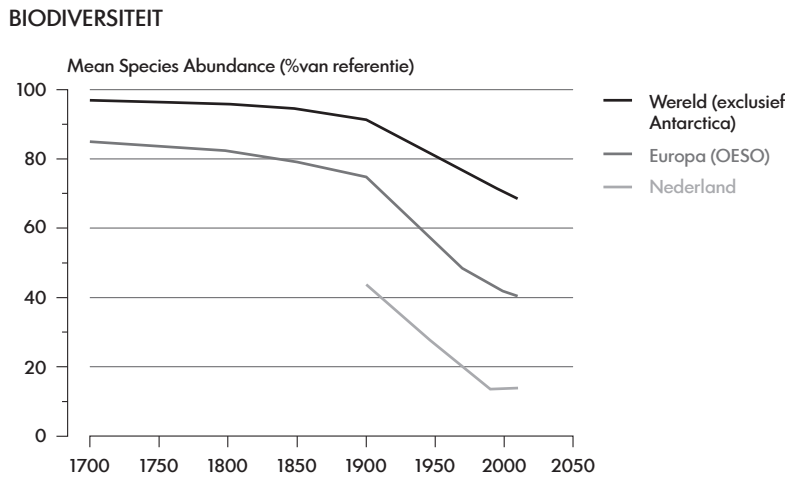


Panel content

Expo

Building for biodiversity

Successfully working on more biodiversity means making smart combinations across disciplines (Prof. Ortwin Renn, advisor to the core European Commission, Stuttgart)



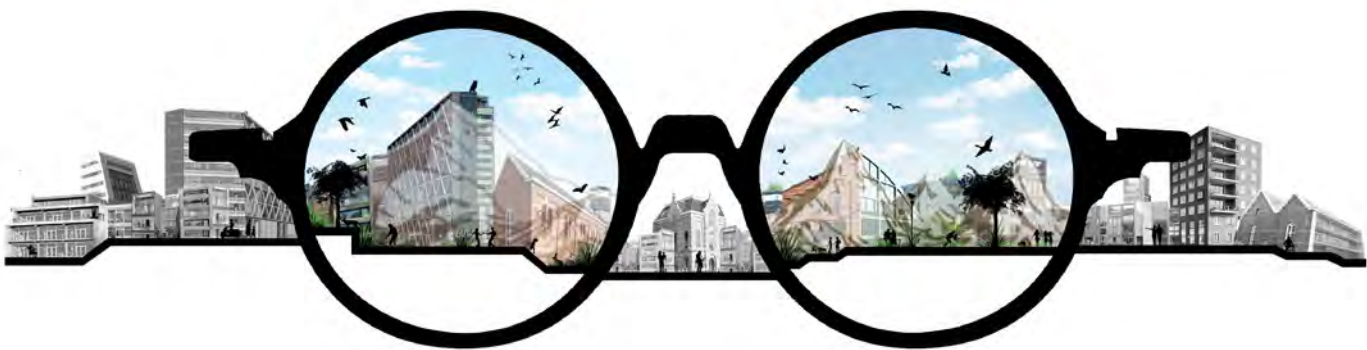
Bron: Compendium voor de Leefomgeving (www.clo.nl144002)

In comparison with Europe and the rest of the world, the Netherlands is considerably less concerned with biodiversity. In Europe as a whole, less than 50% of the original biodiversity remains. The decline of biodiversity in Europe has slowed down since 2000. At the world scale, 70% of original biodiversity remains. In the city, the richness of different sorts is often greater than in the modern countryside.

Four of five Europeans live in urban areas

Real men don't mow

Building for biodiversity



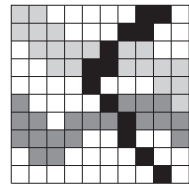
Live with life, building for biodiversity

Perhaps you've never looked at it this way? For living organisms a city is nothing more than a rocky landscape. We are becoming increasingly aware of what each species needs in order to establish itself, to grow and to breed.

We can build for plants and animals by giving them a role in the reaching of planned objectives. That is good for biodiversity and good for us.

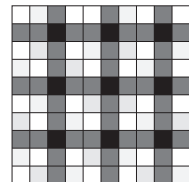
Diversity in all respects makes a city future-proof (Prof. Thomas Elkqvist, Stockholm University)

What should you look for?



