housing (exposure, vulnerability, subletting, age of building, etc.). • Risk management and emergency plan or strategy (fires, floods, etc.) 	<h3>Social behaviour</h3> <ul style="list-style-type: none"> • Description of the current population (number of inhabitants; demographic and household composition; rates of poverty, unemployment, child labour, etc.) • Estimated floating population during the week and at weekends. • Social and commercial organisations in the area. • Presence of immigrant communities. 	<h3>Mobility</h3> <ul style="list-style-type: none"> • What are the existing transport networks (public transport, private transport, bike lanes, etc.)? • Identify the main routes for each means of transport. • Are there ordinances on heavy goods traffic (volume, time restrictions, flows, etc.)? • Number of public and private parking spaces for vehicles and bikes. • Map of pedestrian flows within and outside blocks.
<h3>Economic development</h3> <ul style="list-style-type: none"> • Identify main and secondary economic activities. • Identify established and emerging economic activities in the area. • Locate places or routes with tourist potential. • Regulations on street vending and informal markets. 	<h3>Public spaces</h3> <ul style="list-style-type: none"> • Identify existing amenities and services. • Identify neighbourhood centres and sub-centres. • Identify cultural, sports and recreational facilities. • Public space maintenance and cleaning plan. 	<h3>Urban design/planning</h3> <ul style="list-style-type: none"> • Definition of neighbourhood boundaries in the project area. • City planning and development projects in progress or under study. • Number of building permits issued but not used. Register of city squares, open spaces and residential areas. • Register of investment programmes. 	<h3>Supplies and waste management</h3> <ul style="list-style-type: none"> • Access network for goods and supplies. • Electricity, gas, water and sewage networks. Current capacity and projections. • Network of waste collection, storage and recycling points. • Methods for managing waste and debris. • Ordinances on waste management.

Project details

Project area	Date and place of work	Team participants	Working group

S04

MODEL FOR SECTORAL AND CROSS-CUTTING COMPONENTS

Toolbox

Climate-Proof Integrated Urban Planning

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What is it?

This tool helps to provide a comprehensive picture of the sectoral components involved in developing the city. It also includes cross-cutting issues.

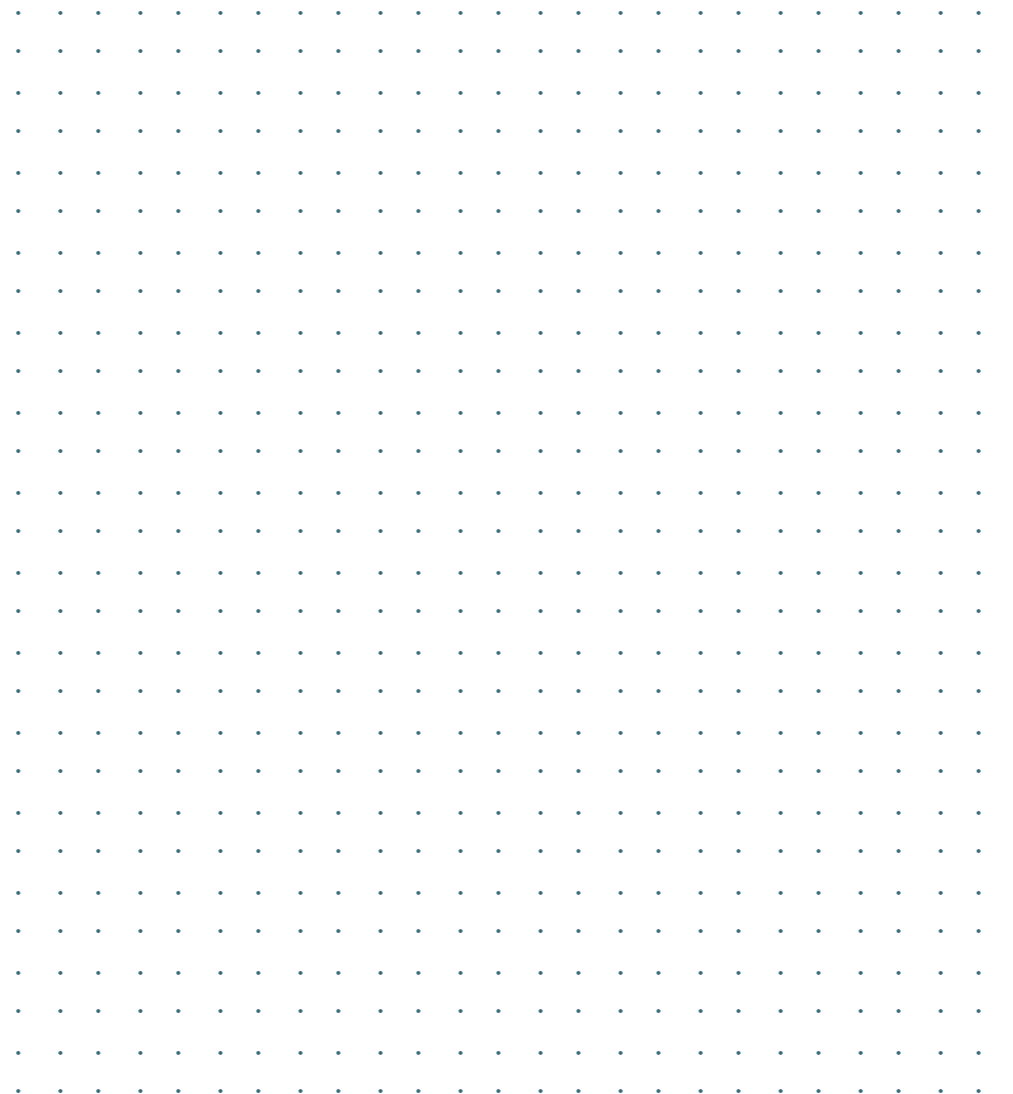
This list, which is not intended to be exclusive or exhaustive, was produced based on the Leipzig initiative adjusted to Santiago's context. It can therefore be added to and updated to suit the specific context in each project area.

