Climate Change Adaptation Strategy for the City of Oslo

Oslo - a climate-resilient city

In order to become climate-resilient, the city of Oslo is implementing a number of measures that will also create a safer, greener and more pleasant city. Oslo must prepare to meet a changing climate, with more extreme rainfalls, higher temperatures and stronger wind. Storm-water is, and will be our biggest challenge, and is a main priority.

slo is the fastest growing capital in Europe. The challenges of dealing with increasing population density in a climate-resilient way, will affect all municipal agencies.

The City of Oslo is taking a two-pronged approach through both mitigation and adaptation. Cross-sectoral cooperation is essential for both approaches.

How do we adapt to a changing climate?

One of Norway's national climate goals is that our society shall prepare for and adapt to climate change. Local authorities have been assigned most of the responsibility to achieve this, and will need to build knowledge and initiate appropriate preventive measures.

A climate-resilient society must be able to limit or avoid adverse effects of climate change. In order to adapt, we need more knowledge on issues ranging from which streets tend to get flooded and how climate change affects buildings, to which invasive species or new diseases could arrive in

Norway due to climate change, and how we deal with this. Global climate change can have indirect impact on Norway, with consequences where action is needed, such as food insecurity and climate refugees. Identifying benefits of the changing climate is also a central part in adapting.

Preliminary main action points

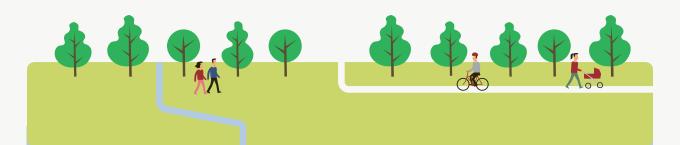
Moving forward, data collection and knowledge building will be crucial. An improved data base on our future climate, its impacts and our vulnerabilities, will enable us to implement appropriate measures. Adaptation to climate change is complex, and a unified approach and cross-sectoral cooperation will be key success factors.

We will prioritise the following action points:

- Storm-water management
- Climate data
- Awareness raising
- Cross-sectoral cooperation
- Underground mapping
- International cooperation

Six priority areas

In Oslo, a cross-sectoral group examined the challenges facing the city in terms of our future climate. The group identified six priority areas where action is needed:



WATER

Greater risk of rain floods, storm surges and a rising sea level

LAND USE

Pressure on city spaces and changed impact on nature

EMERGENCY RESPONSE

Handling of extreme weather related impacts

FUTURE CLIMATE

Changing precitipitation, temperature and wind conditions

INFRASTRUCTURE

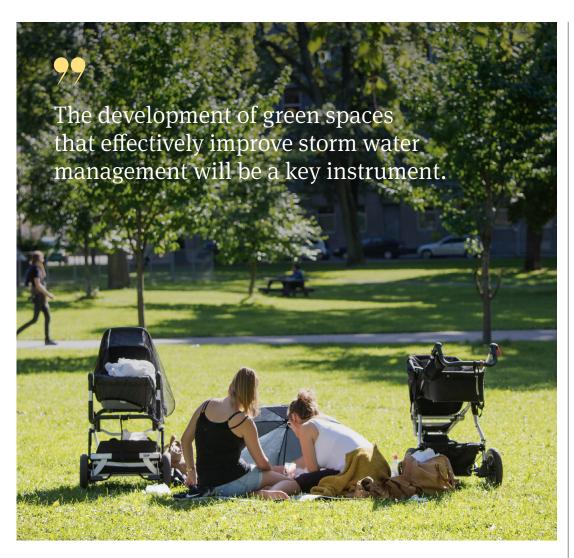
Erosion and weathering of roads, buildings, tracks and power grids

NATURAL ENVIRONMENT

Invasive species on a local level and loss of biodiversity

HEALTH

Increased risk of poor quality of drinking water and increased volumes of microorganisms



Increased urbanisation makes us more vulnerable

With high population growth and rapid urban development, climate resilience is becoming increasingly important. By 2030, it is expected that the population of Oslo will be about 30 percent higher than today. To address this growth, Oslo will have to develop into a more compact city. The combination of more extreme precipitation events and an increased proportion of impermeable surfaces between buildings will reduce natural drainage and make us more vulnerable.

Organisation of work

The City of Oslo's adaptation to climate change will be followed up through our regular planning, budget and management systems. It is important to view strategies, plans and measures together. This will enable us to meet challenges in a comprehensive manner and use resources efficiently.

We plan to develop an overarching action plan for climate change adaptation measures, where initiatives are incorporated into and followed up under existing agency frameworks. At the same time, municipal enterprises and agencies will continue to work together to ensure that Oslo is as well-equipped as possible to meet a changing climate.

Green benefits

As we adapt Oslo to climate change, we will simultaneously create a safer, greener, and more pleasant city. Important aspects of our preventative work to handle increased rainfall and storm-water issues include re-establishing rivers and streams, new parks, fountains and green areas, tree conservation and building more green roofs. These adaptation measures will also make our city greener and more pleasant, and have positive impact both on local communities and the city biodiversity.



Blue-Green Factor – an important tool

We will make use of the Blue-Green Factor (BGF) to ensure there are "bluegreen qualities" in construction and renovation projects. BGF is a tool designed to give higher priority to green areas and outdoor spaces in planning processes, and also to ensure predictability for developers in terms of requirements for outdoor spaces when it comes to water management, vegetation and biodiversity. The development of green spaces, which also includes storm-water management, is a key instrument in Oslo's adaptation to climate change.

Sources:

Climate Change Adaptation Strategy for the City of Oslo, www.oslo.kommune.no City Government proposition 236/14, www.oslo.kommune.no Meld. St. 33 (2012–2013) White paper on Climate change adaptation in Norway, www. regjeringen.no