

**CROW publication 277****‘Adapting public space to climate change – Municipal councils set to work on climate adaptation’****Summary**

The climate is changing. There is no doubt about that. Global warming is taking hold, winters are becoming wetter, summers drier and extreme rainfall more frequent. For the urban living environment, climate change means an increase in warmth in the cities and more frequent flooding and waterlogging. Dry periods occur more often and persist for longer. In many cases, this means that it is necessary to adapt public space to climate change.

In most cases, adaptation occurs in an existing urban environment where multiple uses converge. Adaptation requires space, as do spatio-economic urban developments such as increased building density and mobility. Scarcity of space therefore makes the adaptation of public space to climate change a complex task.

It is precisely this combination of climate change and the dynamic of urban space that makes the task complex, but that also creates opportunities. ‘Smart links’ enable more targets to be achieved, sometimes even without extra demand for space or extra costs. Linking means being smart about choosing the right moment and location to start with adaptation, for example, where large-scale maintenance or new construction and restructuring work is being carried out anyway.

While adaptation is an important task, climate change does not always necessitate modifications to urban public space. In certain cases, accepting the consequences of climate change can be both a conscious choice and a good one. It is important to find the balance between adaptation and acceptance. This consideration depends to a large extent on the exact situation on site. In addition, the consequences for urban public space are not always understood, nor are the scale and intensity of those consequences. The perception of the consequences and the risks by users also plays a key role in the consideration. Finally, the investments necessary for modifying public space and the possibility of creating links are important for the decisions that need to be taken.

Knowledge development and dissemination take place and are essential. While not all knowledge is (immediately) available, enough is known to get started. Municipal councils can now start working on a ‘no regrets’ basis in order to gain experience. CROW would like this publication to contribute to raising awareness of the problem of climate adaptation before it is too late, allowing preparations and implementation to be linked with existing urban tasks of restructuring, modernisation and expansion at an early stage so that no opportunities are lost.

But how can a municipal council start working on a dynamic and evolving theme such as climate adaptation? Where do they begin? The step-by-step plan provided in this publication offers a solution. The plan consists of six action-oriented steps to get started. The measures and programmes included in this publication offer an overview of the possibilities for climate adaptation and also serve as inspiration.

Figuur 1. Stappenplan: Klimaatadaptatie in zes stappen



Figure 1. Step-by-step plan: climate adaptation in six steps

[Clockwise:]

- Determine the physical task
- Search for the balance between adaptation and acceptance
- Search for opportunities for linking
- Start test projects
- Enlist support
- Evaluate and learn

### **Determine the physical task**

The climate adaptation task is initially determined by the magnitude of the primary consequences of climate change: more water, higher temperatures, increased drought. The extent of the consequences for public space depends on the physical characteristics. In recent years, various aids have been developed, such as adaptation scans, which can be used to determine the physical task. This can lay the foundations for determining what measures are necessary and for developing a vision of how to approach climate adaptation.

### **Search for the balance between adaptation and acceptance**

There is still much to learn about the consequences of climate change for public space and about their scale and intensity. Many people will perceive certain consequences as positive, such as long-term periods without rain, although these can also have a negative impact on green amenities. Conversely, flooding and waterlogging will largely be experienced as a nuisance. Moreover, adjusting to the consequences determines the choice for adaptation or acceptance. The balance between adaptation and acceptance will be approached differently depending on the municipal council and the nature of the consequence. The assessment will also have to take the consequences of potential measures for cost effectiveness and increase in real estate value into account. When opting for adaptation or acceptance, applying the ‘no regrets’ principle at an early stage creates space for future security and flexibility. As we gain more experience with measures and their effects in the years to come, the contours of the assessment framework within which decisions are made will gradually become more clearly defined.

### **Search for opportunities for linking**

Opportunities for linking can be found by looking for where and when dynamic is at play in the cities. Where is public space being constructed or reconstructed? Which elements of public space need replacing and when? How can costs be cut by doing various tasks at the same time? Although the scale of the consequences is largely unknown – and that can be awkward – there is still time to make good choices or to postpone making them until more is known. Smart organisation opens up opportunities for linking.

**Start test projects**

Small-scale test projects can be started up immediately. These projects can be linked to locations in the city where public spaces are already being reconstructed. Test projects make climate adaptation tangible and offer excellent leads for enlisting support and mobilising learning processes.

**Enlist support**

Climate adaptation of public space is a new and unknown subject that is still only just finding its way onto government agendas. Many of the key players (users, managers, fellow civil servants, administrators, public and private parties) are not yet aware of the consequences of climate change for public space. The same applies to possible measures. At this stage, communication geared to raising awareness and acceptance of and ultimately support for these measures is imperative.

**Evaluate and learn**

Although so much is still unknown, there are a number of appealing practical examples. These projects are mainly about experimenting, evaluating and learning. The designers, planners and users are continually learning. These learning processes merit a place in a good organisation because they are a precondition for an enduring climate-proof design of public space. Particularly if the topic is a new one, a good organisation is essential. The task of climate adaptation comes in a variety of forms. Some users of urban public space benefit from change and the consequences of a changing climate, whereas for others they represent an inconvenience and a nuisance. Giving everyone involved a good idea of their specific task is therefore an essential first step towards shaping climate adaptation. Despite the development still ahead for climate adaptation, the time has come for small-scale experimentation and learning so that people can give shape and content to climate adaptation in their own environment.

Fitting climate adaptation into existing urban public space is a complex challenge full of opportunity.