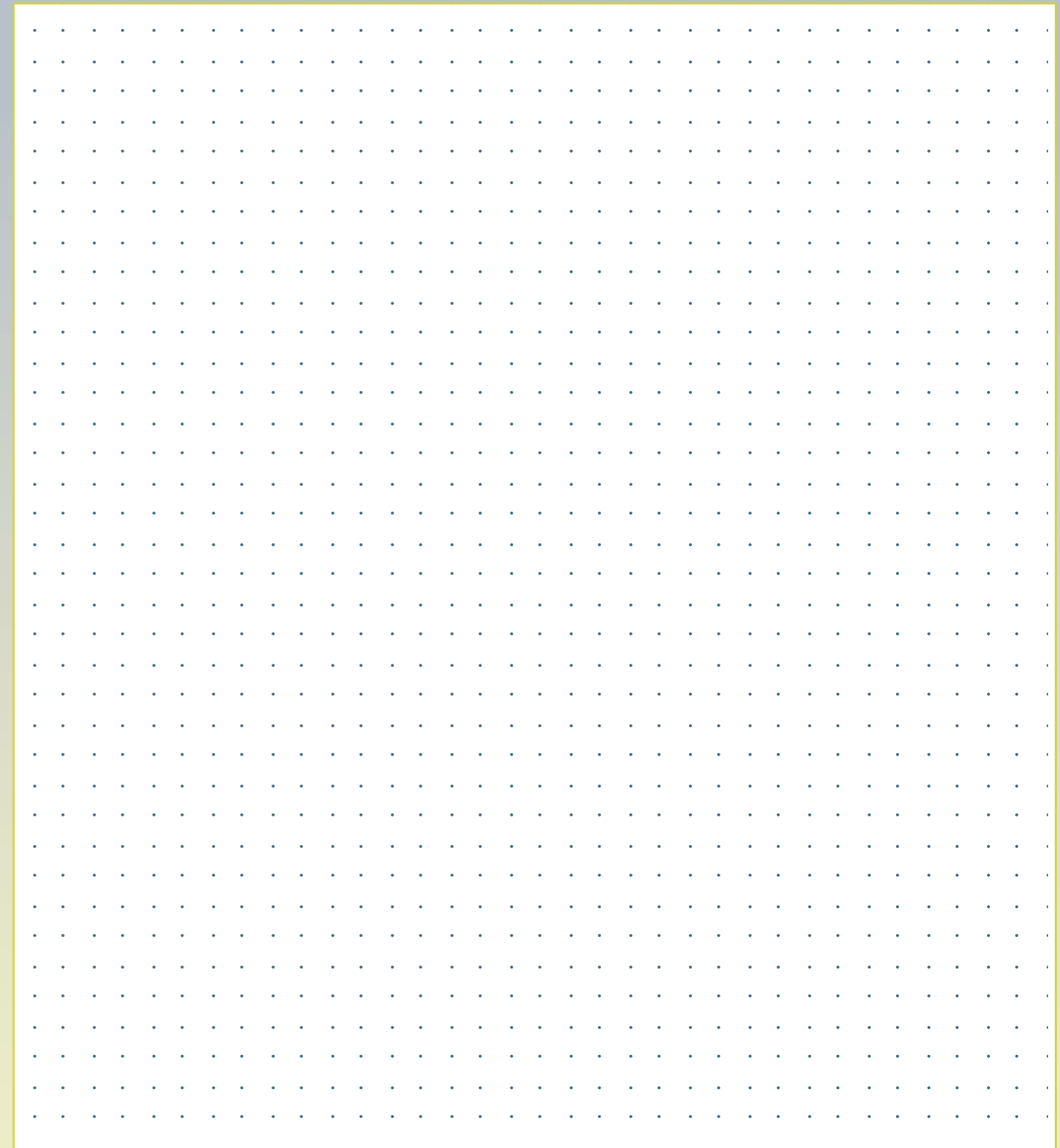
What is it for?

