URBAN WATER SPACES-STANDING

OBJECTIVE

Retain rainwater and reduce the urban heat island effect.

DESCRIPTION

To retain rainwater in an urban environment, water-spaces can be created to drain water and collect it in non-flowing surface water bodies, such as ponds, lakes and water squares. The purposes are twofold: on the one hand, the water surfaces located in densely built urban contexts favor the lowering of air temperature, thus also helping to reduce the formation of heat islands during the hottest days of the summer season. On the other hand, standing water-spaces, if properly sized, can also reduce the impacts of flooding events, caused by intense rainfall, draining rainwater in this space.

EXPECTED RESULTS

Reduced temperature during the heating up; increased water retention in the water body and reduced peak flows, depending on size of standing water.

RESULT INDICATORS

Volume of water drained [m³]
Reduction of damage caused by flooding [€]

INVOLVED ACTORS

Municipality, service of water supply and technicians.

EXPECTED TIMELINE FOR ACTION

- Short term (1-4 years)

BEST PRACTICES

- Tiel – Netherland
- Nijmegen – Netherland
- Ieper – Belgium
- Apulia Region – Italy

CRITICALITIES

The costs vary according to size and complexity of the measure; conflicts could arise when maintenance is needed to keep the water clean to avoid smelling, or the place can become an attractive meeting place and noise can be a problem, or standing water can contradict the aim of cooling during summer nights due to the specific heat capacity.

SCOPE OF THE ACTION

- Adaptation

TYPE OF PROPOSED ACTIONS

- Grey
- Green

SECTOR OF ACTION

- Biodiversity / Conservation of ecosystems
- Urban settlement
- Water resource management

CLIMATE IMPACTS

- Change or loss of biodiversity
- Drought
- Extreme precipitation
- Extreme temperatures

IMPLEMENTATION SCALE

- Municipality

SOURCE

http://www.future-cities.eu/fileadmin/user_upload/pdf/FC_AdaptationCompass_Supplement_web.pdf