



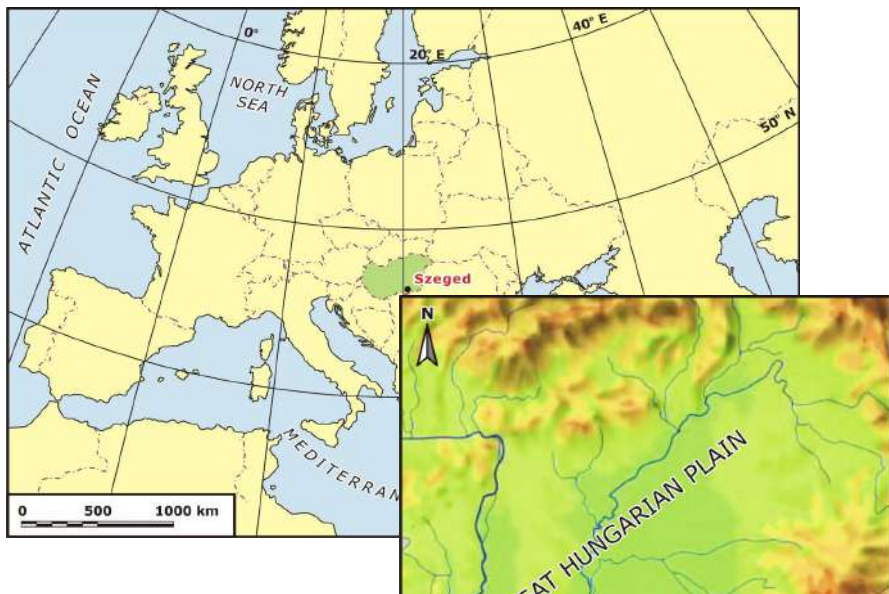
**Biodiversity as urban challenge**  
case studies from Szeged  
Hungary

**Ágnes Gulyás PhD**

Department of Climatology and Landscape Ecology  
University of Szeged, Hungary



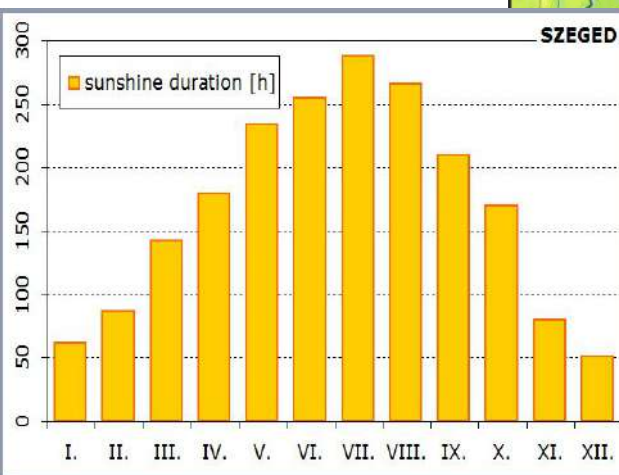
# Bird friendly garden in a school



3<sup>rd</sup> largest city of **Hungary**  
(population: ca. 162,000 + 25,000 students)

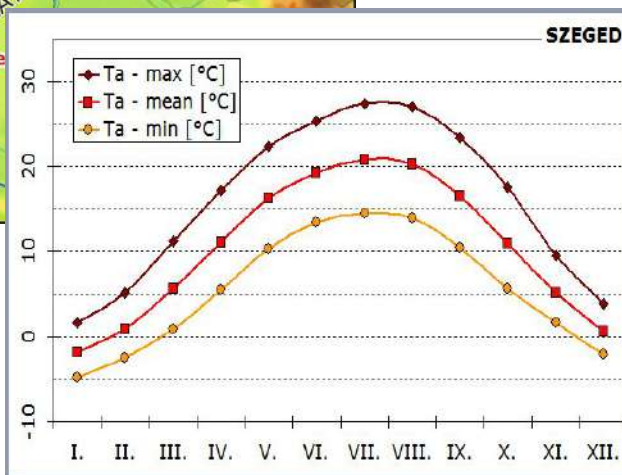
Southeastern part of Hungary  
(46.255°N 20.145°E)

The ‘city of the sunshine’



