

iWater Tool sheets / Planning support tools:

Cloudburst management plan

Copenhagen's cloudburst plan is the first city-wide master plan for cloudburst management. Over the next 30 years, Copenhagen will implement a number of concrete actions to protect the entire city against the damages of heavy rain.

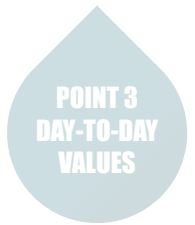
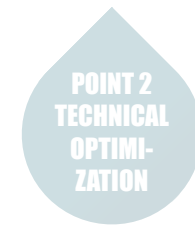
Why: The city of Copenhagen has suffered from serious floods caused by heavy rain events which have subsequently brought about remarkable economical damage. The city has developed a new *cloudburst plan* that incorporates both traditional measures to drain water away through an expansion of the sewer network underground, as well as 300 surface solutions to be constructed across the city at a rate of 15 each year.

How: The plan includes four types of new elements. Stormwater roads will transport water to lakes and the harbour, detention roads and detention areas will detain and store water, and green roads will detain and hold back the water locally. A remarkable feature of the *Cloudburst Management Plan* is the collaboration of different city actors and their mutual agreement, rendering it more convenient to design and implement stormwater management projects with a holistic perspective in the city of Copenhagen.

The city has studied its most vulnerable areas and concentrated on rehabilitating the system by implementing an integrated stormwater management approach including all the various actors, such as concrete structures, city authorities and public.

Good to know: From the very beginning, the creation of opportunities for urban development and improvement of the quality of life in the city have been the objectives. However, some criticism has been that insufficient interest has been paid to source management and inclusive use of SUDS elements (see also the tool sheets for *Source control* and *SUDS*).

Copenhagen's approach has received international interest and some other cities are preparing similar plans.



Realized example of a new urban infrastructure in Copenhagen (picture copyright E. Lähde).

More information

Documents of the Copenhagen's Cloudburst plan in English:
www.international.kk.dk/artikel/climate-adaptation

