



Digital Kins: A Biodiversity Data Portal

< Stories

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Location
51.5960° N, 5.6815° E
Ecodorp Boekel, Netherlands



Tags
AUTOMATION
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DIGITAL TWINS
MONITORING
PARTICIPATION

During the spring and summer of 2023, postdoc [Michelle Westerlaken](#) carried out [fieldwork](#) about the digitalisation of [biodiversity](#) technology together with [Ecodorp Boekel](#), in the south of the Netherlands. Over the course of five months, we used different technologies to collect and experiment with local biodiversity data. The main questions that guided this project were 'how is multidimensional biodiversity knowledge produced and used by local communities?', and 'how does digital biodiversity data gain meaning in local participatory contexts?'. This fieldwork is part of a wider case study about environmental Digital Twins, that investigates attempts at creating advanced digital simulations and other immersive technologies to engage with environmental data.



A satellite view of Ecodorp Boekel, an ecovillage with circular housing situated at the border of Boekel, between protected forest and agricultural land.

Ecodorp Boekel

Ecodorp Boekel is an urban development and Living Lab that aims to inspire new forms of sustainable living. The two-hectare village consists of 36 rental homes, a food forest, and a garden that host approximately 62 inhabitants. It is located in a rural area in the south-east of the Netherlands and residents have spent the last 12 years working towards sustainable forms of community living. Inhabitants are between 0 and 71 years old, predominantly Dutch, and the ecovillage also includes two caregiving homes, and two homes for people with refugee status. The ecovillage also has a biodiversity plan with 10 different indicator species and the target numbers for their presence in the village over the next decade.

The Smart Forests Atlas contains various resources in relation to the fieldwork that was carried out at the ecovillage:

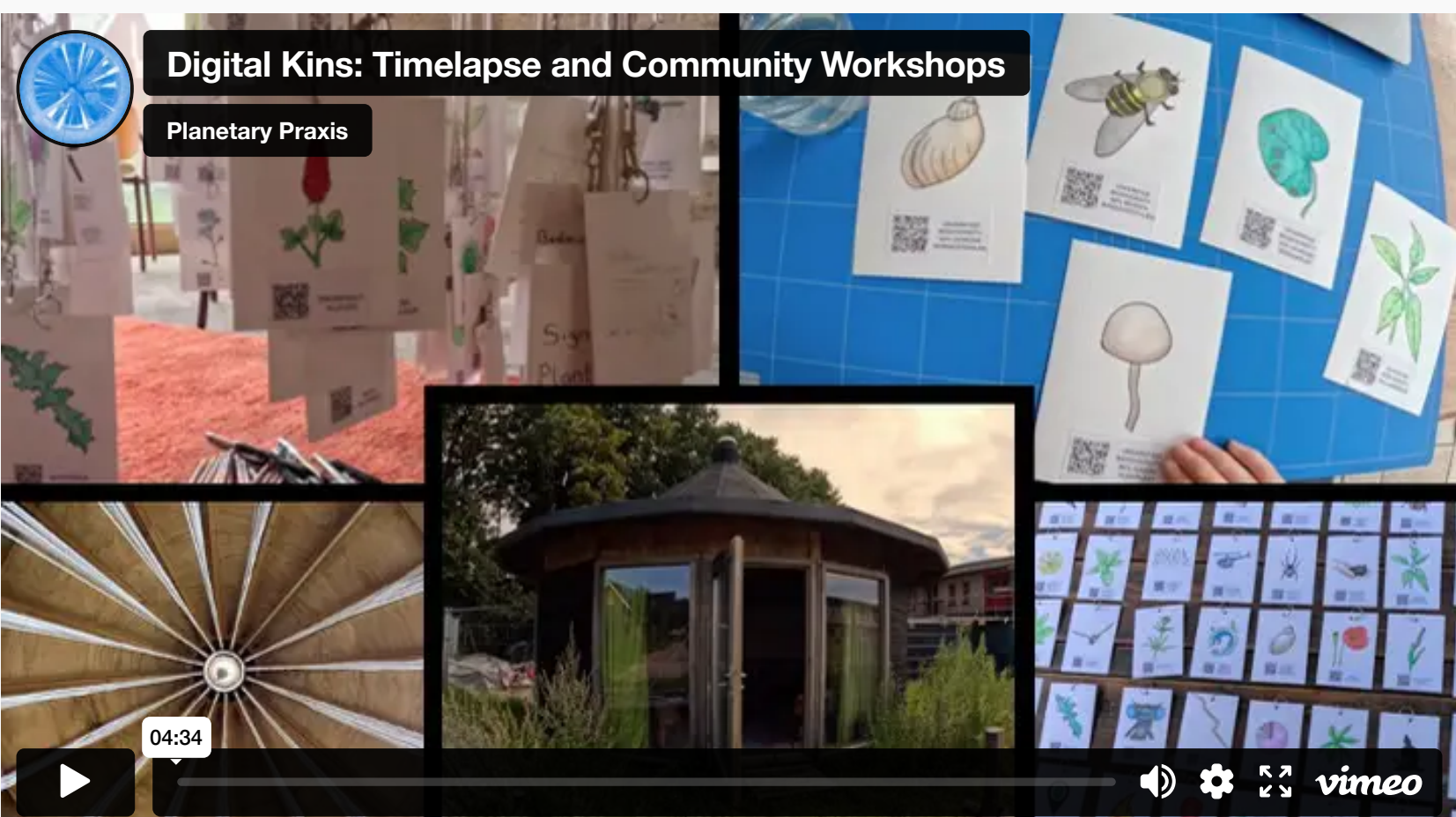
- A [logbook](#) that narrates more background information about the ecovillage and its relations to biodiversity
- A [logbook](#) about related digital biodiversity practices
- A [logbook](#) about participatory camera trapping practices for three different biodiversity cameras that were installed at the ecovillage
- A [logbook](#) about non-digital practices for engaging with biodiversity we explored at the ecovillage
- A [radio episode](#) with a [soundscape](#) of the adjacent forest in Boekel
- A [radio episode](#) with a short fragment of a [soil](#) expert who visited the ecovillage
- A [radio episode](#) with a soundscape of the ecovillage in relation to the nearby military airport
- A [radio episode](#) with a short fragment of a local forest tour with the forester
- A [radio episode](#) with a short fragment of an ecovillage inhabitant taking us through the wildflower garden
- A [radio episode](#) with an edited collage from a workshop we organised about biodiversity [sensing](#)
- Collective contributors that played an active role during the fieldwork: [Biodiversiteitsliefhebbers](#), [Emerging Ecodorp Ecologies](#), [Katten Cluster](#), [Huismussen Knot](#), [Mezen Dissimulation](#), [peelrandbreuk](#) />>[Peelrandbreuk](#), [water -agricultural-disjoints](#) />>[Forest-Urban-Water-Agricultural Disjoints](#). Each of these contributor pages also shares further insights about the relations and more-than-human entities emerging during this fieldwork
- The [map page](#) also provided an overview of these pages that can be accessed by zooming in on the south of the Netherlands
- Lastly, searching for the tags 'biodiversity' or '[monitoring](#)' also creates different entry points for exploring this case study, as well as other content on this Atlas