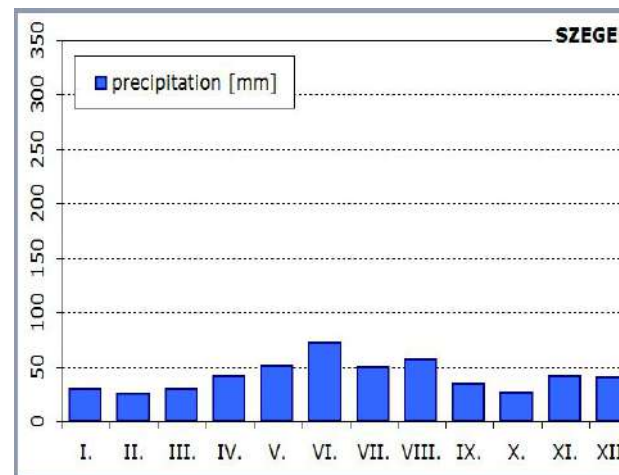
**2023 h**

yearly sum of sunny hours



**10.5 °C**

mean annual temperature



**495 mm**

yearly sum of precipitation





# Arany János Elementary School



northern part of the city  
residential area  
4-lane busy boulevard





## Basic idea - opportunities



➤ 800 students + 100 teachers and staffs

➤ large free space

➤ favorable microclimate

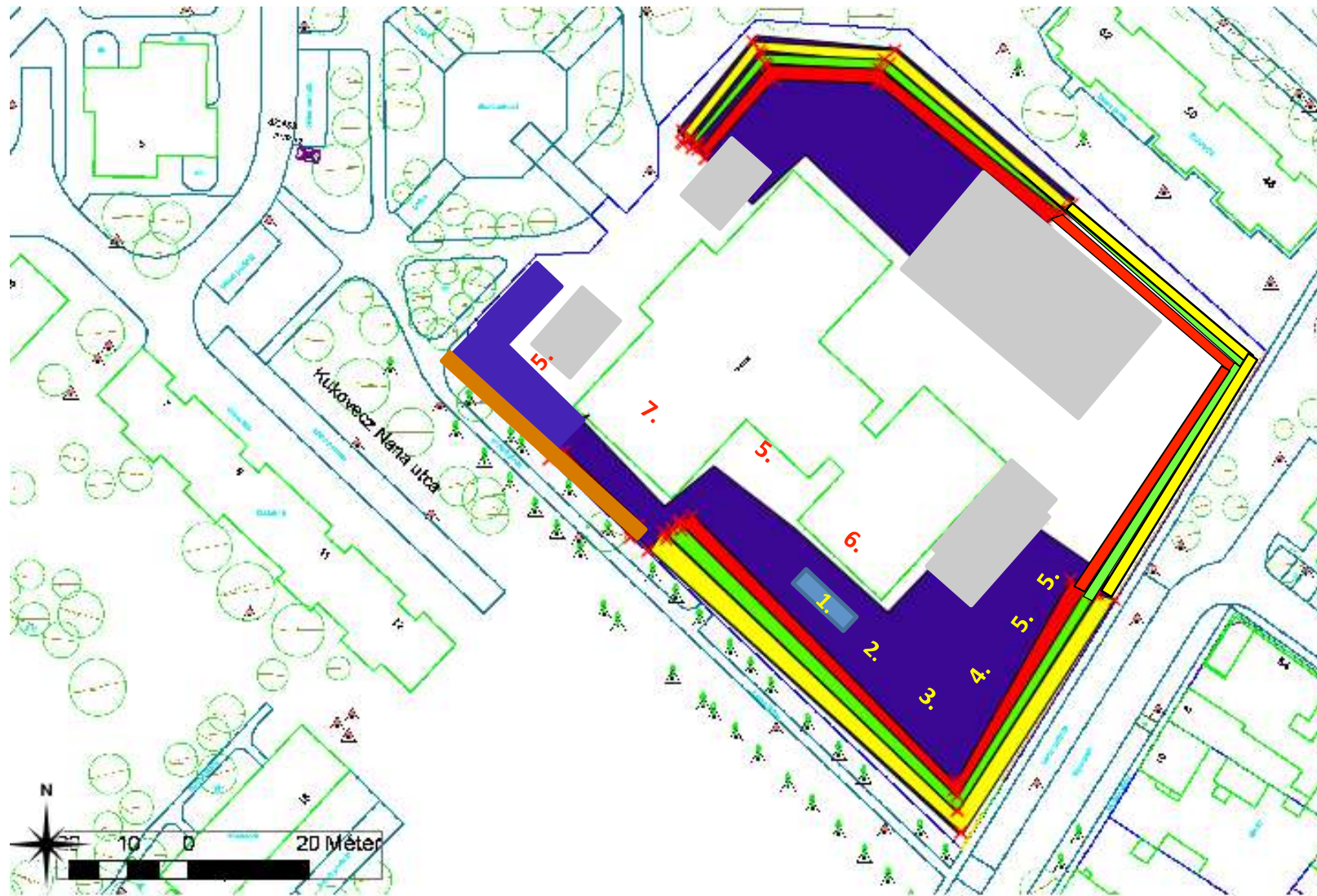
➤ connection

➤ „unlimited”  
human resources





# 1. Step – detailed assessment



-  tall species
-  middle sized species
-  low perennials, broadleaf evergreens
-  shade-tolerant plants
-  concrete surfaces
- 1. composting
- 2. birth bath
- 3. feeder on the soil
- 4. feeder
- 5. nesting box
- 6. artificial swallow nest
- 7. spice and herb garden



# Difficulties



➤ poor soil condition

➤ poor water supply

➤ intensive use



➤ limited financial resources





## 2. Steps – habitat development



➤planting

shrubs, perennials

(native, drought tolerant...)





## 2. Steps – others



- pollinator protection
- bird protection equipments
  - ✓ Feeders
  - ✓ Boxes
  - ✓ Swallow nests
- water supply





# Results – vegetation diversity







# Results – pollinators diversity







## Results – birds diversity







# Difficulties now 01







## Difficulties now\_02







# Advantages - Plans







# Thank you for your attention!



Visit our website: <http://www.nature4cities.eu/>

And follow us on the social medias:

