

Adapt to climate change: Water management in Park Glorieux Eindhoven, the Netherlands: a successful story. Rob Plomp and Henes Claassen

Last summer, in Chambord, I started the mornings with a swim in the Loire. What better example is there of climate change : a few weeks later swimming in the Loire was almost impossible by the lack of water.

Climate change will bring more drought as well as heavy rains. We must think about a new balance. In the old days (or maybe until now), the Dutch are world wide known as heroes in water management. Big parts of the Netherlands are below sea level so the biggest job is to get rid of the water or we will drown. But in the last few years we are facing an new problem as we experienced a great lack of water in the summertime. So the new added goal is to store as much water as possible to overcome droughts.

Harrie Theunissen, head gardener in Eindhoven, has reached this goal already. On his estate Glorieux in the centre of Eindhoven, he has no problems with too much or not enough water. Even in the last few very dry years. How he managed to do this, I will explain to you in a moment.

He asked me to tell this story on his behalf because he thinks his knowledge of English and French is insufficient. Besides, he is so enthusiastic that he needs at least three hours to tell his story. And there is only 10 min available.....

Of course there was a lot of work done to get to the point where Harrie is now. But before I show you what measures he took it is important to realise that it is not just taking measures, it is a way of life. Harrie emphasizes that experience and curiosity are very important. And by that he means Experience on your estate, a long life bond and curiosity to new solutions.

Park Glorieux started in 1912 as “Congregatie van de zusters van barmhartigheid” (Congregation of the Sisters of Mercy) but is now a place for about 140 care- needing elderly. It is about 12 ha and consist of gardens, lawns, waterways and a large forest.

When Harrie started working in Glorieux in 2014 he immediately started with big changes. For two months the excavators were digging in the park. His slogan was: waterways are to bring the water in and not to take it out. So he dug holes where possible so that rainwater could gather and infiltrate. He dug new ponds and ditches where a surplus of rain could be saved. All drains from buildings and roads are leading to waterways-so all the rainwater is kept on the estate.

Harrie compares his estate to a pot plant: if it dries out it is very hard to moist it again. Water will not be stored in a dry medium: it takes time to remoisten the soil. But by always keeping the medium in a moist condition, every waterdrop will be taken and stored by the soil. So soak the soil when you have a surplus (i.e. in winter) and keep it moist as long as possible.

Of course a very important part is: organic matter. It helps to save the water and is indispensable part in water management. Harrie hates compost! Why: to make compost you have to work very hard : gather it, turn the heap several times, spread it again. And who wants that, there are more important things to do. Furthermore, by gathering your components for the compost, you leave all live back in the forest and garden hungry. So: do not remove leaves or any dead materials (for example in borders). Make heaps of dead wood for insects and all other creatures.

Also Do not mow under trees, and never prune trees from the lowest branches. By this the tree makes a healthy root system. Soil temperatures are higher in winter and spring which has the effect that trees are forming leaves earlier in spring. That makes that evaporation from the soil less and the temperature in summer under the trees lower. It saves water.

Harrie says : Management is like chess: if you move one piece it influences all the others. So in order to win you have to move the right pieces. Keep that in mind and your win will be easy.

Has it worked? Yes. Deteriorating trees are forming new shoots, the leaves are bigger and greener. The biodiversity is enormous, especially if you look at the location of the estate, surrounded by the city of Eindhoven. I will show you pictures from 2016 and 2021.

Conclusions:

- Stay at your estate as long as possible so you will get to know your “chesspieces”
- Be curious to research for new solutions
- **Keep the water in, moisten your soil**
- Do not waste any materials
- Love animals as well, increase your biodiversity
- Tell your story! (to the councils, to the children, to students, to anyone)