

DISCOVER URBAN ECOLOGY

An aerial photograph of a green roof structure, showing a dense layer of green plants and trees growing on a curved, elevated surface. The background is a clear blue sky. The image is framed by a white border with a black and white pattern on the sides.

**DEVELOPING ECOLOGICAL
SKILLS TOGETHER**

waag  futurelab

Introduction

When you look closer, there is always something interesting to discover in the landscape. Nature is a source of beauty, relaxation and well-being, but it is also under pressure. Biodiversity is declining and habitats are disappearing. We humans have lost sight of the living world around us. How can we better attune our senses to our surroundings? And work towards a future where the human and other life forms live together as equals in a healthy environment?

In the recovery of our ecosystems, the city plays a remarkable role. The city is a hotspot for biodiversity and a daily meeting place for all kinds of living beings. It is a place where we can strengthen the connections between human and other life forms, but only if we learn to look at the city's living environment through a different lens. Waag Futurelab's Urban Ecology Lab explores the city as a living place, where people live together with many other forms of life. How do we relate to other animals, plants, soil, air and micro-organisms - in other words, to the 'more-than-human'?

This publication provides insights and examples of how more-than-human perspectives can be included in city-making. It draws on the experiences of the European research and innovation project T-factor, in which Waag explored how city initiatives can contribute to strengthening the bond between human and more-

than-human (pilot theme: Greening, biodiversity & urban wildernis).

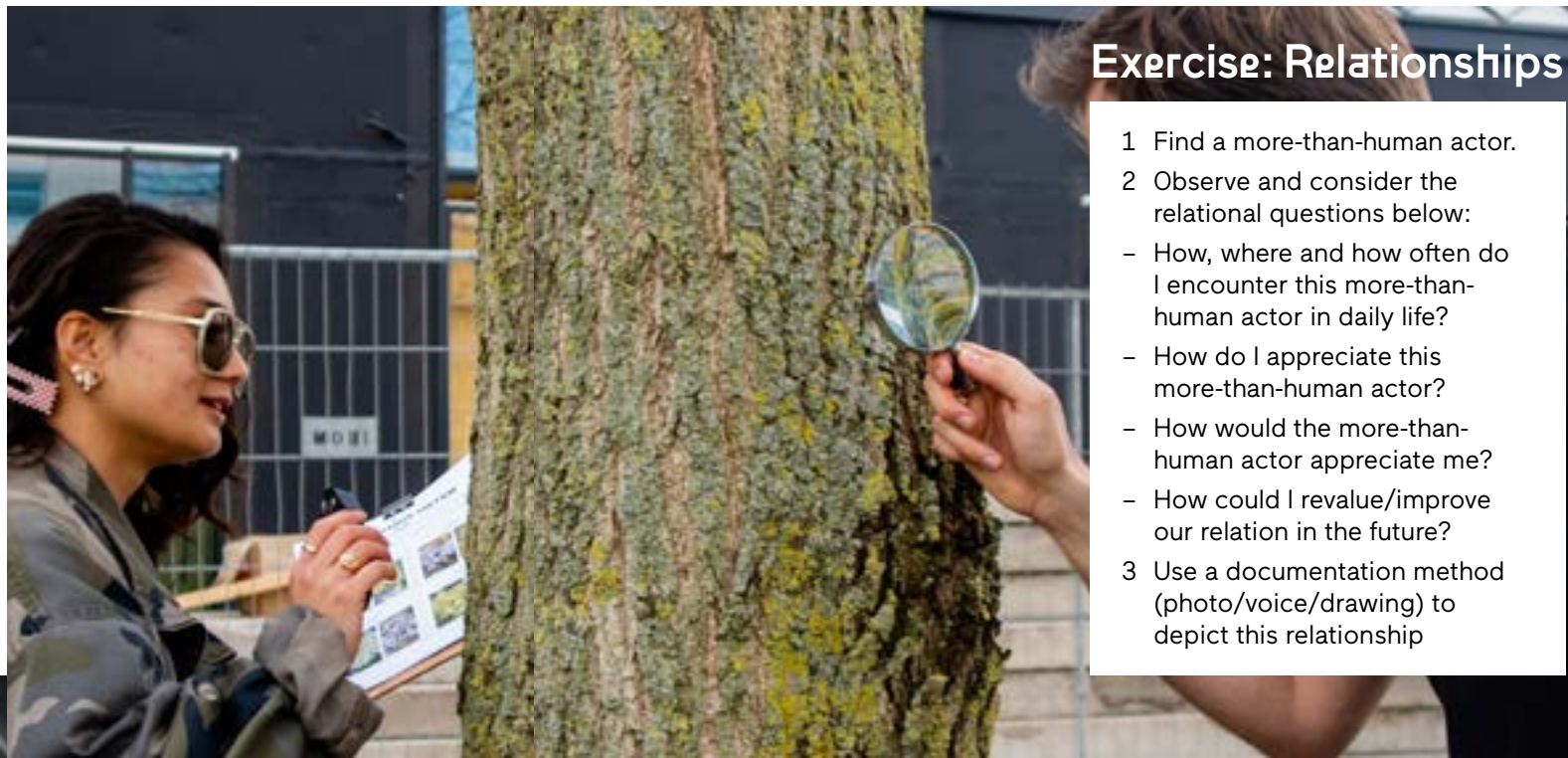
As part of T-Factor, Waag Futurelab organised the Landscape Festival: Met andere ogen (through other eyes). During this festival Waag collaborated with communities of artists, citizens, students, urban developers and researchers to create a new relation to nature. We followed the rhythm of the seasons – from building biodiverse interventions in spring to observing nature flourish in summer. The publication will guide you through the Landscape Festival's interventions and offers concrete ways to develop a more-than-human view of the city and practice ecological skills in collaboration with others.

