Translating Data into Art: A Conversation with Thijs Biersteker on Ecology and the Amazon

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Wither (2022) by Thijs Biersteker in collaboration with Unesco.
On view at Staatlichen Kunstsammlungen Dresden. Image by the artist. © All rights reserved

Introduction

Ecological artist Thijs Biersteker is renowned for his data-driven installations bringing attention to pressing environmental issues such as deforestation, biodiversity loss, climate change, and ecosystem fragility. Biersteker's work engages audiences through immersive, sensor-based sculptures that visualize real-time

scientific data. In this conversation, Biersteker shares insights into his practice, the ethical dimensions of working with data, particularly concerning the Amazon, and how his work seeks to instill both emotional connection and ecological urgency in viewers worldwide.

Ecozon@: *As you know, this special issue is dedicated to the vegetal humanities in the Amazon. Your work has addressed a wide range of environmentally relevant topics, such as melting glaciers and underground ecosystems, and also visualizes ecological processes connected to the Amazon in pieces like* Wither *and* Amazonium. *What draws you to these themes, and specifically to the Amazon?*

Thijs Biersteker: I don't really choose my topics; they tend to find me. Often, large institutions familiar with our work across ecological issues such as biodiversity, climate change, and environmental migration, approach us to help amplify their scientific or environmental messaging through art. I do, nonetheless, have a deep affinity for the Amazon due to its scale and role as a planetary balancing system. When you're there, in the rainforest, the connection feels completely different than walking through a secondary forest. It's a place that speaks to the imagination. In Western societies, the Amazon has become an ecological icon, and its symbolic value makes it easy to fall in love with its peoples, cultures, and river flows. It's a living metaphor for biodiversity and interconnection, like an eternal wellspring of stories that carry the voices of the forest outward into the world.

This richness is also what drives my work. *Wither*, for instance, reflects the staggering rate of deforestation, while *Amazonium* explores reforestation, centering on growth and recovery. The contrast between loss and gain is what excites me the most. It creates a narrative that holds both fear and hope. These fluctuations offer powerful moments for storytelling and emotional engagement.

Growing up in the Low Countries, where most native forests have been destroyed, I'm deeply aware of the need to raise awareness before it's too late. While the West pushes for protection measures elsewhere, it fails to acknowledge its own history of loss. Rewilding efforts are happening in parts of Europe, but these are retroactive. In the Amazon, the urgency is rooted in prevention and keeping its ecological balance intact.

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Amazonium (2023) by Thijs Biersteker in collaboration with Unesco. Image by Woven Studio. © All rights reserved

Ecozon@: *As you mention fear, hope, and even grief, there seems to be a strong affective and metaphorical dimension to your work, which coexists with a very tangible, material one. How do these different elements come together in your practice?*

TB: For me, everything starts with data, often just a spreadsheet. My role is to interpret that data and bring out its emotional or human dimension. Facts alone don't move people; feelings do. So, by combining the factual with the emotional, we can motivate action. That's why I prefer physical installations over purely digital representations: they create stronger emotional connections. We're physical beings, after all.

But bringing all this together can't be done alone. It requires a joint effort. While I focus on the concept, prototyping, and part of the build, we work with scientists who provide the data, with engineers, coders, roboticists, along with the team who builds the installations. This kind of cross-disciplinary collaboration is essential if we want to make ecological issues accessible and relevant. At our art studio, *Woven*, data translation is one of our core pillars. We've created a framework to help artists collaborate with scientists and use collaboration as a tool for communication. What started as an artist's studio is evolving into something more visionary. We're even launching a foundation to develop university training modules that help scientists communicate their work in more emotionally resonant ways.

I believe the era of purely self-expressive art is behind us. Much of it suffers from an articulation problem. The same applies to science. Researchers often speak only to other scientists using inaccessible academic language. But if their research is to have any societal impact, it must be translated—by writers, poets, artists, filmmakers, journalists. That's where we come in. With our work, we aim to create art

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that is open, understandable, and invites people in, that makes scientific knowledge emotionally compelling without compromising accuracy. The shift from individualism to collective engagement is key to the art of the future. That's where the power lies.

Ecozon@: *Could you walk us through the creation of one of your pieces to illustrate both the collaborative process and the communicative strategies you use to bridge art and science?*

TB: Sure. Let's take *Wither* as an example. The piece was about making the scale of Amazon deforestation tangible. Most people might find it hard to grasp how vast it is, or how much is being lost. So we asked: *What if a slice of rainforest disappeared right in front of you?* We collaborated with UNESCO to obtain accurate data. Each leaf in the sculpture represents 100 square meters of rainforest. The leaves fade in real time, reflecting current deforestation rates. At first, visitors admire the beauty. Then they see the data on the screen. That moment, when aesthetic appreciation turns into awareness, is where the power of the piece lies.

This transformation is especially important for Western audiences, who are often removed from these issues. We want to build emotional bridges, so that someone in a village in Germany, for example, can feel a real connection to the Amazon. While our institutional partners often provide solution-based frameworks, like Trillion Trees or UNESCO's initiatives, our primary role is communication, not policymaking. It's about making people care and feel the urgency, not selling them a solution.