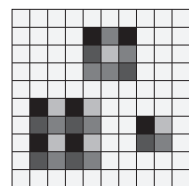
Connectivity

Connections at every scale are important for biodiversity. These include links to and within an area, such as walkways, waterways and air corridors for different plants and animals to move across and through.



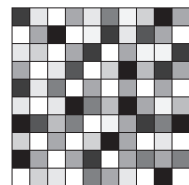
Redundancy

The increased continuity of biodiversity is created through the overlapping and backing-up of certain species, so that the disappearance of one is compensated by the growth of another. A redundant system does not consist of a single species.



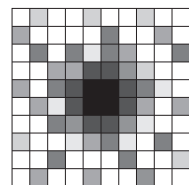
Modularity

Diversity in the size and structure of the building blocks of a city, district or neighbourhood promotes biodiversity. The greater variety in number and size, the better.



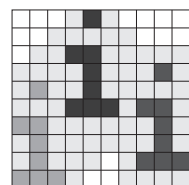
Diversity

A variety in use, buildings, residents, management and maintenance at every scale increases biodiversity. A small piece of uncut grass in a lawn already has a large effect on the whole.



Stewardship

Living with life is a new experience and successfully working towards biodiversity is the fruit of a joint effort. The necessary stewardship and enthusiasm means a change in our attitude and behavior.



Communication

There is always fear of the unknown. Milk comes from a cow, not a package. Information and ambassadors are needed to make the well-intentioned efforts of initiators run smoothly and end successfully. Spread the word and start immediately!

In Toronto 2,000m²+ buildings have a green roof

What should you look for?

Within the next 40 years urban infrastructure will cover an area of the size of Mongolia

How to bring more biodiversity in the city

The UN University investigated the factors that are important for the liveable city of the future. They distinguish four criteria, which also serve as suitable indicators for the increase of biodiversity in the city.

A fence around protected species is not enough; people want to experience biodiversity and actively support it. American experience shows that this involvement is the key ingredient to success in the long term

The Swiss government has learned that in order to create successful policy for urban biodiversity, adequate information and public support are essential.

More biodiversity in the city results in more quality of life – also for humans (Prof. Helge Bruehlheide, Halle)

Urban nature around the 200,000 trees in Amsterdam's public space provide a home to 140 species of birds, 34 mammals, 6 amphibians and 60 species of fish

Why biodiversity?



I deliver the basics

A working cycle of elements is the basis for life. A biodiverse ecosystem stores nitrogen and carbon stores and makes it available to man. Leaves absorb CO2 and fine dust and they produce oxygen.



Take profit from my products

A well-functioning ecosystem provides not only food such as grain and fruit, but also building materials such as wood. Medicinal herbs, soap and clean water contribute to our personal well-being.



I sort it out

A stable microclimate, a self-cleaning system for air, water and soil are priceless services. In addition, the ecosystem itself takes care of the pollination of plants.



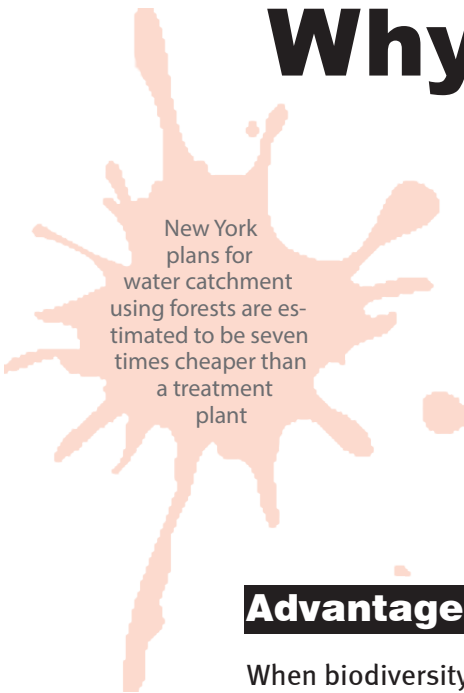
Enjoy the culture

A biodiverse ecosystem is a solid base for recreation, tourism and enjoying natural beauty and aesthetics. In addition, a biodiverse environment fosters inspiration, discovery and education, but also reflection and spirituality.



