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# Climate Alliance recommendations on neighbourhood concepts

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Rostock | 27.09.2019



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# Background infos

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- **Development** of the Neighbourhoods recommendations paper within the Interreg Project Climate Active Neighbourhoods
- **Together** with German municipalities : Leipzig, Dresden, Halle, Offenbach, Düsseldorf, Müllheim an der Ruhr, Bonn, Potsdam....
- **Proof** by the European municipalities of Arnheim, Plymouth and Liege
- **Why?** Climate Alliance has a high experience in CO2-Monitoring but never worked on districts
- **Districts are becoming essential** by the description of **local climate protection**



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# Challenges

## Non existing formal definition of neighbourhoods and size

### Definition

- Neighbourhoods are limited in space and have a spatial context
- Neighbourhoods are a common place to live or a community

### Size

-In order to enhance the comparability of neighbourhood concepts and to **clearly distinguish** between **cities**, districts and neighbourhoods without confusing these concepts Climate Alliance recommended a maximum size of **20.000 inhabitants**



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# Preparatory work analysis of different elements

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## ■ **Topographical categorisation**

- Large-scale categorisation of the neighbourhood or settlement
- Terrain: hills, valleys, terracing, dips, hollows, ridges... type of and distance to bodies of water
- Settlement density, ventilation corridors
- Ecological factors: proximity to forests, local vegetation, green spaces

## ■ **Climatic and environmental conditions**

- Climatic conditions have a big influence in the energy consumption specially in heating and cooling
- An analysis of climate risk and hazards should be part of the district concept



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# Preparatory work analysis of different elements

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- **Air quality in the neighbourhood**
  - Analysis of data from air monitoring stations is an good supplement
- **Neighbourhood origins and settlement structure**
  - The neighbourhood's history is an essential aspect with a huge impact on the other characteristics.
- **Building typology**
  - Also other aspects such as the building's current condition and state of retrofitting
- **Social and economic structure of the neighbourhood**
  - the age distribution, income structure, level of education, property ownership, origin of inhabitants, their identification and identity are decisive factors



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# Elements the district concept

## Energy and CO2 inventory

- Quantification the **primary and final energy consumption** and their emissions of all relevant sectors excluding transport
- The CO2 inventory should be **compatible** with the **national methodologies**, like the BSKO standard in Germany and the **SECAP template** the Covenant of Mayors, using the **same CO2 emission factors**

### Necessary sectors to calculate

- Buildings by use
- Businesses: trade, retail, services, and industry
- Street and traffic lighting
- Neighbourhood infrastructure



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# Transport indicators

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- Number of vehicles registered in the neighbourhood
- Traffic calming measures: number and length of 30 km/h zones, play streets
- Number, distribution and distance between public transport stops and frequency of use within the neighbourhood
- Number, distribution and length of cycle paths
- Number of parking spaces for motorised vehicles compared to the number of bicycle storage spaces
- Number of charging stations for electric vehicles per inhabitant or street (public/private)
- Description of the cycling infrastructure
- Number of parking garages, multi-storey car parks, parking spaces and areas



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# Elements the district concept

## Energy supply plan

- A reduction the primary energy consumption is only possible with a energy production within the district, avoiding transport and loss of energy
- The planning of a decentralised energy generation concept on the neighbourhood level should at the same time be linked to building retrofitting measures. **No renovation without energy production!**

### **Other aspects of energy supply concepts should include:**

- Planning of heating and cooling networks
- Planning of heat storage tanks as buffer tanks
- Use of industrial waste heat and possible energy cascades (not yet relevant for municipalities, but potentially in the future)



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# Elements the district concept

## Adaptation plan

- To guarantee an efficient energy supply, avoiding extreme energy consumption peaks and implementing building retrofitting measures, adaptation and resilience measures should be planned. A neighbourhood's green infrastructure and land use plan should also form part of the neighbourhood concept
- The definition of measures serving both mitigation and adaptation purposes are of particular interest in the neighbourhood concept: renewal of sewage channels and systems or the insulation and cooling of buildings along with straightforward adaptation measures



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# Elements the district concept

## Consistency with other existing plans

- The neighbourhood plan should be consistent with other relevant city and urban land-use plans as well as plans relating to energy and climate, nature and environment, emissions, waste, and traffic.

The measures are divided into four categories:

- 1) **Specific measures:** relating to a specific property in the neighbourhood (building, energy system, etc.)
- 2) **Linear measures:** relating to a section of or entire road
- 3) **General measures:** relating to the whole neighbourhood
- 4) **Building block measures**



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# Elements the district concept

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## Participation of citizens and stakeholders

- Widespread acceptance of the neighbourhood concept is crucial and necessary to ensure the success of the measures.
- Citizen and stakeholder participation process are absolutely necessary!
- We recommend also to keep the participatory process in municipal hands



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Thank you very much!

Contact **Climate Alliance**

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