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| **Project name** | Potsdamer Platz, Berlin, Germany |
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| **Keywords** | rainwater harvesting, green roofs, artificial urban lake, constructed wetland for rainwater treatment |
| **Start of project** | 1994 |
| **End of project** | 1998 |
| **Contact person or organisation** | ARGE Dreiseitl/ Piano/ Kohlbecker Technische Universität Berlin, Marco Schmidt |
| **Short project description / project function** | This urban waterscape has contributed to making Potsdamer Platz one of the most visited places in Berlin. The idea behind this important urban waterscape is that the rainwater should be used where it falls. At Potsdamer Platz, a combination of green and non-green roofs harvest the annual rainfall. Rainwater then flows through the site's buildings and is used for toilet flushing, irrigation, and fire systems. Excess water flows into the pools and canals of the outdoor waterscape creating an oasis for urban life. Vegetated biotopes are integrated into the overland landscape and serve to filter and circulate the water that runs along streets and walkways, all without the use of chemicals. The lake's water quality is excellent forming a natural habitat and fresh water usage in the buildings has been reduced. Potsdamer Platz stands as a successful example of a revitalized open space where city life, prestigious architecture, and the beauty of water are in harmony. |
| **Water** | The following measures are implemented for the management of 23.000 m³ rainwater of 19 buildings per year:<br>• extensively and intensively greened roofs<br>• collecting of roof runoff to be used for toilet flushing and irrigation of green areas including intensively greened roofs<br>• Refilling an artificial lake<br>2550 m³ of storage capacity corresponds to 15% of the annual precipitation (Berlin 580 mm). The urban water covers a total area of 13,042 m² and has a volume of 15,000 m³. The water is divided into 4 independently |

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| | functioning parts and systems. The level of the urban lake may be changed by 30 cm, which corresponds to a storage capacity of 3500 m³ and 17% of the annual precipitation. Advanced technology controls the constant quality of the water. The cleaning and filtering of the water is achieved naturally through the cleaning biotopes, a modified constructed wetland which is planted mainly with Phragmites. The water circulates continuously with a maximum filtering capacity of 30 m³/h to 150 m³/h for the different parts of the lake. |
| Energy | There is district heating and cooling. |
| Biomass | n/a |
| Project benefits | The urban waterscape at Potsdamer Platz reduces the risk of floods and polluted surface waters. It also closes the water cycle through evaporation due to green roofs and the urban lake, improving the local microclimate. |
| Project level | Pilot project / mature technology |
| Financial scale | n/a |
| Environmental conditions | Climate zone: cold temperate Geographic Coordinates: 52° 30' N / 13° 22' E |
| Altitude | 35 meters above sea level |
| Description of special local conditions | There is no connection to the rainwater sewer. There is 2550 m3 of storage capacity in tanks and 3500 m3 additional storage capacity through increased or decreased water level. |
| Context Zero Emission Buildings | Rainwater is utilized, so there is no rainwater disposal into sewers to avoid the overload of the mixed sewage system. Rainwater is mainly redirected into the atmosphere by evaporation, therefore closing the small water cycle and improving the local microclimate. |