Combined with urban planning and architecture an urban ecosystem delivers energy, heat insulation and sound absorption and it provides light - or natural shading. Biodiversity in the city is used by architects to give identity to a place, and to promote social interaction. Beyond symbolism or even folklore biodiversity encourages the feeling of 'belonging' in the city.

Why biodiversity?

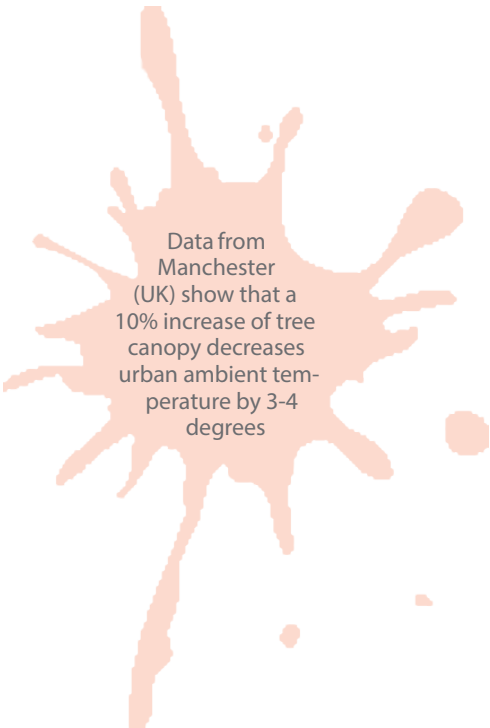


New York plans for water catchment using forests are estimated to be seven times cheaper than a treatment plant

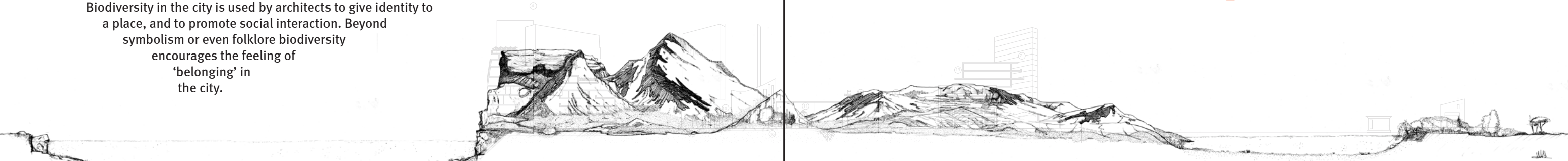
Advantages of increased biodiversity in the city

When biodiversity flourishes, so does human life. A biodiverse and stable ecosystem delivers services and products to the urban dweller. These internationally recognized

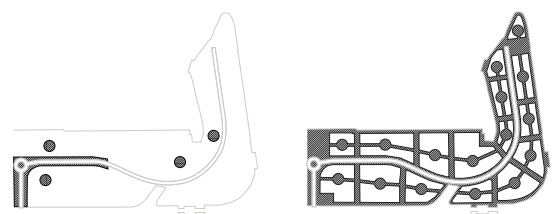
ecosystem services improve the quality of life in the city - and they are free. Their positive effect is improved by combining fauna and flora with architecture.



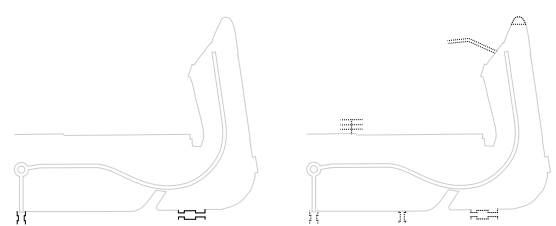
Data from Manchester (UK) show that a 10% increase of tree canopy decreases urban ambient temperature by 3-4 degrees



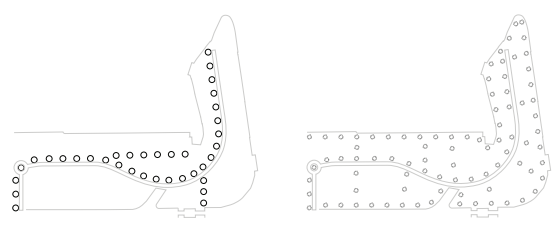
Case study Cruquiseiland



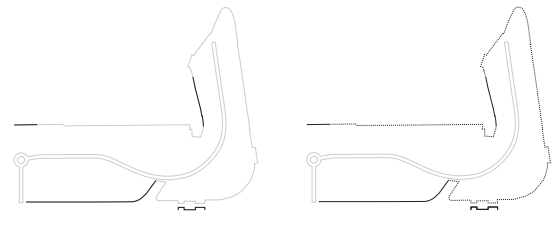
Gardens
Connections between private and public planted areas allow small animals and insects to migrate through.



