

# Rain gardens as examples of community building and sustainable urban development in Kecskemét, Hungary

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# WHAT IS A RAIN GARDEN?

- A rain garden is a depressed area in the landscape
- Collects rain water allows it to soak into the ground, reduce runoff
  - from a roof,
  - driveway or street
- Filters out pollutants in runoff and provide food and shelter for butterflies, song birds and other wildlife
- Improves the aesthetics of the urban environment

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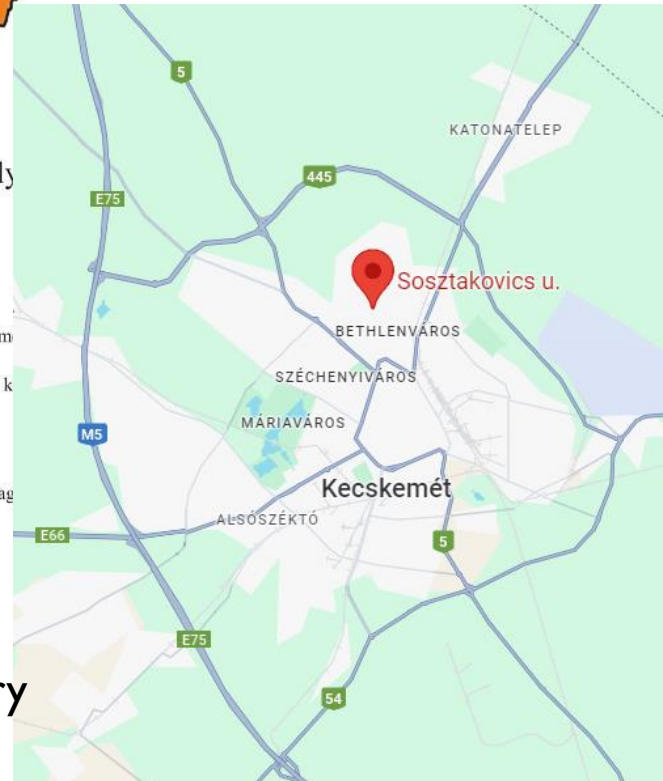
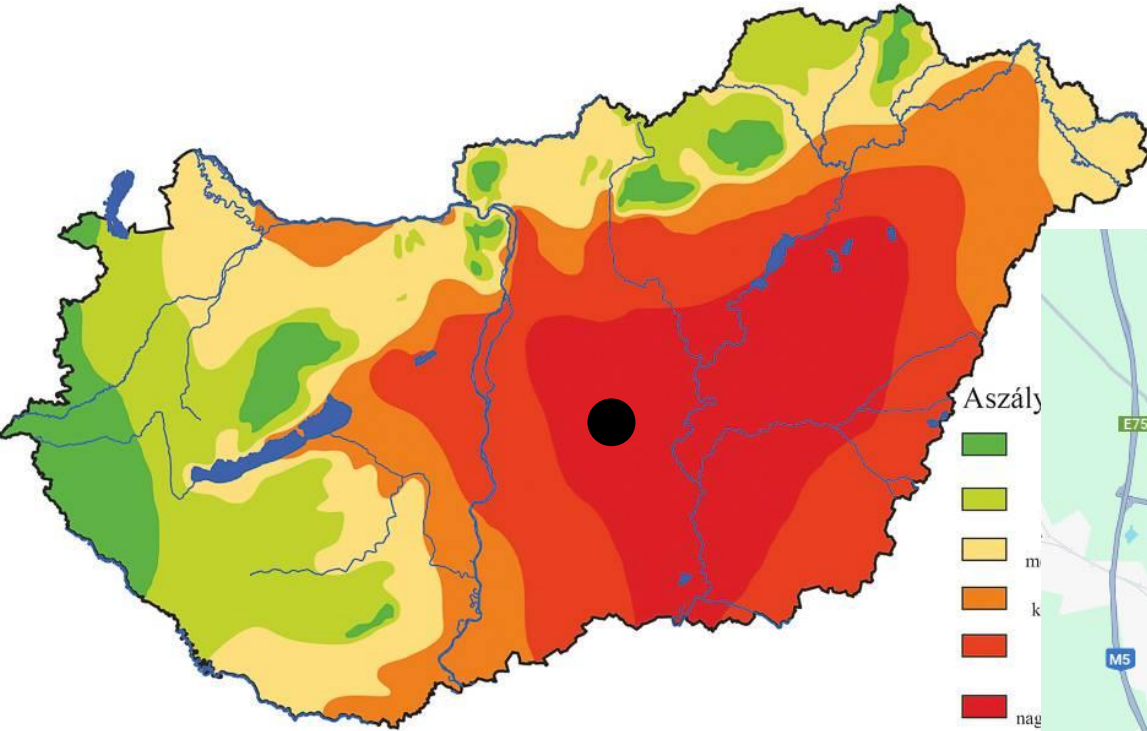
• Visegrad Fund