In the integrated planning process, it is necessary to identify which sectors are involved in developing or implementing an issue or strategy and the corresponding actions. This tool enables the sectors involved to be identified, ensuring that none are left out due to oversight or error. It facilitates the task of identifying who is responsible for each area and the actions that each sector must develop and implement.

How is it used?

- In the preparation phase (1): when working on S01, use this tool as the basis for developing the map of actors; and when working on M01, use it to design the working groups.
- In the concept design phase (2): when working on S02, use this tool to verify that the actions in each sector have been marked on the map; when working on S03, use the suggestions to identify the information required for each component to build the profile of the area; and when working on S07, use this tool to analyse each of the climate change adaptation/mitigation actions.
- In the implementation phase (3): when working on M06, use this tool to assign responsibilities in the operational plan.





Project details

Area of intervention	Date and place of work	Task team	Working group

	Planning instruments	Abbreviation	Sphere			
			Social	Urban	Economic	Environmental
National						
Regional						
Local						

Issue	Project details			
Issue No. ____ of ____.	Project area	Date and place of work	Task team	Working group

S06

SWOT ANALYSIS

Toolbox

Climate-Proof Integrated Urban Planning

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What is it?

The purpose of the SWOT analysis is to identify the strengths, weaknesses, opportunities and threats of the strategies proposed to implement the concept. This analysis should, at the very least, be conducted at two points: during the analysis of the baseline situation and during the analysis of the future situation.

What is it for?

Highlighting the internal factors considered to be strengths and weaknesses in the strategies, along with the external variables, commonly referred to as threats and opportunities, helps to optimise the realisation of these strategies and establish mitigating measures to address problems that could arise in the future.

How is it used?

The following are needed to use S06:

- a working group made up of five to eight participants from different sectors;
- experience with the previous tools.

Sequence of work

1. Conduct the SWOT analysis.
2. Discuss each aspect at the team meeting.
3. Record the results in the summary table.
4. Write a report on the actions required.
5. Repeat the analysis from the perspective of each of the sectors involved.



M04

MAP OF THE VISION
AND OBJECTIVES

Toolbox

Climate-Proof Integrated Urban Planning

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of the Federal Republic of Germany

What is it?

The map of the vision and objectives is the output of the scenario planning exercise in which the long list of actions is clearly shown. The map sets out the preliminary strategies.

What is it for?

This tool is used to display the results of the analysis of the baseline situation. By showing existing actions on the map, it is possible to identify interrelations and synergies between them. The map features the vision and the preliminary strategies with their associated actions.

How is it used?

This tool is used in various steps in a multisectoral process. It sets out the vision and preliminary strategies and also contains the long list of actions. The following are needed to construct the map to identify the strategies, needs and demands:

- experience with the previous tools;
- a map of the area and its surroundings, showing the project area as clearly as possible;
- the map in a digital editable format.

Sequence of work

1. The map is in a digital format so that it can be shared and worked on with the advisory group and the consulting group. It must therefore be printer-friendly and ideally readable when printed on A3-size paper.
2. Assign a colour to each theme and show the associated actions in that colour.
3. Display the actions in the project area, indicating the location as accurately as possible.
4. List unmappable actions in the box provided for this purpose.

It is recommended that the following tools be used to define the climate-proof vision of the city and its objectives:

- S02 Map of the project area: this tool is used to display a map of the area showing baseline information. It provides the baseline context for the analysis.
- P01 Guiding urban principles for climate-proofing: this tool summarises some of the guiding urban concepts for climate-proofing. It includes a table showing the resilience criteria that will facilitate the steering group's discussions to determine the best combination for the project area.
- S07 Contribution to international agreements: this tool is used to identify how the climate-proof city vision to be promoted can contribute to international agreements, specifically the SDGs and NDCs.

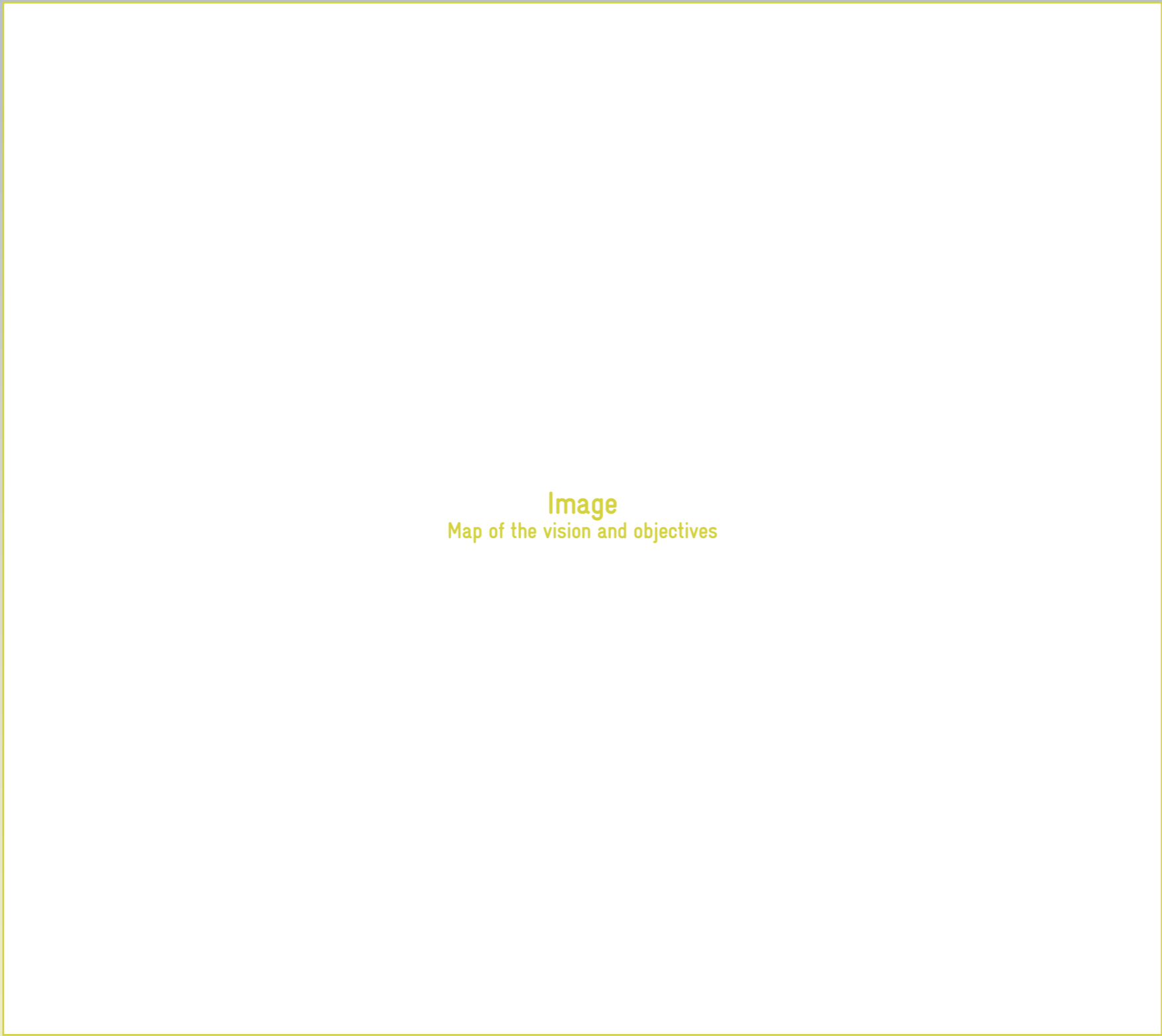


Image
Map of the vision and objectives

Theme 1	Theme 2	Theme 3
<div style="background-color: #e0e0e0; height: 100%; width: 100%;"></div>	<div style="background-color: #e0e0e0; height: 100%; width: 100%;"></div>	<div style="background-color: #e0e0e0; height: 100%; width: 100%;"></div>
List of unmappable existing actions by theme		
<div style="background-color: #e0e0e0; height: 100%; width: 100%;"></div>	<div style="background-color: #e0e0e0; height: 100%; width: 100%;"></div>	<div style="background-color: #e0e0e0; height: 100%; width: 100%;"></div>
Milestones		

Project details

Project area	Date and place of work	Team participants	Working group

P01 GUIDING URBAN PRINCIPLES FOR CLIMATE-PROOFING

Toolbox Climate-Proof Integrated Urban Planning

Published by:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of:

 Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:

 Federal Ministry
of the Interior, Building
and Community

of the Federal Republic of Germany

What is it?

There are numerous perspectives for contextualising urban development. The table shown here provides guiding concepts exemplified by city models and their behaviour in the face of climate change and consider the following criteria: efficiency, diversity, interdependency/redundancy, exposure and robustness/consistency. The table provides a description of each of these criteria.

These principles vary in complexity, and no single one provides a one-size-fits-all recipe for achieving sufficient mitigation, adaptation and resilience. A combination is therefore required and this varies from one city to another. The *Guiding Urban Concepts and academic discourse* publication provides other useful examples of climate-proof city models, such as the 'colourful city'.

	Criterion	Description
1	Redundancy	Securing the entirety of a system through a "number of functionally similar components so that the entire system does not fail when one component fails".
2	Diversity	Protecting the entirety of a system through a "number of functionally different components in order to protect the system against various threats".
3	Efficiency	Securing a dynamic system through a balanced ratio of delivered and self-generated energy.
4	Autonomy	A system that is capable "to operate independently of outside control".
5	Strength	A system that has the "power to resist attack or other outside force".
6	Interdependency	A system having interconnected components that "support each other".
7	Adaptability	A system that has the "capacity to learn from experience and the flexibility to change".
8	Collaboration	A system that entails "multiple opportunities and incentives for actor participation".