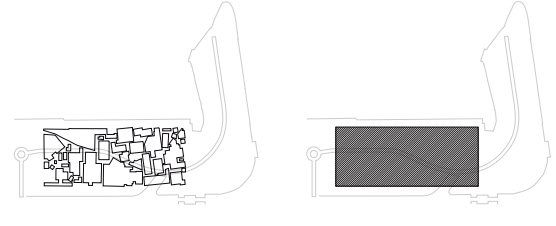
Civil works
Many types of infrastructure provide space for shelter, nesting opportunities and for wall vegetation.



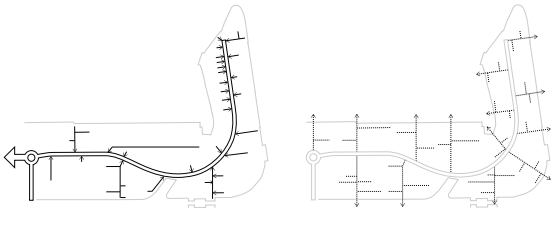
Streetlights
Smart lighting and amber colored streetlights are bat friendly.



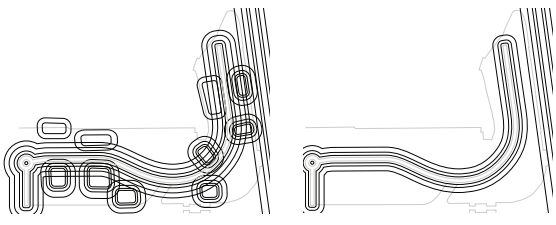
Decontamination
The quays to isolate the polluted soil can also be suitable sites for vegetation. Animal routes also increase accessibility to the water for people.



Generating energy
Solar cells on green roofs have a higher efficiency because they stay cooler than while on a bare roof.



Water management
Collecting the rainwater in a natural water treatment area (helophyte filters) creates a source of plant and animal life. You can discharge the clean water onto the surface. This relieves the sewage water.



Noise reduction
Vegetation reduces noise from the surrounding environment. Permeable pavements and porous facade materials promote the growth of mosses and lichen.

current situation after transformation

Case study Cruquiseiland

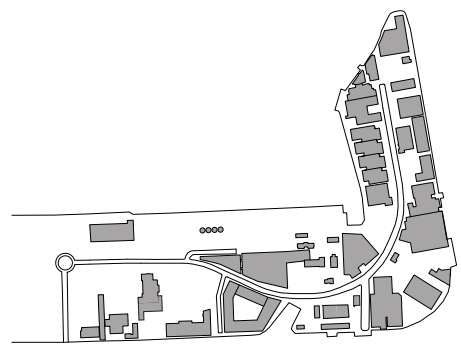


Combining redevelopment and biodiversity

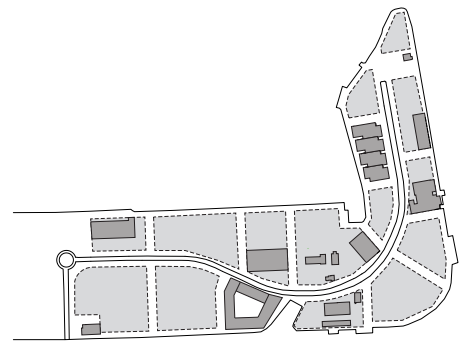
Successfully working towards more biodiversity in the city means making smart combinations with other task. The natural wealth increases by determining

the possibility for biodiverse results at the start of an investment. The credo in construction is: Make it biodiverse!

