

Dialogue as a means of understanding and empathy

The **Collective Terravibe*** presents a moment of reflection on Climate Change, Migration and In/Justice as part of the exhibition “On the Move Across the World: stories of coming and going” at the Ballenberg Open-Air Museum.

Soils, the base of life on land, are literally and metaphorically the common ground our lives and communities are built upon. Expanding on their work with soils as a hyper-local, stable medium, they play with water and rivers as a global, flowing element to draw attention to in/visible connections between the mountains and the sea, beginnings and endings, Switzerland and India. By getting personal through a mixed method comparative study between the Tomasee in Switzerland and the Gangetic Delta in India, their intention is to bring forward dialogue as a tool of empathy, change, resistance and action in highly complex, intangible contexts.

This project was created throughout the 2024 Residency by EcoArt Lab by HKB, in association with the Ballenberg Museum, Helvetas, and mLab at the Institute of Geography at University of Bern.

**Terravibe: flüster aus der erde is a dirty-hands lab to regenerate our soil heritages and cultures through art, play and experimentation. The postdisciplinary collective works with soils as our common ground and medium to enter cross-generational, cross-sectural, intercultural reconciliation work. It consists of Artist Alisha Dutt Islam, Designer Nora Gailer, and Geographer Christa Herrmann and is based in Zürich, CH.*

Dialogue of two Mothers from Tomasee to Sunderbans

Video – 9:00 Min. 2024
Focus: Climate Change & Migration
Perspective: ecofeminism
Collective Terravibe: Alisha Dutt Islam & Nora Gailer

Through an intergenerational dialogue between Dutt & Herrmann, both in their 30s, and their mothers, both in their 60s, we add in women’s perspectives through time. They explore the connections between women and nature in the socio-cultural context of their homes, highlighting the importance of honoring a spectrum of perspectives and learning from our elders.

Gangetic Delta: mouth of the Ganga River, stronger cyclones, rising sea level, salinisation of soil

In January 2024, artist Alisha Dutt Islam embarked on a journey along the Sundarbans Tiger Reserve in the Gangetic Delta with her mother and geography teacher, Apala Datta. Growing up in Kolkata, Alisha frequently took this boat trip with her mother for fieldwork during her studies. We can hear Apala Datta explaining the geographical and socio-political situations of the floodplains to the artist. The Ganges Delta, predominantly covering the Bengal region of South Asia (Bangladesh and West Bengal, India), is characterized by unstable weather and living conditions. People began settling in the hostile climate of the Sunderbans during the colonial period when the British Raj decided to deforest much of its mangrove forest for agricultural revenue, and with it destroyed the natural shield of the eastern portion of the Indian Mainland against sea storm. Over the last two decades, seasonal migration has become a coping mechanism for large proportions of the population in the Sunderbans to avoid flooding.

Tomasee: source of the Rhein, decreasing snowfall, increasing heat waves & droughts

In July 2024, geographer Christa Herrmann went on a journey to the source of the Rhine at Tomasee with her mother, sports teacher and hiking guide Marianne Herrmann. Christa visited Tomasee with her family various times as they are originally from Obersaxen GR, a *Walsersiedlung* about 50km down the valley which was founded in the 12th century during the last mass migration in the middle ages, caused by overpopulation in the Wallis VS and a changing climate at the time. We can hear Marianne Herrmann share her personal experiences with climate change and its effect on humans and nature in the region.

The Surselva is characterized by a significant amount of rubble, poor soils and limited surface water, which makes it a challenging place for agriculture. Like many Swiss mountain regions, its local population is facing a net outmigration, whilst tourism and ownership of secondary homes is increasing.

By placing the audio-visual elements of the dialogues with our mothers side by side with the construction of our soil pyramids, we bring our art X Science X practitioner work to the audience at Ballenberg museum through the voice and work of people in the present day. Whilst digital art pieces can break geographical boundaries and make this work accessible beyond the physical presence at the exhibition, they open up new questions of accessibility & resonance for the elderly, energy use and its ecological footprint, and more.

Soils as our common ground

Soils, gravel, colored clay, rammed earth 2024
Focus: Climate Change & System Change
Perspective: soil science
Collective Terravibe: Alisha Dutt Islam, Christa Herrmann, Nora Gailer. With kind support from: Ralph Künzler, Thubten Shontshang, Angelos Merges, Vital Stocker, visitors of Ballenberg Museum

Soils have the power to unite us. Healthy soils are essential for our survival as they’re needed for food production, maintaining biodiversity, and building resilience. They’re also the most effective carbon sink on land. At Terravibe, we see soils as the perfect medium for addressing local issues and finding common ground to reconnect with our communities and nature. By collaborating and growing strong roots together, we can overcome our greatest challenges.