Source: Godschalk 2003: 139

What is it for?

These trends are put forward as a basis for discussion among local political leaders, the area's authorities, the private sector and civil society. The aim is for decision-makers, advised by their teams of urban planners, to use these discussions as input to define the climate-proof city vision. A vision that is suitable for climate-proofing a city is not based on one single model but rather on a dynamic spectrum of these city models that facilitates the right choice of strategies for each case.

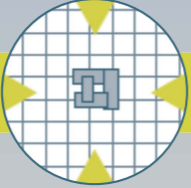


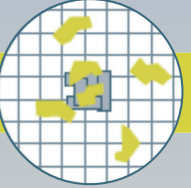
How is it used?

- Discuss how these criteria contribute to defining the development vision for the project area.
- Decide which city model(s) are most suitable for the project area.
- Use these models to define the development vision to be proposed as part of the concept.
- Tick the chosen model(s).



City models

[Evaluation: (-) negative, (+) positive, (n) neutral]

	 COMPACT CITY	 AXIAL CITY	 PLANNED CITY	 PERFORATED CITY
Definition	A model originating from a renewed appreciation of historic urban also called 'short-distance city' or patterns, 'European city'.	Urban expansion along lines coordinated by public authorities in conjunction with private entities and with a layered system of centres and sub-centres.	The landscape is connected to the built environment. Connections can be concentric or axial, dividing the city into cells, with a representative functional centre rather than a geographic one.	A city that shrinks due to population exodus, leaving vast areas of unused infrastructure and housing.
Efficiency	Low energy consumption (+)/Low spatial use (+)/Efficient infrastructure (+)/Short distances (+)	Efficient traffic system (+)/Efficient infrastructure (+)/Pooling of infrastructure (+)	High traffic (-)/High land use due to settlement structure (-)/Heavy use of infrastructure (+)	High traffic (-)/High use of land for road infrastructure (-)/underused infrastructure (-)
Diversity	Mixed urban structures (+)/Few undeveloped areas (-)/High density of buildings (-)/Few central urban green spaces (-)	Large spatial diversity (n)/Low spatial compactness (-)/Green spaces in axis interspace (+)	Lack of diversity of structures but available on large scale (n)/Scattered areas with vast green spaces (+)	Wide spatial diversity (n)/Green spaces in low-density areas (+)
Interdependency Redundancy	Well-connected infrastructure networks (+)/Polycentric commercial and service infrastructure (n)/Mixed use (+)	Orientation along axes and centre (-)/Self-sufficient settlements with relevant infrastructure in the centre (n)/Mixed use in highest density areas (+)	Monofunctional (-)/Concentration of critical infrastructure (-)/Lack of mixed urban use (-)	Partially well-connected infrastructure networks (n)/Minimum infrastructure (n)/Partial mixed use (n)
Exposure	High levels of urban surface sealing (n)/Large number of shaded areas (n)/Robust construction (+)/Highly flexible of construction (use, density, traffic) (+)	High levels of urban surface sealing (-)/Consistent axial infrastructure (+)/Flexibility of construction following a basic pattern inside settlements (+)	High use of spaces due to large scale (-)/No density pressure (+)/Dispersion due to green spaces (+)	Low settlement expansion (+)/No density pressure (+)/Population reduced due to partial demolition (+)
Robustness Consistency	Low settlement expansion (+)/Partial pressure of densification (n)/Pressure of redensification on open spaces (n)	Low settlement expansion along axes (n)/Partial pressure from density (n)/Clearing of green areas and open spaces between settlements (+)	Good local micro-climate, due to demolition and renaturalisation (+)/Susceptible open (loose) building structure (-)/Poor flexibility due to monofunctional development but spaces have been reserved (n)	Improved microclimate due to new open spaces (+)/Viable structures thanks to adequate decreasing density (n)/Partial demolition of building stock and renaturalisation of open spaces for future use (n)
City model chosen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Project details

Project area	Date and place of work	Team participants	Working group

S07

CONTRIBUTION
TO INTERNATIONAL
AGREEMENTS

Toolbox

Climate-Proof Integrated Urban Planning

Published by:

giz Deutsche Gesellschaft
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On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:



Federal Ministry
of the Interior, Building
and Community

of the Federal Republic of Germany

How is it used?

The following tools are needed to use S07:

- Map of the vision and objectives (M04)
- Profile of the project area (S03)
- Guiding urban principles for climate-proofing (P01)
- Model for sectoral and cross-cutting components (S04).

What is it?