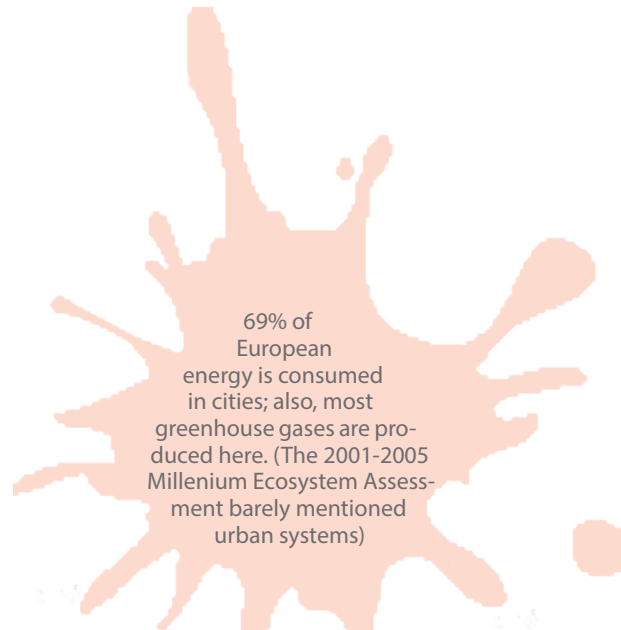
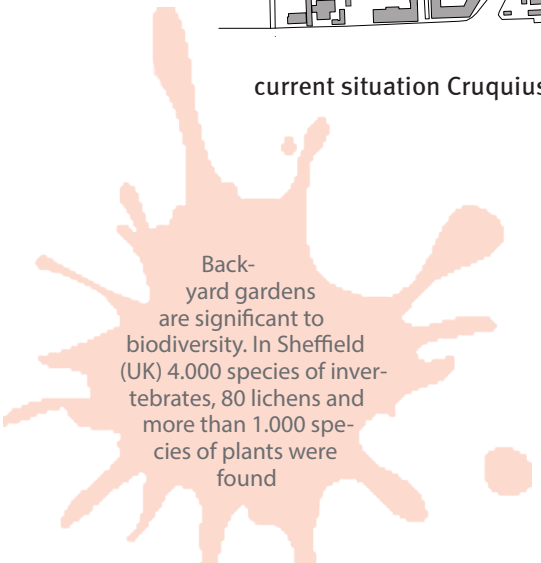
A healthy tree has the cooling capacity of 10 airconditioning systems



current situation Cruquiseiland



transformation sites Cruquiseiland



Co-operate!

In Bern
15% of a
new building
plot is nature

Amster-
dam promotes a
more ecological and
'wild' way of main-
tenance because more
biodiversity leads to
economic development
(Plan Amsterdam
3-2014)

What do you suggest?
Stick your ideas on the panel

Am-
sterdam
digs a free pave-
ment garden for
inhabitants

The world

Biodiversity has an intrinsic value for evolution and for maintaining life sustaining systems. Conservation of biodiversity is a common concern of humankind (UN Convention on Biological Diversity CBD, 1992, Rio de Janeiro).

Amsterdam

Cities across the world play an important role for the conservation of biodiversity. The Structuurvisie 2040 is the first plan that gives attention to biodiversity and ecological connections. While in the previous nine plans attention was given to green spaces, this was always approached from a human perspective. The new structuurvisie shows a change in mentality (Structural Amsterdam 2011, Ecological Vision, 2012).

Netherlands

The essence of the vision for the next 10 years is a change in thinking: nature has a place in the middle of society, not only in the nature areas. This is good for the economy and for biodiversity (National Nature Vision 2014 further course).

Amsterdam East

Here, the agenda is a greener, more biodiverse, higher quality and more attractive living environment in the public space, initiatives in the area (such as vegetable gardens and the facilitation of floating gardens). Attention given to the call "nature inclusive design". Besides its own position, the district also serves as a pilot (Agenda for the area "light", Eastern Docklands, 2014).

Amsterdam
repairs spatial
bottlenecks in biodi-
verse connections with
Fauna Exit Passages for
200.000 euros per year
(Ecologische Visie Am-
sterdam 2012)

Cruquiseiland

Initiatives that result
in more biodiversity
in the city

Paris: city beehives
Basel: 15% mandatory nature
Toronto: mandatory green roofs
New York: green building construction act
Malmö: storm water policy (from roof top wetlands)
Amsterdam: initiatives for a biodiverse Cruquiseiland
Stadsdeel Oost: Vegetable garden 'De Cruquius Tuin'
Amsterdam: Regulation for "temporary nature"
Amsterdam Subsidy for green roofs
Amsterdam: Small front yards

COLOPHON

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