Climate Alliance recommendations on neighbourhood concepts

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Background infos

• **Development** of the Neighborhodds recommendations paper within the Interreg Project Climate Active Neighbourhoods

• **Together** with German municipalities: Leipzig, Dresden, Halle, Offenbach, Düsseldorf, Müllerheim an der Ruhr, Bonn, Postdam....

• **Proof** by the European municipalities of Arnheim, Plymouth and Liege

• **Why?** Climate Alliance has a huge experience in CO2-Monitoring but never worked on districts

• **Districts are becoming essential** by the description of local climate protection
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
Preparatory work analysis of different elements

- **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
Preparatory work analysis of different elements

- **Air quality in the neighbourhood**
  - Analysis of data from air monitoring stations is a 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
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 BISKO 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
Transport indicators

- 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
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)
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.
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**
Elements the district concept

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
Thank you very much!

Contact Climate Alliance

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