

# The Space Between

## Progress report

by Michèle Boulogne, Alice Ladenburg, Zoënie Liwen Deng

“That which is above is from that which is below, and that which is below is from that which is above.”  
from the ancient Emerald Tablet of Hermes Trismegistus 323 BCE - 30 BCE

**Technological advancements such as multispectral and hyperspectral imaging in Earth Observation are helping us to understand, diagnose and tackle environmental issues in unprecedented ways. Yet globally, we are still making decisions that have a devastating impact on our planet, with local voices ignored, and their needs unmet.**

### Overview

There is an urgent need to recognise the value of the knowledge that an individual or community has of their locality, to consider it alongside Earth Observation, and generate a more nuanced understanding of environmental concerns.

Whilst Earth Observation data can present us with an impressive and useful overview of a site, it is the nuance and unpredictability of a place, with the unique understandings of a local observer, that reflects the infinite ways in which our planet might be imagined. This project invites Earth Observations and ‘Ground Observations’ to come together, creating a new area of exploration and discussion: The Space Between.

The Space Between brings together space-borne and earth-bound perspectives. In doing this, it asks two complimentary questions:

*Can the knowledge and stories of individuals on the ground instigate a paradigmatic shift in technological and scientific environmental research?*

*Can the knowledge of Earth Observation contribute to actions on the ground driven by matters-of-concern and matters-of-care?*

The starting point of each case is a dialogue between an Earth Observation expert with an individual who is engaged with a local environmental mattering. The two observer-types address the same issue from very different angles, but ultimately, both share a deep care for our planet.

The conversation might remain a private interaction between two individuals, offering one another new understandings of a site. It could also actively address environmental matterings, exposing previously unconsidered issues, or strive to communicate critical issues more effectively with decision makers.

### Process

In order to identify potentials and pitfalls in this experimental research process, the pilot phase of this project focused on facilitating three discussions between local Ground Observers and an Earth Observation expert at three different sites. This involved:

Engagement with a Ground Observer and their community at each site (through a series of workshops and informal discussions)

A photographic series of each site, taken by the Ground Observers.

The selection of a series of satellite images from the site (in this case Sentinel 1, Sentinel 2 and Planet NICFI), as close to the date of the ground photography as possible. Online encounters between the Ground Observers and an Earth Observation expert for each site.

Gathering, sharing and comparing the findings from Ground Observation and Earth Observation.

**SITE 1:** Hackney Tree Nursery and Garden Forest, London

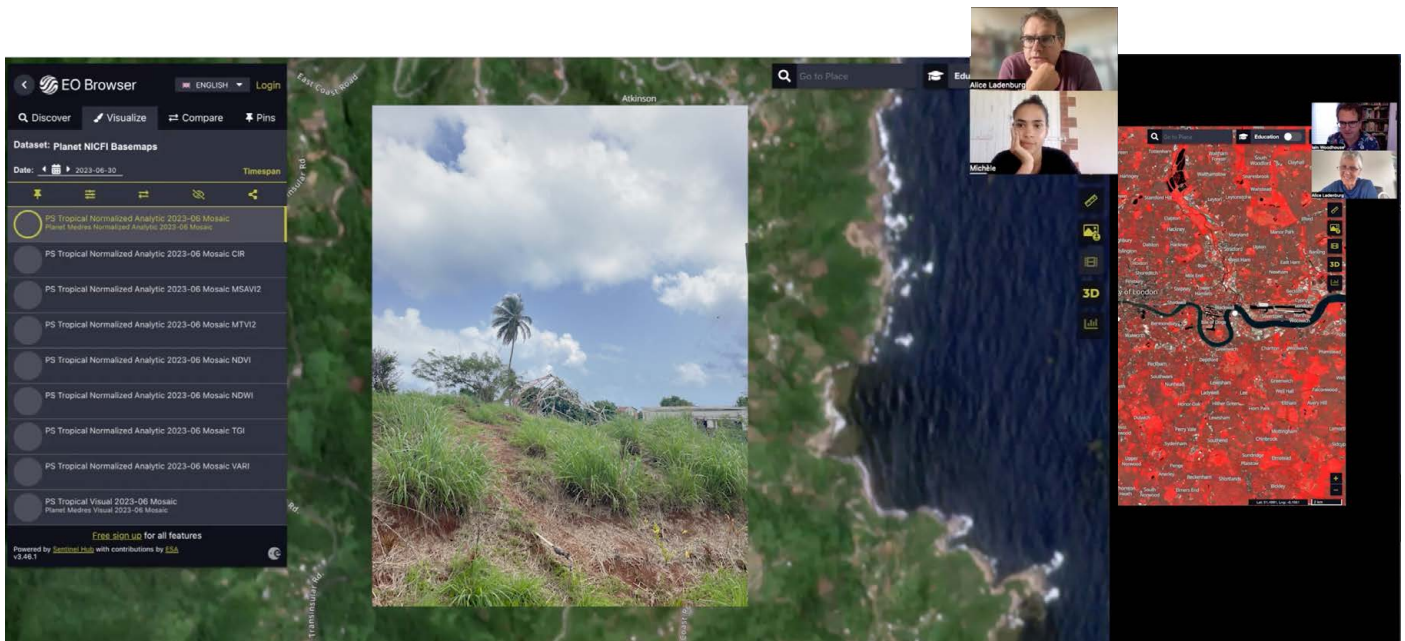
A small green slice bursting with biodiverse abundance, in an otherwise heavily developed and developing area in North London. Annie Chipchase, a long-time Hackney local, has been a passionate steward of this space for the past 20 years.