Arts of Noticing

To built towards an ecological inclusive city we must move beyond the anthropocene's human centric approach. There is a need for a shift in attitude and way of working; to develop a sensitivity for more-than-human perspectives and take their perspectives into account in decision making and city planning.

Anthropologist Anna Tsing developed the method 'The Arts of Noticing' to become more aware of our senses and thinking, and to embrace our earlier practices of observation and natural history. The arts of noticing is about using all of your senses when researching the environment (*The mushroom at the end of the world*, 2015).

Practicing the arts of noticing enables us to experience and appreciate our environment in different ways: to take on different perspectives and help speculate what more-than-human perspectives are related to city developments. It offers interesting possibilities for attention and slowness in the interaction with the living environment. By taking a close look at the environment and taking the time to experience your surroundings with all of your senses, you open your eyes to things that usually stay unnoticed. In that way new relations with the environment start to form.



Exercise: Relationships

- 1 Find a more-than-human actor.
- 2 Observe and consider the relational questions below:
 - How, where and how often do I encounter this more-than-human actor in daily life?
 - How do I appreciate this more-than-human actor?
 - How would the more-than-human actor appreciate me?
 - How could I revalue/improve our relation in the future?
- 3 Use a documentation method (photo/voice/drawing) to depict this relationship



Landscape Festival: Met andere ogen

Inspired by the arts of noticing, Waag Futurelab organised the Landscape festival: Met andere ogen (with other eyes) in 2023 during the seasons of growth: spring and summer. Artists, residents, students and scientists came together over the course of several seasons during the festival to explore Amsterdam Science Park as a living place.

The festival started with a 'construction period' in spring. Through workshops and biodiverse adjustments, we collectively built physical, biodiverse interventions. These interventions brought together different forms of life and taught us

to pay attention to more-than-human perspectives and experiences.

During the summer, we humans took a step back, so that nature could take over the further development of the interventions. Other life was given the space it needed to flourish. On the longest day of the year, 21 June 2023, we marked that transition with the Midsummer Night Celebration. Throughout the summer, visitors could follow a walking route along all the biodiverse and artistic interventions to discover the more-than-human city.

The Landscape Festival as a strategy

The Landscape Festival proved to be a relevant strategy for creating an ecological inclusive city. The festival allowed people to look at the living environment from different perspectives and created practical ideas for making public spaces more biodiverse. Bundling multiple interventions in a festival made it clearer and easier for landowners and policymakers to grant permission to realise bottom up interventions in public space.

