

3rd ESP EUROPE CONFERENCE



Tartu, Estonia

Ecosystem Services Science,
Policy and Practice in the
face of Global Changes

2021 7-10 June

LODZ CITY
DEMO SITE



HELSINKI CITY
DEMO SITE



LYON CITY
DEMO SITE



ATENAS





LODZ CITY DEMO SITE

The upper Lodka River





Blue – Green Infrastructure

management of stormwater
and adaptation to climate change

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Blue – Green Infrastructure management of stormwater and adaptation to climate change

Iwona Wagner



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CLIMAPOND: Biological pond collecting rainwater from roofs

Radom climate kindergarten (before and visualization)



- Public Kindergarten No. 16 in Radom
- Water management on the site
- Retains and infiltrates water from 225 m² of roof and 121 m² of pavement



- Ecological requirements taken into account equally with the technical requirements
- Improving biodiversity and regional fauna and flora
- Adaptation to climate change
- More friendly landscape and recreational ground
- Water playground
- Environmental education

CLIMAPOND: Biological pond
collecting rainwater from roofs

Radom climate kindergarten (implementation, 2017)



CLIMAPOND: Biological pond
collecting rainwater from roofs

Radom climate kindergarten (implementation, 2017)



CLIMAPOND: Biological pond collecting rainwater from roofs

Residential backyard, Aarhus, Denmark (before, visualization)



CLIMAPOND: Biological pond

collecting rainwater from roofs

Residential backyard, Aarhus, Denmark

(implementation, 2016)



CLIMAPOND: Biological pond

collecting rainwater from roofs

Residential backyard, Aarhus, Denmark
(implementation, 2016)



CLIMAPOND: Biological pond

collecting rainwater from roofs

Private house, Middelfart, Denmark
(implementation, 2016)



Green Bus Stops retaining stormwater



Green Bus Stops retaining stormwater



WATERBOX - Rainwater retention from roofs and sidewalks
Kindergarten in Radom **KILIŃSKI**ego Str. (in progress)



POND - Rainwater retention from roofs and sidewalks
Housing cooperative, Warsaw, Filtrowa Str. (in progress)



CLIMAPOND - Rainwater retention from roofs and sidewalks Radom Gymnasium, ul. Gagarina (in progress)



Rainwater retention on the roof of the underground garage Warsaw



Blue – Green Infrastructure

Benefits

- **Adaptation to climate change** – mitigating the effects of high temperatures and heavy rainfall
- **Management of rainwater** at the site of precipitation (prevention of flooding, off-loading of the sewer network)
- **Mitigation of the urban heat island** – improving humidity and air quality, lowering high summer temperatures
- **Reduction of rainwater discharge fees**
- **Friendly public space** - more greenery in the city
- **Supporting biodiversity**

<http://zieloneprzystanki.pl/>

<http://klimatfppenviro.pl/>

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Blue – Green Infrastructure
for stormwater management



Blue – Green Infrastructure management of stormwater and adaptation to climate change

Agnieszka Bednarek



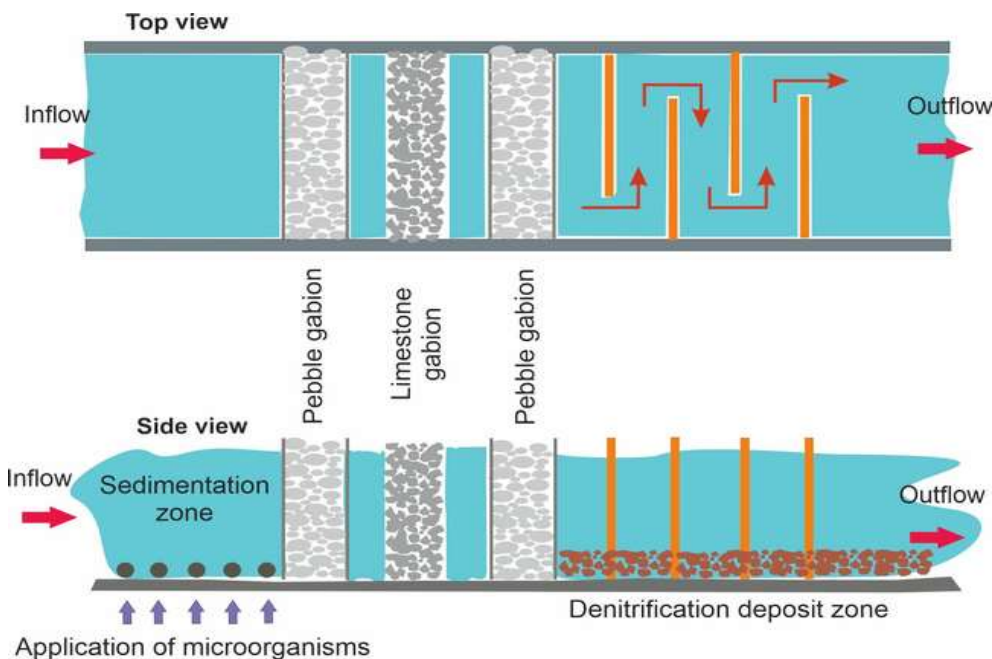
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Denitrification zone in Sedimentation Biofiltration System (SBS) for nitrogen removal from contaminated storm water



Sedimentation Biofiltration System located in Gniezno, Poland (Struga Gnieźnieńska/Jelonek Lake) (construction: Mikronatura Środowisko Sp. z o.o., project GEKON2/O3/267948/21/2016 Development and implementation of a method of lake reclamation and surface water protection based on natural biological technologies using useful microorganisms; property rights: P.422056 29/06/2017)



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