**SITE 2:** Kalinago Territory, Waitukubuli, Dominica

Dominica has the greatest intact forest cover in the Caribbean and is home to the Kalinago Territory, the only remaining official native territory of the island. In 2017 Hurricane Maria devastated the country. Cassius Darroux, currently serving as Dominican Minister of Agriculture, is a cornerstone of the Kalinago community.

**SITE 3:** Tuinpark Rust & Vreugd, Amsterdam, The Netherlands

Rust & Vreugd is an organic allotment garden association with a wide diversity of native trees, plants and animals. It aims to contribute to a green, sustainable and social environment in the city. Lynn Shore teaches ethical foraging and herbalism, and is an advocate for the widespread use and understanding of local plants.



The Earth Observation expert discussed the satellite imagery, whilst the Ground Observer presented their photographs. Other than this, the conversation was intentionally unstructured, allowing participants to guide their own shared discussion. The conversations were recorded and included in a film, alongside the Ground and Earth Observation imagery, to illustrate the first phase of this project.

## Reflections

Stories and knowledges from the ground enrich and animate any given site. In Earth Observation, a site is essentially coordinates on the globe; surrounded by a jigsaw of landforms, roads and buildings. The Ground Observation contextualises the site in time and space - a place immersed in historical, cultural, political, ecological, and embodied knowledges and stories.

Navigating the space between two ways of thinking is both complicated and unpredictable. Not only this, but accessibility to technologies and Earth Observation data varies from site to site. This makes it clear that we need to address the problem of inequality and accessibility if we want to develop The Space Between into a methodological tool.

There are both differences and similarities with this process at each site regarding reading the Earth Observation images, and connecting to the Ground Observer's concerns. This reflects the need to consider political, social and cultural issues in Earth Observation, both as a technique and as an industry.

## Next steps

This pilot study demonstrates how we might engage scientific researchers working with local individuals and communities to explore a new type of research process - where addressing environmental concerns starts not from matters of fact or interest, but from observing, imaging, and imagining from matters-of-concern and matters-of-care.

*Can Earth Observation knowledge contribute to on-ground activism?*

*Can a case be built by the Earth / Ground Observation dialogue that ultimately influences decision making impacting a matter of environmental concern?*

To answer these questions, The Space Between will now focus on more intentional case-studies, identifying and addressing a series of particular matters of urgent concern. It will seek out and build upon efforts where Earth and Ground Observations converge, using and expanding upon the tools and methods established with the pilot.

## Credits

The Space Between, 2023

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with Annie Chipchase (co-ordinator, Hackney Community Tree Nursery and Forest Garden, London) and Professor Iain Woodhouse (Personal Chair in Applied Earth Observation, University of Edinburgh), Cassius Darroux (Former Minister for Kalinago Affairs, Dominica), Regina Joseph Lestrade (Farmer, permaculture expert within the Kalinago Territory of Dominica) Lynn Shore (Urban Herbiologist, Amsterdam) Supported by Waag Futurelab | Space Lab's Planetary Public Stack workshop series with Space4Good and Leiden Observatory. Funded by CLICKNL.