The Landscape Festival's biodiversity interventions were initially developed as temporary experiments in public spaces. After the festival, three

interventions were continued: a flower field, a green space co-designed by students where they can unplug from technology and a garden greenhouse where vegetables and plants are grown by residents. Read more about these projects in the following chapters.

The Landscape Festival also brought together local communities and stakeholders. A Green Coalition was started at the Amsterdam Science Park: a local, informal governance structure uniting people and initiatives with the aim to put urban ecology issues on the policy agenda. The group consists of Jeugdland, Anna's Garden & Ruigte, Vrienden van het Flevopark and Waag Futurelab. The Landscape Festival increased recognition among policy-makers and landowners of the added value of biodiversity within different domains. Especially important to them is the positive impact of green spaces on mental and physical well-being.

Waag Futurelab has the ambition to organise the Landscape Festival in other neighbourhoods and cities in the Netherlands in order to jointly build this new relationship with nature and give more space to the more-than-human in urban development.

The following chapters will guide you through the Landscape Festival's interventions and provides an insight into a more-than-human view of the city.



Multispecies Livingroom

De Onkruidenier

The Multispecies Livingroom is a living artwork that makes us aware of its ever-changing landscape. It is a collective learning environment where we learn to listen to the landscape and gain insights from its adaptability.

The urban environment is increasingly facing extreme weather due to climate change - from drought and heat stress to torrential rain. Extremophiles are cultures of bacteria that thrive under such extreme conditions. What can we learn from them?

In the Multispecies Livingroom, De Onkruidenier invited visitors to

reflect on how we will relate to an increasingly wetter, hotter and saltier environment. During several workshops, visitors empathised with extremophiles. Inspired by the survival tactics of extremophiles, we made skins and cocoons from jute and dyed them red with madder. These materials tell a story about the ecosystem that we are part of. For example, did you know that madder and jute thrive extremely well in hot urban climates as they are heat-seekers?

Find [more information](#) about De Onkruidenier's approach and method.

More-than-human Shelter

Esmee Geerken & Estelle Barriol

Could the need of humans and other animals for a safe refuge be a reason to live together? The More-than-human shelter provides a place where the returning wolf can mate, flanked by a habitat wall for kingfishers, a bench made of earth, a rabbit burrow where foxes can also settle and a meditation and observation site for humans.

Artist Esmee Geerken and architect Estelle Barriol collaborated with scientists, artists and residents to build a more-than-human refuge by watching and listening to the landscape. Who lives here and what is needed? At a sheltered spot near a

sand hill by the water, the shelter took shape. They investigated the history of that spot by looking at the soil: they found sand, peat and sea clay from the North Sea.

In the workshops, visitors, scientists, artists and residents built the shelter with local materials: from willow branches and limestone to sheets of bioplastics with calcite granules extracted from water softener. The floor was made of rammed earth, compressed soil from the Amsterdam Science Park.



Wild Spot

Futuribile

More and more is known about how mental health is connected to the environment: a green environment has a positive effect on health. Students and professors at Amsterdam University College experience the constant presence of technology as a hindrance. The Wild Spot is a hotspot to disconnect from the cognitive fatigue of the information economy and reconnect with nature, oneself and the others - a place focused on attention and connection between people and other life forms, and one that contributes to the development of a rich biotope.

In the course Anthropologies of

Communities, Professor Scott Dalby and Marta Arniani asked their students to design interventions at the Amsterdam Science Park to unplug from technology and relax in nature. During three workshops, the students designed their own intervention for the Wildspot. The interventions were built near a pond frequented by many students and located right next to the Amsterdam University College (AUC) campus. The students filled the spot with gardens, a hotel for insects, a hammock and a duck hatchery. Some of the interventions in the Wildspot will be given a permanent place next to the pond by the area manager.

Sound Oasis in the Making

Acoustic Ecology Tesla minor – University of Amsterdam

Although people are often not aware of their sound environment, it does affect our well-being. Policymakers at the Amsterdam Science Park also give little thought to creating a pleasant sound environment. In an effort to improve the acoustic environment of the park, the Sound Oasis in the Making was developed, creating a habitat for birds and a place where people can listen to their surroundings.

Master students Julia Marinissen (ecology), Zino Groen (biomedical sciences) and Maria Loos (ecology) investigated the acoustic ecology of the Amsterdam Science Park. Via the

[Sounding Urban Nature SoundCloud](#), different soundscapes of the Amsterdam Science Park can be listened to.