This tool is used to put the city's development and the actions implemented into an international context. The United Nations has established 17 Sustainable Development Goals (SDGs) to be achieved by 2030. To use this tool, five goals have been pre-selected that are directly linked to climate-proof urban development. This does not mean that the other goals cannot be discussed, and the tool allows other goals to be incorporated if they are relevant to the issue being addressed. The tool also considers the Nationally Determined Contribution (NDC) in which countries set out their climate pledges to limit the global temperature rise to 1.5 °C. It seeks to encourage the inclusion of sustainable development and climate change mitigation and adaptation measures in the concept.

What is it for?

The purpose of this tool is to help identify the contribution made by existing actions in the project area and will indicate their contribution to climate change at this preliminary stage before the concept is implemented.

The tool helps to determine whether the strategies and actions are moving in the right direction in terms of climate change mitigation and/or adaptation and to establish the baseline situation of the project area based on the list of existing actions.

Sequence of work

1. Form a task force of five to eight people representing the different sectors and levels of government in the city.
2. Write down on a card the actions that contribute to climate change mitigation, using the map of the vision and objectives (M04). Repeat the process for adaptation actions. Use the two columns on the left to record the actions that contribute directly to fulfilling the NDC.
3. Discuss these actions with the members of the task force.
4. Group the actions into issues, indicating if they are mitigation or adaptation measures.
5. Rewrite the actions, indicating their specific contribution to adaptation/mitigation.
6. Tick the SDGs that the actions contribute to.
7. Repeat the process for each issue.



M05

MAP OF
'THE CITY WE WANT'

Toolbox

Climate-Proof Integrated Urban Planning

Published by:



On behalf of:



In cooperation with:



of the Federal Republic of Germany

How is it used?

This tool is used in various steps of a multisectoral process. The following tools are recommended to develop the map of 'The City We Want':

- M02 Work plan: The work plan indicates the points in the process when consultations should be conducted, and information disseminated in relation to the milestones. This will help to secure approval for the concept.
- M03 Strategic analysis by field of action: this analysis serves as a basis for the work required to develop scenarios and define 'The City We Want'.
- S03 Profile of the project area: provides information that reflects the realities of the context and is used to analyse the feasibility of the idea put forward in the concept.
- S05 Regulatory checklist: provides information on the regulatory environment in the project area to assess feasibility and determine whether new laws or regulations need to be passed or existing ones amended.

What is it?

This is the roadmap that sets out the multisectoral agreements discussed in the participatory processes in previous steps. It summarises the action to be taken in the medium and long-term to implement the concept. The map shows all the actions required to achieve the strategies' objective and sub-objectives.

What is it for?

The map of 'The City We Want' is one of the outputs used to define the final concept. It helps to determine the spatial dimension of the strategies and actions and to understand how they relate to one other. The tool shows how each sector will contribute to implementing the concept as all the sectoral actions are labelled on the map.

- S06 SWOT analysis: this analysis provides a list of demands that must be considered when defining the concept.
- M04 Map of the vision and objectives: this map is an aid to ensure that the design process moves forward, as planned. The issues displayed on the map will serve as the basis to develop the strategies for 'The City We Want'.
- P01 Urban guiding principles for climate-proofing: this tool provides a reference to determine 'The City We Want' and establish the concept.
- S07 International agreements and how they relate to the concept: this tool helps to keep sight of the fact that, in implementing the concept, an explicit contribution must be made to fulfilling international agreements.
- S08 List of priority actions: this table provides scoring criteria to rank the actions based on their effectiveness and contribution to the concept, the SDGs and NDCs. It is used to select the actions that are feasible and establish the agreed order for implementing the concept.

Sequence of work

1. Write a report summarising the results of the concept design phase.
2. Develop the vision and improve the initial proposal.
3. Validate the overall objective and break it down into sub-objectives.
4. List the actions that will be implemented in the future, grouping them by issue.
5. Display the actions on the map, which will be one of the three outputs to be validated by the various working groups. The map must therefore be printer-friendly and ideally readable when printed on A3-size paper.
6. List the actions that are not mappable in the box provided for this purpose.
7. Complete the map using the table provided in the tool.



Concept

Grid area for writing the concept.

Overall objective

Grid area for overall objective.

Specific objectives

1 Grid area for specific objective 1.

2 Grid area for specific objective 2.

3 Grid area for specific objective 3.

Strategies

1	Grid area for strategy 1.	Actions	Grid area for actions for strategy 1.
2	Grid area for strategy 2.		Grid area for actions for strategy 2.
3	Grid area for strategy 3.		Grid area for actions for strategy 3.

Project details

Project area	Date and place of work	Participants	Working group

Includes explanatory report



Published by:



On behalf of:



In cooperation with:



S08

LIST OF PRIORITY
ACTIONS

Toolbox

Climate-Proof Integrated Urban Planning

Published by:

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für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:



Federal Ministry
of the Interior, Building
and Community

of the Federal Republic of Germany

How is it used?

