

”The Copenhagen Climate Adaptation Plan is designing the city of tomorrow today.”

John Heskett, INDEX: Award



Illustration: Tredje Natur

Danish strongholds in climate adaptation



Confederation of Danish Industry



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Danish strongholds in climate adaptation

Climate change and related storms, heavy precipitation and extreme temperatures pose major challenges on cities across the globe. A variety of solutions are needed for cities to overcome climate challenges on both short term and long term basis.

Denmark and the capital of Copenhagen has a number of leading edge competencies within planning and implementation of climate adaptation solutions that we want to share with other cities. Below you will find a short overview of Danish strongholds in climate adaptation:

Holistic urban planning

Copenhagen is taking a lead in addressing climate change by targeting three key levels of climate adaptation:

- Minimizing potential damage arising from climate change
- Warning and response systems to deal with abnormal conditions
- Preventive infrastructure to cope with damage, loss and traffic disruption

Among other, Copenhagen received the INDEX Award 2013 for the city's climate adaptation plan that is tightly interlinked with Copenhagen's other key plans for green, sustainable, social and economic development. Taken together, the plans demonstrate how public- private cooperation and long term urban planning can foster growth, employment and a more livable city alongside adapting to climate change.

Danish expertise includes establishment of "blue" and "green" city areas that:

- Reduce stormwater flows by absorbing and detaining water
- Moderate and balance temperature changes
- Reduce the city's energy consumption
- Increase biodiversity
- Reduce noise and pollution
- Creates possibilities for recreation



Illustration: Rambøll/Dreizeit

Flood water management

Denmark has leading edge competencies and technologies in a variety of disciplines related to flood water management and forecasting.

Danish expertise comprise:

- **Hydrology models** – risk mapping of flooding from extreme weather and rising sea-level
- **Monitoring and warning** – water levels, flow measuring, water quality etc.
- **Urban flood management** – drainage systems, reservoirs, pocket parks, green roofs and walls etc.
- **Coastal protection** – embankments, dikes, breakwater, croynes, dredging etc.
- **Storm water cleaning** – open water protection by water brakes and cleaning technologies



Illustration: Rambell/Dreiseittl

Building resiliency and efficiency

Danish expertise in climate adaptation comprise a wide range of disciplines and technologies related to construction and retrofitting of buildings for resiliency and energy efficiency.

Danish expertise comprises:

- **Building resiliency** – extreme weather protection through construction and retrofitting of buildings, materials/parts, surrounding areas, drainage systems etc.
- **Energy efficient buildings** – construction and retrofitting of buildings, materials/parts, energy saving solutions, sustainable solutions and energy management systems etc.



Illustration: Tredje Natur

More information can be found on:

www.stateofgreen.com
www.klimatilpasning.dk
www.cphcleantech.com



Illustration: Trecie Natur

Skt Kjeld's Quarter – Denmark's first climate adapted neighbourhood

Case: One of the demonstration projects for Copenhagen's climate adaptation solutions is "St. Kjelds Quarter". The project demonstrates how floods due to heavier rainstorms could be tackled innovatively. The project introduces bicycle paths that act as storm water channels, water towers, green roofs, urban gardens, green houses and canals that carry water from the neighbourhood to the harbour. By making use of future heavy rain, St. Kjelds Quarter holistically integrates solutions, art and aesthetics which combined give rise to Copenhagen's greenest neighbourhood.

Read more on www.klimakvarter.dk