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Wither (2022) by Thijs Biersteker in collaboration with Unesco. On view at the Barbican Centre London. Images by the artist. © All rights reserved.

Ecozon@: *Since your work focuses on environmental issues, do you incorporate sustainability principles in your artistic process?*

TB: Definitely, sustainability is another of our core pillars. We use material passports, recycled materials, and we consider the full lifecycle of each piece—how it's produced, preserved, and eventually disassembled. That may seem self-evident, but in the art world, it's not always obvious how to make these processes truly sustainable. It takes intention and ongoing effort. We also offer guidance to other artists in establishing sustainable practices. One thing we emphasize is that art doesn't have to last forever. Most pieces should be designed to disappear. Even if they're materially lost, they have still served their function. That may be hard to accept, but it's part of the shift we're advocating. In the same vein, we don't sell our work to collectors, because we consider it climate emergency work. It needs to be seen now, not be sold and stored away from public view. If it were hidden, its value as a communication tool would be lost. In that sense, though they feel logical to us, our artistic choices are not always aligned with how the art world typically operates.

ECOZON@ | Vol 16, No 2

Wither (2022) by Thijs Biersteker in collaboration with Unesco. On view at the Barbican Centre London. Image by the artist. © All rights reserved

ECOZON@ | Vol 16, No 2

Ecozon@: *As an artist with European heritage working on the Amazon, how do you navigate your role in relation to Indigenous land and knowledge systems? And how does your work connect with Indigenous communities?*

TB: I'm very conscious not to tell stories that are not mine to tell, or to create art based on knowledge systems outside of my lived experience. As with our other projects on plastic pollution, air quality, glaciers, or root communication of trees, our Amazon-focused works are rooted in data-driven storytelling. We rely on research gathered by those directly on the field and we translate that information into aesthetic forms that aim to communicate across cultural boundaries. Most of our production process is also intentionally hyperlocal: we aim to keep every part of the process within a one-kilometer radius to minimize our environmental footprint.

When we brought *Amazonium* to Colombia, Sônia Guajajara, the first Indigenous leader of Brazil, felt emotionally connected to the work. That meant a great deal to me. We had a meaningful conversation about how the ecological crisis affecting fragile parts of her country could be translated for international audiences in a way that still feels authentic. That moment reaffirmed something I care deeply about: that the value of this work lies not in appropriation, but in staying conscious of our role as artists, that is to translate science into art, and to do so with care and respect.

Sônia Guajajara in front of *Amazonium* (2023) by Thijs Biersteker in collaboration with Unesco. Image by Joe Short. © All rights reserved

What excites me most is when our installations use real-time environmental data to become, in a sense, living sculptures. For example, *Origin*, a permanent installation at the Zaishui Art Museum in China, connects a living cacao tree in Java to its digital twin through sensors that transmit data in-real time. Visitors can witness

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the tree's growth, sap flow, and other responses as they happen. In our hyperconnected world, the more immediate and tangible the interaction with ecological realities, the stronger the emotional response. And the stronger that emotional connection, the greater the potential for meaningful action.

Ecozon@: *What you describe sounds like a beautiful process of multispecies translation, transcending not only cultural boundaries, but also species boundaries.*
TB: I think many people in the West struggle to truly connect with nature, simply because we're often so removed from it. We're no longer surrounded by it in our daily lives. That's why using real-time data from living entities, like trees or roots, can offer a new kind of relationship. It becomes one of the most powerful bridges that technology can offer us today. It's like a Babel fish for the environment translating natural processes into human terms.

Ecozon@: *Why did you choose the cacao tree specifically for one of your installations?*
TB: Because it represents so many interconnected global crises: slavery in supply chains, deforestation, soil depletion, food insecurity, corporate monopolies, and of course climate change. The cacao tree is also one of the first trees to show stress. So, in one chocolate bar you get a microcosm of global systems in collapse. It's a perfect example of beauty and discomfort interwoven.

Ecozon@: *Do you have any upcoming works planned that might engage with an environmental issue that our readers might be familiar with?*
TB: Yes, quite a few. We're currently working on a large permanent installation about the Amazon for the Science and Technology Museum in Shanghai, which receives over four million visitors a year. The piece explores the loss and regrowth in Amazonian regions, emphasizing the tension between devastation and resilience.

Another project focuses on the fragility of space and, by extension, the fragility of life on Earth. We're collaborating with an astrophysicist to create an equation that calculates how likely it is for any one person to exist at this precise point in time and space as a living organism. The probability is exceptionally small: it's basically a zero followed by thousands of zeroes after the decimal point, and then a small number. The challenge for this work is how to translate that into a visual language that captures the fragility and wonder of existence. The works tries to grasp that moment when you lie in the grass and you look up to the stars and feel both small and uniquely alive.

Ecozon@: *Your creative work and reflections offer a moving reminder of the delicate ties between multispecies life, cosmology, and the vibrant ecosystems we inhabit. Thank you for this generous conversation. It's been a pleasure to explore how your work resonates so deeply with the environmental questions at the heart of our journal.*

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