

# Water retention areas

## Potential Climate/ Disaster Impacts addressed and Justification for this Approach

Dong Hoi has faced unprecedented flooding in combination with storms and unexpectedly heavy rainfall, while in the dry season the water level is alarmingly low, resulting in water shortages that affect both production and people's well-being. The measure supports flood risk management and heat stress mitigation while providing urban green spaces for citizens and enhancing urban biodiversity.

## Process of Implementation

The project followed the following steps:

- (1) site assessment,
- (2) goal setting,
- (3) general design considerations,
- (4) maintenance,
- (5) stakeholder engagement,
- (6) project approval,
- (7) installation

### Project Title

Support to Viet Nam for the Implementation of the Paris Agreement

### Project Number

2017.9010.4

### Results and Impacts

In Cau Rau river park, four types of water retention areas were applied and integrated, creating a water runoff system based on delay-store-drain principles. Pathways and a playground were installed with permeable pavements to slow down the runoff and allow water infiltration into the soil. The bioswales were installed along the road network, together with natural corridors, to delay and convey the runoff to the river park, where bioretention basins store the stormwater and drain it into the river or drainage system. The project area compromised 4.9 hectares and the catchment basin area 10.55 hectares with a water storage capacity of 4,000 cubic metres, benefitting 29,000 Dong Hoi residents.



#### TYPE OF APPROACH

Implementation of technical solution



#### COUNTRY

Vietnam



#### LEVEL OF INTERVENTION

city, neighbourhood



#### TYPE OF RISK MANAGEMENT

prevention



#### MAIN HAZARDS ADDRESSED

flood



#### URBAN FUNCTION PROTECTED

Public security/ civil protection, recreation



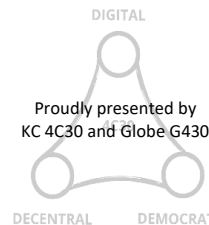
#### SPHERE OF INTERVENTION

socio-political sphere/ governance, environment



#### COOPERATION PARTNERS

Quang Binh Department of Natural Resources and Environment (DONRE),  
Quang Binh Department of Construction (DOC), Dong Hoi City People's Committee



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