The following tool is also needed to complete the table:

- Map of 'The City We Want' (M05) and the explanatory report.

What is it?

This is one of the outputs used to define the concept. The tool produces a list of the actions that make up the strategies and meet the criteria for prioritisation starting with their contribution to addressing climate change, meeting the Sustainable Development Goals and implementing the concept; the availability of financing and the planning stage. The tool is also used to assign responsibilities and to determine whether the action is included in other public policies or general plans. The actions are prioritised based on a combined analysis of their feasibility and cost-benefit ratio.

What is it for?

The purpose of the table is to determine the cost-benefit ratio of the actions and identify those with the greatest impact. Once the list has been approved by the authorities, it can be shared and widely disseminated as part of the concept.

Sequence of work

1. Write down the strategies and the associated actions.
2. Use the table to assess the actions according to the criteria shown in the columns.
3. The 'Contributes directly to the concept' and 'Feasibility' columns are particularly important.



Strategy	Action	Field of action (FoA)	Addresses climate change threats and vulnerability	Includes climate change mitigation and adaptation measures	Addresses the Nationally Determined Contribution (NDC)	Addresses the Sustainable Development Goals (SDGs)	Contributes directly to the concept	Cost	Availability of financing	Requires additional financing	Implementation period	Stage of planning	Sector(s) responsible for implementation			Included in policies or other general plans	Feasibility
													Public	Other institutions	Private		

1																	

2																	

3																	

<ul style="list-style-type: none"> Governance and management (G) Policies and strategies (P) Measures: from policy to action (M) Capacity development (C) 	(+) Yes	(+) Yes	(+) Yes	(+) Yes	(+) Yes	Amount (\$)	(+) Available	(+) Yes	Duration in months	(+) Implementation	Check as applicable	(+) Yes	Completed, in progress short-term (S), medium-term (M), long-term (L), under evaluation (E)
	(o) Neutral	(o) Indirectly	(o) Indirectly	(o) Indirectly	(o) Indirectly		(o) Possibly available	(o) Possibly		(o) Planning		(o) Possibly	
	(-) No	(-) No	(-) No	(-) No	(-) No		(-) Unavailable	(-) No		(-) Idea		(-) No	

Project details

Project area	Date and place of work	Team participants	Working group

M06 OPERATIONAL PLAN

Toolbox

Climate-Proof Integrated Urban Planning

Published by:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:



Federal Ministry
of the Interior, Building
and Community

of the Federal Republic of Germany

What is it?

The operational plan sets out the strategy for implementing the actions. It determines the time frame and the sequence in which the actions are to be implemented. It also establishes milestones, implementation periods, performance indicators, the individuals responsible for implementation, the annual cost and possible measures for mitigating and preventing risk in implementing the concept.

What is it for?

The operational plan is a tool for monitoring implementation and verifying that the objectives are being met. It is used to track progress in implementing the concept's actions. It also flags incidents that may require the plan to be adjusted to ensure implementation does not become unviable. The plan is for internal use by the steering group, although it should be shared with all those involved in implementing the concept.

How is it used?

It is recommended that the following tools be used to prepare the operational plan:

- S08 List of priority actions: this list is used to design the operational plan.
- S09 Cost table: estimate and regularly refer to the implementation costs and establish the annual implementation periods.

Sequence of work

1. Fill in the strategies and the associated actions.
2. Define the milestones set to achieve each of the associated actions.
3. State the implementation period.
4. Identify the performance indicators and record them in the corresponding column.
5. Specify who is responsible for implementing the action.
6. Fill in the total cost of the action.
7. Identify any potential risks to completing the action.
8. Use the 'Comments' column to include any comments that may be relevant to those implementing the actions. It is recommended to revise the plan every three months and to plan for the following year well in advance.



Strategy	Action	Milestone	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter	Indicator	Individual responsible	Need for cooperation	Annual cost	Risks	Comments
S1	A1											
	A2											
	A3											
S2	A1											
	A2											
	A3											

Project details

Project area	Date and place of work	Team participants	Working group

S09

COST TABLE

Toolbox

Climate-Proof Integrated Urban Planning

Published by:

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für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of:

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for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:

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of the Interior, Building
and Community

of the Federal Republic of Germany

How is it used?

The following tool is needed to complete this table:

- List of priority actions (S08).

What is it?

This tool breaks down the annual cost of the actions over a five-year period.

What is it for?

The purpose of this table is to estimate the investment required for five-year periods, broken down by strategy. It can also be used to calculate the annual investment required for implementation.

Sequence of work

1. Define the lifecycle of each action.
2. Plan annual investment.
3. Fill in the total costs in the corresponding column of the cost table.
4. Conduct an analysis of the information recorded in the table, reprioritise and reorder the actions according to budget availability.