Nature sounds in particular are perceived by people as very pleasant and calming. Therefore, the students designed a Sound Oasis in the Making - a place where birds find food, shelter and nesting places. Seats were created for people to relax and listen to the environment more consciously. In addition, the students wrote recommendations for the decision-makers of the Amsterdam Science Park on how to improve the acoustic experience of the area.



Bamboo Dome

Anna's Tuin en Ruigte

Most people see bamboo as an invasive and unwanted plant. In permaculture garden Anna's Garden & Ruigte, people learn to look at bamboo in a different way: as a versatile and strong material that is locally available and can be used to build sustainable structures.

During the Landscape Festival, residents and enthusiastic (future) gardeners built a dome from bamboo; the Dome will be used as a garden greenhouse. This greenhouse will be a place where different types of crops can overwinter. In addition, participants learned more about what techniques can be used to combat

drought when growing crops and plants.

Cities are often home to green initiatives in which residents can contribute to a greener living environment. Anna's Garden & Ruin creates habitats for wildlife and plants in many ways; for instance, there is a food forest, a vegetable garden, and a garden forming a green corridor in which fox, stone bumblebee and kingfisher have been spotted.

Mini-hortus

Spark Village

Spark Village is the residential area at the Amsterdam Science Park. During the Landscape Festival, residents built a 'mini-hortus' in the communal garden. A 'hortus' is a place to marvel at the world's plants.

During a brainstorming dinner in the Spark Village common room, residents came up with the idea of building a greenhouse: the mini-hortus, a connecting place where local residents can come together to learn about nature and create more greenery in the neighbourhood. The plants grow in the greenhouse and when they are big enough, they move outside and make the area

more biodiverse. The mini-hortus was built by Spark Village residents during the construction period of the Landscape Festival in May and June 2023.

Seats were also created for people to relax and listen to the environment. The sound oasis aims to improve the sound environment and also to make people listen more consciously. In addition, the students wrote recommendations for the decision-makers of the Amsterdam Science Park on how to improve the acoustic experience of the park.