Oregon, USA

Source: [oregonmentro.gov](http://oregonmentro.gov)

# WHERE IS THE BEST PRACTICE SITUATED



Kecskemét, Hungary  
Source: Google

- In a post-socialist condominium environment
- In an underutilized public park,
- A 120 sqm rain garden.

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# STEP BY STEP



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Kecskemét, Hungary  
Source: esokertek.hu

# FUNDING SCHEME

- **Funding method:** the process was co-financed

Local  
representatives'  
financial  
framework



Condominium  
contribution



Public  
donations



Rain garden

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- **Costs:**

- Materials for a do-it-yourself rain garden can cost 1€-5€ m<sup>2</sup>,
- or 100-2,000€ for a 100- to 400 m<sup>2</sup>

# METHODS USED TO INVOLVE THE COMMUNITY



- Partnership was built by the local community and residents of the condominium
- People were asked to cooperate and help in the creation of the rain garden
- The locals are responsible for the maintenance (whis requires low effort)

*„We cannot achieve results without the cooperation and support of the population, and it is important to think together.”*

Source: baon.hu

Source: Facebook/esokertek

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## SIDE EFFECTS

- If rain gardens are not for everyday use, since the soil becomes compacted,
- On hilly areas erosion eventually occurs
- Too much rain leads to reduced soil oxygen:
  - can lead to root loss
  - rotting that stifles a plant's growth
- Can attract wildlife, including insects may cause damage or frustration of people

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Kecskemét, Hungary  
Source: esokertek.hu

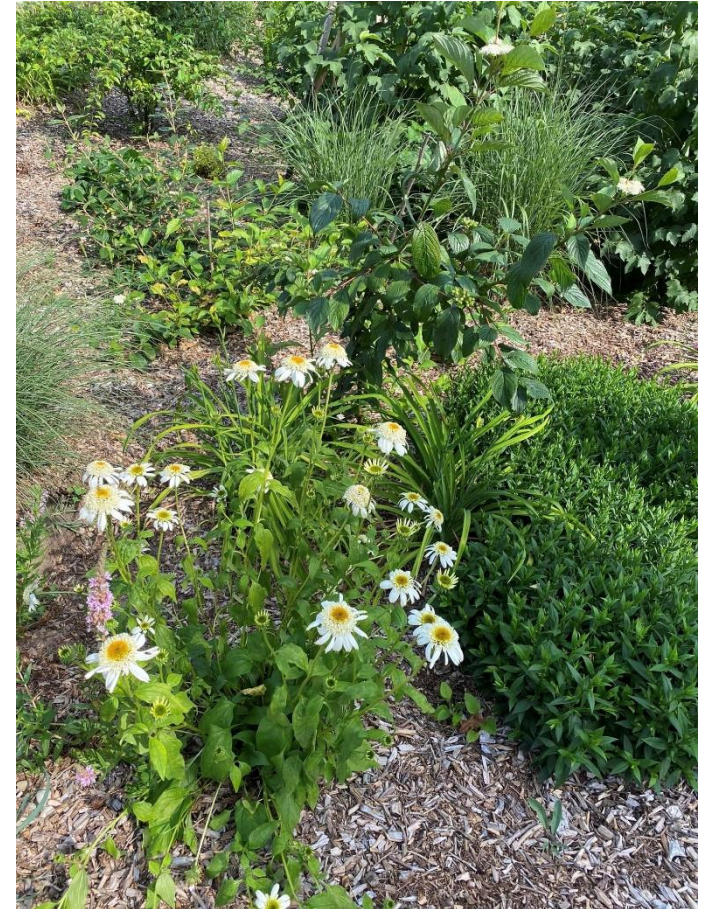
## RISK/THREATS FOR MAINTENANCE

- Native plants do not need fertilization
- Maintenance of these gardens is considered minimal
- Fairly regularly there is the need for weeding and remove rubbish or debris
- In dry periods, there is the need for watering the area