Strategy	Action	Year 1	Year 2	Year 3	Year 4	Year 5	Total
S1							
	Investment	\$	\$	\$	\$	\$	\$
S2							
	Investment	\$	\$	\$	\$	\$	\$
S3							
	Investment	\$	\$	\$	\$	\$	\$

Project details

Project area	Date and place of work	Team participants	Working group

M07 PERFORMANCE MONITORING PLAN

Toolbox

Climate-Proof Integrated Urban Planning

Published by:

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of:

 Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

In cooperation with:

 Federal Ministry of the Interior, Building and Community

of the Federal Republic of Germany

How is it used?

To use M07, the following tools are needed:

- List of priority actions (S08)
- Map of 'The City We Want' (M05)
- Cost table (S09).

What is it?

This tool is used to link the strategies and their associated actions to the strategy objective and sub-objectives. As a performance monitoring tool, it defines the performance indicators. The aim is therefore to determine the specifics of the activities in order to define them. The tool covers the process from the objective to the performance targets.

What is it for?

The purpose of this tool is to monitor implementation. The indicators are measures that are used to determine whether the expected progress is being made. If the process is not advancing to plan, the problem is flagged so that the schedule can be revised, and measures taken to ensure that implementation remains on track.

Sequence of work

1. Fill in the strategy in the corresponding space.
2. Fill in the strategy's overall objective.
3. Fill in the sub-objectives that the strategy aims to achieve.
4. Conceptualise the expected results.
5. Design performance indicators for the expected results.
6. Establish targets for the sub-objectives.
7. Repeat the process for each sub-objective.



Strategy

Overall objective

Grid area for Strategy

Grid area for Overall objective

	Sub-objectives	Expected results	Indicators	Targets	Comments
1					
2					
3					

Project details

Project area	Date and place of work	Team participants	Working group



Published by:



On behalf of:



In cooperation with:



S10

CONTRIBUTION OF THE
CONCEPT TO THE SDGS

Toolbox

Climate-Proof Integrated Urban Planning

Published by:

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On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

In cooperation with:



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of the Interior, Building
and Community

of the Federal Republic of Germany

How is it used?

The following are needed are to use S10:

- Contribution to international agreements (S07)
- Map of 'The City We Want' (M05)
- List of priority actions (S08).

What is it?

This tool is used to identify specific indicators to measure the concept's contribution towards achieving the SDG targets. The tool can be used to develop the indicators that will serve to measure this contribution starting with the actions identified in tool S07, which pinpoint the SDGs linked to the concept and establish climate change mitigation and adaptation actions as part of the NDC.

What is it for?

This tool shows the contribution that actions relating to the SDGs will make. Contributing to achieving the SDGs is important because it improves quality of life in urban settings. Contextualising the actions as part of international agreements all improves the chances of securing national and international resources. A document establishing performance indicators to measure the contribution to achieving SDG targets is therefore a useful aid.

Sequence of work

1. Use tool S07 (Contribution to international agreements) along with the strategies recorded in tool S08 (List of priority actions).
2. Link the completed actions with the indicators measuring the contribution to achieving the targets.
3. Complete the summary table.



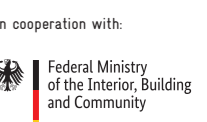
Related SDG	Description of goal	Performance indicator – SDG target	Contribution of the concept to achieving the SDG target	Comments
1				
2				
3				
4				
5				
6				
7				

Project details

Project area	Date and place of work	Team participants	Working group



S10 Contribution of the concept to the SDGs



of the Federal Republic of Germany

S11

CONTRIBUTION OF THE
CONCEPT TO THE NDC

Toolbox

Climate-Proof Integrated Urban Planning

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giz Deutsche Gesellschaft
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Zusammenarbeit (GIZ) GmbH

On behalf of:



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What is it?

This tool is used to link actions that have already been completed to the Nationally Determined Contribution (NDC) submitted by the country to meet its climate change mitigation and adaptation pledges, in compliance with the Paris agreement signed in 2015.

What is it for?

The purpose of the table is to track actions that contribute to mitigating greenhouse gas emissions. Those involved in implementing the concept can refer to specific actions and see how they contribute to mitigation and adaptation. This will facilitate efforts to measure and monitor the contribution made to addressing climate change.

How is it used?

The following tools are needed to use S11:

- National strategy for achieving the NDC
- Contribution to international agreements (S07)
- List of priority actions (S08).

Sequence of work

1. Identify the targets established in the country's NDCs that are related to the area of work in question.
2. Use tool S07 (Contribution to international agreements) along with the strategies established in tool S08 (List of priority actions).
3. Link the actions from the List of priority actions (S08) that have already been completed with the indicators for measuring the contribution to achieving the targets.
4. Complete the summary table.



Nationally determined contribution (NDC)	Explanation	Indicators for the target (NDC)	Contribution of the concept to the target (NDC)	Comments	
1					
2					
3					

Project details


Project area	Date and place of work	Team participants	Working group



S11 Contribution of the concept to the NDC

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