Images of the Digital Kins installation.

Based on this fieldwork, as well as other related case study work around the digitalisation of biodiversity, the biodiversity data that was gathered during this fieldwork was turned into a hybrid physical/digital [installation](#). *Digital Kins: A Biodiversity Data Portal*, is a data installation that was installed at Ecodorp Boekel in August 2023 to undertake community workshops and further investigate local biodiversity data in immersive contexts. Rather than attempting to create a digital copy - or twin - of the local biodiversity, Digital Kins challenges intensified [automation](#) and [datafication](#) practices and instead seeks to build relations of [multispecies](#) kinship between humans, other species, [sensors](#), and digital data.

The installation consists of 101 data points - in the form of hand drawn illustrations with QR codes - that each connect to their online (open data) sources. These cards are connected with cotton wires to the circular roof structure of 'Het Expo Huisje' at Ecodorp Boekel. All materials that were used in this installation are recycled and/or sustainably sourced. The wooden structure of this building formed the inspiration for new modes of exploring, categorizing, discussing, and questioning the meaning and usefulness of data practices with local participants at this site. Seven community workshops with a total of 27 participants were hosted to encourage [playful](#) exploration, to discuss data practices, and to add new data to the installation. This process led to important new insights that will be analyzed and shared over the next months. This [video](#) summarizes the development process and some of the workshops:



The 101 online data points that formed the basis for this installation are brought together from many different data practices. The Smart Forest Atlas contains many Logbook, Radio, and Map entries that are included in this project. These include [local Camera Trap Footage](#), [Forest Walks](#), [Local Contributors](#), [Biodiversity Monitoring Workshops](#), [interviews about automated biodiversity monitoring technologies](#), and many other entries. Zooming in on the south of the Netherlands via the [Map](#), or searching for the tags 'biodiversity' and 'monitoring' from the search bar at the top of this page will show an overview of all this data. Besides the Smart Forests Atlas, many other data sources were also part of this installation. These include [biodiversity observations via ObsIdentify](#), open-data maps on [local tree density](#) and [forest fires](#), [local community stories](#), [national biodiversity platforms](#), and many other open-data initiatives.



An overview of all the 101 data points with QR codes that were used as a starting point for the installation. During the workshops, participants contributed an additional 59 handwritten notes and data insights to the installation.

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