FACTSHEET RISK REDUCTION MEASURES

Water absorbing geocomposite (WAG)

Where was it implemented?

Lower Silesia, Poland

Fields of action

- Settlement area

Related to measure from the catalogue of measures

- Water absorbing geocomposite (no 83), Blue and green infrastructure (no 61)

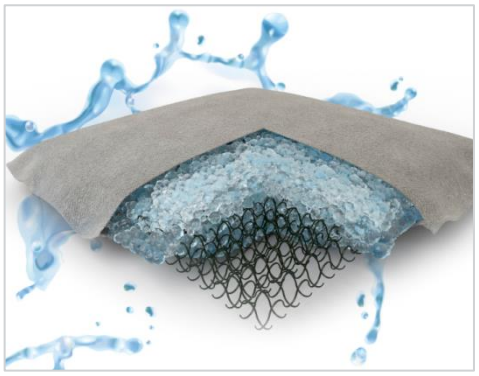
Area characterisation

- **Area type:** Urban, semi-urban
- **Landscape type:** lowland (it's also good for hilly area)

Problem

Extreme weather phenomena occurring in recent years (e.g. droughts, heavy rains) increase the problems associated with maintaining urban green areas in good condition. Droughts cause plants to dry out, and heavy rains results in soil erosion. The proposed solution by improving the living conditions for plants and thus maintaining them in good condition also has a positive effect on the visual attractiveness of the environment.

Source K. Lejcuś



Source: profi.hydrobox.pl/home-en/

Description and aim

Water absorbing geocomposite (GSW) is a technology used to retain water in the soil, so that it is later available for plants. In this way, the GSW help plants to grow faster and under better conditions. Water is available to the plant when the plant needs it. GSW reduces water stress, prevents wilting of plants, boosts plant growth, reduces watering frequency up to three times. The technology retains rainwater coming from infiltration (rainfalls) or waterings. This solution is neither expensive nor complicated and does not require a suitable surface. Wherever vegetation solutions are used to support retention, whether it is grass, trees, shrubs, plants for green roofs or green walls, the development of these plants can be supported by GSW.

Effect of measure

Increasing the amount and improving the conditions of green areas in the city has a positive effect on the well-being of residents.
Increasing the amount of retaining rainwater (GSW).
Reducing water stress, preventing wilting of plants.

Description of implementation

Effect horizon: short term to long-term	**Involved stakeholders:** residents, designers and engineers
Implementation: October 2009/ ongoing	**Initiator / responsible** Wrocław University of Environmental and Life Sciences (The Faculty of Environmental Engineering and Geodesy)

Lessons-learned	
Main success factor: Information of residents about the advantages of these solutions (e.g. the possibility of retaining rainwater in-situ) and the positive impacts on the quality of their life. In addition, risk of losses caused by heavy rainfall are mitigated.	**Main challenge:** The challenge is to disseminate the technology and convince citizens to use the proposed solutions.
Synergies / beneficial aspects: Use of new, more environmentally friendly solutions (like GSW) can bring financial, social and ecological benefits. The solution increases the amount of vegetation. This positively affects the well-being of residents and the microclimate.	**Conflicts / Constraints:** additional cost of the investment
Key message to others starting with a similar task	
Investors should be acquainted with the advantages of this solution in order to use it (e.g. decreasing the costs of maintaining green areas in the future).	
Contact	
Dr hab. Krzysztof Lejcuś Wroclaw University of Environmental and Life Sciences e-mail: krzysztof.lejcus@upwr.edu.pl	

Water absorbing geocomposite (GSW) under tree and on the embankment (good condition of plants has anti-erosion effect) Source: K.Lejcuś