

# Future Cities

urban networks to face climate change

Making city regions fit to cope with the predicted impacts of climate change



## PROBLEMS FACED

Heat island effects and droughts in summer, increased flash flooding and storms are actual phenomena of the changing climate. They have major impacts on urban living conditions, and the quality of life in towns and cities. Well functioning city regions are one of the most important pre-requisites for sustainable economic development. Solely reacting to the impacts of climate change will lead to a cost escalation for adaptive measures – it is time to act now.



Storms



Heat island effects



Increased flash flooding

## ANSWERS SOUGHT

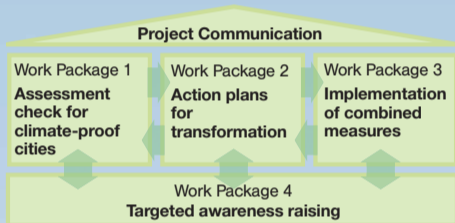
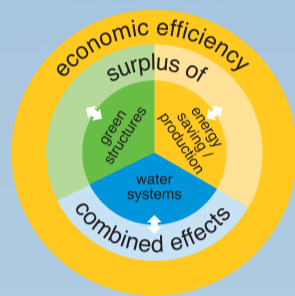
The Future Cities Partnership seeks strategies which:

- are innovative – not yet implemented on the practical level
- prevent greater financial loss – by taking action
- increase synergy and cost effectiveness – by applying combined measures.

The Future Cities Strategy combines strategic urban key components – green structures, water systems and energy efficiency – to transform urban structures pro-actively.

The project approach follows four objectives:

1. Development of common evaluation methods for climate-adapted towns and cities – leading to an assessment check for climate-proof cities
2. Establish action plans for current structures so that the participating regions can adapt their strategies in a concrete manner
3. Implementation of combined measures: Selected construction solutions in eight pilot projects
4. Raising awareness among decision-makers and influencers about pro-active ways of tackling adaptation to climate change impacts



## WORKING IN EUROPEAN COOPERATION

The effects of climate change do not stop at national borders or city limits. European cooperation brings together sectoral and individual know-how to face transboundary challenges. Each partner of the Future Cities project has special expertise: For example water boards' knowledge of urban water systems, and municipalities' expertise on the importance of green structures. The involvement of regional planning authorities adds the expertise of spatial planning as well as development agencies provide for know-how in planning with investors.



## PROJECT PARTNER



Lead Partner



gemeente Tiel



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## EIGHT SHOWCASES FOR CLIMATE PROOF CITY REGIONS

### GREEN-BLUE-CLIMATE-CORRIDOR IN THE CATCHMENT OF THE RIVER LIPPE



Not knowing future rainfall and temperature trends “no-regret-measures” must be developed, which are cost-effective and flexible in the long-run. A green-blue corridor built through the city of Kamen will make the city climate-proof: 2 km of the water body Heerener Mühlbach are ecologically improved. About 80 houses are disconnected and the storm water will be drained into the new, nature-like water body.

### CITY REGION ARNHEM NIJMEGEN: A PRACTICAL METHOD TO FACE OVERHEATING



For the City Region Arnhem Nijmegen, NL, a method is being set up to adapt built-up areas to the warmer and dryer summers and to reduce the urban heat island-effect. It will offer necessary planning and design recommendations. The method is based on components such as green structures, water structures, means of sustainable energy supply as well as city morphology.

### CLIMATE-SENSITIVE DEVELOPMENT IN THE EMSCHER CATCHMENT



Emschergenossenschaft and the municipality of Bottrop cooperate with on-site businesses to restructure the industrial park „Scharnhölzstraße”.

Options to make the area climate-proof include the discharge of rainwater into a nearby water body, infiltration into the soil and retention on green roofs.

### ADAPTATION AND ECONOMIC DEVELOPMENT IN HASTINGS



The Enviro21 Exchange building is part of a series of new business parks on the outskirts of Hastings. It will be platform for dissemination of

knowledge and best practice in terms of adaptation to climate change. The South East regions’ vulnerability to climate change is being assessed to feed amongst others, Hastings’ local climate adaptation plan.

### THE GREEN TRANSFORMATION OF THE CITY OF NIJMEGEN



The idea book “Green Allure Innercity” presents examples how the city centre of Nijmegen can become more green with green roofs, walls and squares. Public water art works can provide visual cooling.

### THE SUSTAINABLE URBAN SITE LUCILINE IN ROUEN



In Rouen, the Luciline project combines water structure and green corridors to regenerate and improve the built environment. The aim is to reduce greenhouse gas using a heat network which will be supplied by geothermal sources

and also to reduce the urban heat island effect with a natural water management, to support and strengthen urban biodiversity.

### DRY FEET FOR TIEL EAST – INTEGRATED APPROACH FOR CLIMATE ROBUST DEVELOPMENT



In the Eastern part of the Dutch city of Tiel water management, climate resilient building and renewable energy is combined and turned into new

options for a climate-proof vision in 2015. A water game shall raise awareness with the inhabitants and stakeholders.

### THE CLIMATE-PROOF TOWN OF IEPER



Wvi is developing a sustainable new area in Ieper. Blue-green corridors connect the quarter with an adjacent housing quarter and the main roads. The use of collective renewable energy systems for the whole

quarter will be examined. Communication will show positive aspects of sustainable development.

## BRINGING PEOPLE AND IDEAS TOGETHER

- Four international working groups bring together the know-how in water management, project development, urban and regional planning
- Twinning for detailed exchange: Partners join to discuss their plans and develop specific measures further that are implemented within Future Cities
- Spreading the word with International Conferences

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