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Kecskemét, Hungary  
Source: esokertek.hu





# RESULTS REACHED

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## BENEFITS OF RAIN GARDENS



Bak, J.; Barjenbruch, M. Benefits, Inconveniences, and Facilities of the Application of Rain Gardens in Urban Spaces from the Perspective of Climate Change—A Review. *Water* **2022**, *14*, 1153. <https://doi.org/10.3390/w14071153>





Source: Facebook/esokertek



Source: Facebook/esokertek



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Source: Facebook/esokertek



HUMUS

SANDY BASE SOIL

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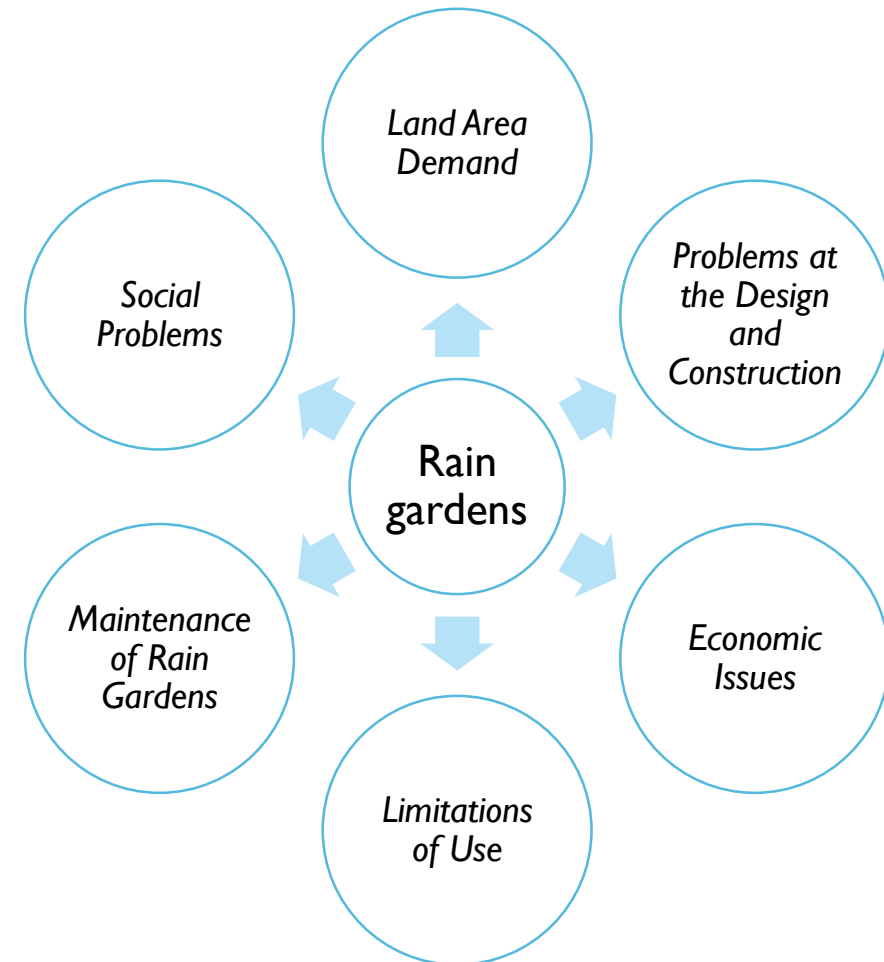
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# ADAPTATION POSSIBILITIES FOR OTHER SETTLEMENTS

- Limitations to the use of best practice in different locations
  - Not all areas are suitable for a rain garden
  - Soil should not have too high a clay content
  - Minimum need of approximately 50-100 square meter
  - To have a supply of rainwater runoff
  - if the area is on a steep slope, a rain garden is not considered suitable



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THANK YOU FOR YOUR  
ATTENTION

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