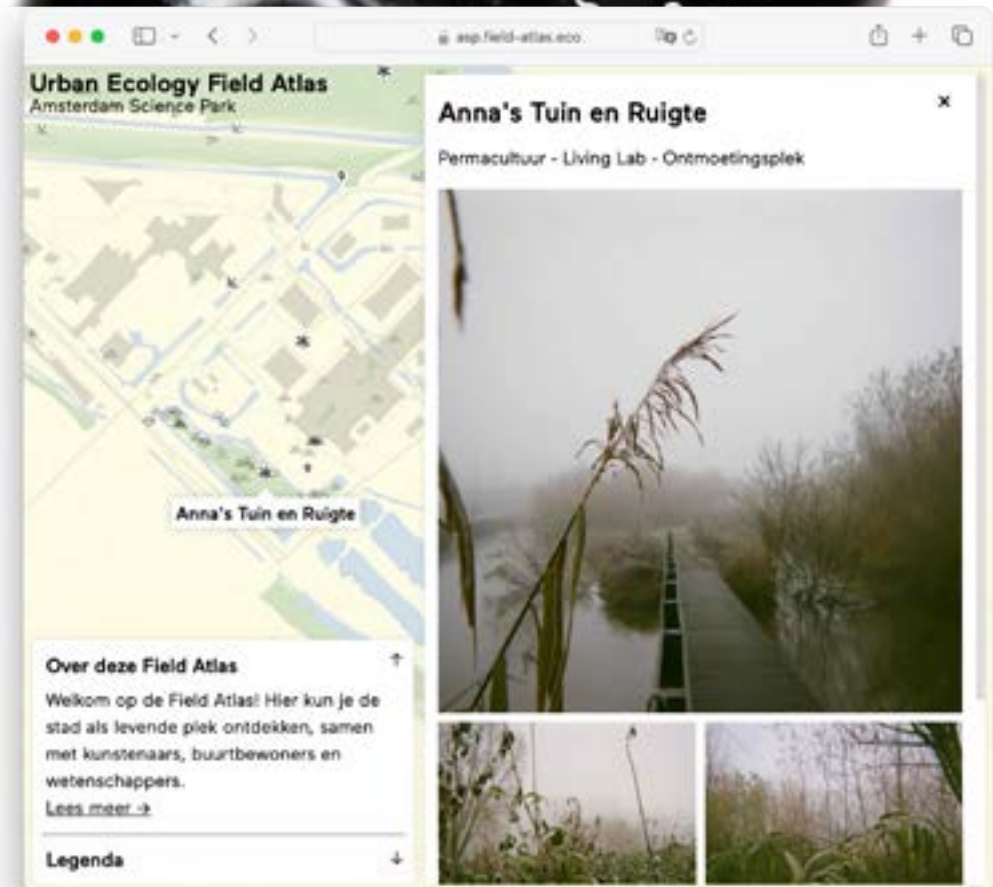


Flower Wilderness for Birds and Bees

Waag Futurelab

Waag Futurelab's Urban Ecology Lab encourages people to take a step back and let nature take its course. The patches of greenery in the Amsterdam Science Park are regularly mowed by the City of Amsterdam. Waag asked the municipality not to mow a large field next to the data centre at the Amsterdam Science Park, so the place had the opportunity to grow wild.

The field was sown with a flower mix that benefits insects and birds and came into beautiful bloom in the summer: from snake weed with beautiful purple flowers to the red poppy. Visitors were invited to view the wonderful flowers. The field not only gave an increasingly colourful appearance, it also provided a great buffet for birds and insects!



Field Atlas

Waag Futurelab

What if we map our surroundings focused on the city as a living place? The Field Atlas is a subjective map of the Amsterdam Science Park that shows its biodiversity.

Visitors can add their observations to the atlas by sharing them through iNaturalis. The map also shows all the interventions that were built during the Landscape Festival. The Field Atlas is not static, because the

Amsterdam Science Park is always changing. Unlike the Master Plan adopted by the City of Amsterdam and the University of Amsterdam in 2014, the Field Atlas offers space for new developments from the bottom up and shows the city as a living place.

Visit [the Field Atlas](#).

Waag Futurelab

Waag works in a trans-disciplinary team of designers, artists and scientists, using public research methods in the realms of technology and society. This is how Waag empowers as many people as possible to design an open, fair and inclusive future.

Urban Ecology Lab

In an era of climate change and biodiversity loss, the relationship between humans and their environment is in need of renewal. Waag's Urban Ecology Lab explores the future of the city as a living place, where people live together with many other forms of life.

Together with communities of artists, citizens, urban developers and researchers, we actively go out into the field to develop ecological skills together. We conduct artistic experiments and learn how to study the living environment with attention. The Urban Ecology Lab also develops methods to recognise the polyphony of an area and use imagination to arrive at new visions of urban design. By doing so, the Urban Ecology Lab creates a new perspective on urban development that includes human and more-than-human.

T-Factor

T-Factor is a EU Horizon 2020 project that seeks to unlock the transformative potential of temporary use in

urban regeneration. The project is a collective effort of many organisations across Europe and beyond, including cities, universities, businesses, and grassroots communities.

The project develops temporary use programmes within the realm of regeneration initiatives across Europe and China, harnessing culture and creative collaboration to prototype urban hubs of sustainability, social innovation, and inclusion. T-Factor ultimately aspires to foster sustainable and resilient communities, empower local stakeholders, and inspire global dialogue on the role of temporary use in shaping vibrant, equitable, and adaptable urban environments for generations to come.

Pilot: Amsterdam Science Park

Waag coordinated the pilot at the Amsterdam Science Park, focusing on Greening, biodiversity & urban wilderness. Science Park is an area in Watergraafsmeer, a neighbourhood on the outskirts of Amsterdam, Netherlands. Amsterdam Science Park is a centre for science in Amsterdam and combines science with living and working space. The three landowners of the Science Park are the Municipality of Amsterdam, the Netherlands Organisation for Scientific Research (NWO) and the University of Amsterdam (UvA).



Colophon

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Discover Urban Ecology highlights the ways that co-creative methods and temporary interventions can foster biodiversity and ecological awareness in citymaking. It focuses on the concrete approach and activities that Waag coordinated during the project T-Factor.