Soil Science studies soil as a natural resource on the surface of the Earth. It is interested in soil formation; classification and mapping; physical, chemical, biological, and fertility properties of soils; and these properties in relation to the use and management of soils. Here, we highlight a selection of scientific facts about soil which. From a scientific perspective, soils contain mineral, organic, solid, liquid, gaseous, living and inanimate elements. The mineral and organic substances form the skeleton of the soil; the plants and living organisms need water and air to feed and breathe.

For this project, we focused on visual properties of soil which can easily be distinguished between different soil types: horizons, texture and color.

Soil horizons
Dig down deep into any soil, and you’ll see that it is made of layers. These are called horizons and are defined by obvious physical features, mainly colour and texture. Put the horizons together, and they form a soil profile. Like a biography, each profile tells a unique story about the life of a soil and its environment. In most soil classification systems, horizons are used to define soil types.

Soil Texture
The soil texture corresponds to the ratio of sand, silt and clay in the soil. It determines its use, particularly in agriculture and clay construction. While agriculture is primarily interested in the fertility and water balance of a soil, earth-based construction cares mainly about sustainable stability. The decisive element for this is the soil texture. A suitable soil mixture for the rammed earth technique we used to build our pyramids is approx. 1/3 (30-40%) clay and 2/3 (60-70%) sand, gravel and coarse material, with as little organic material as possible.

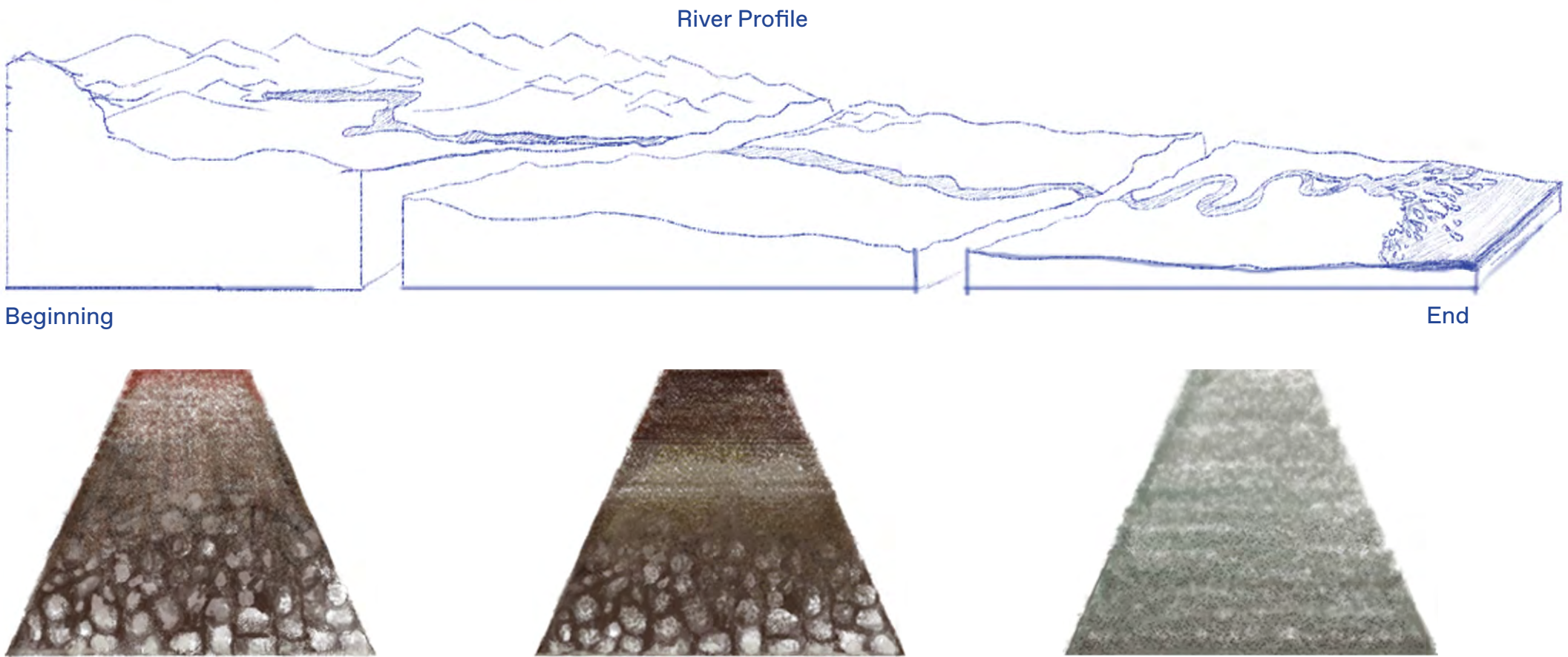
Soil Color
Colour is one of the most obvious characteristics of soil. Soil colour is influenced by four main factors: 1. Mineral matter derived from the parent material; 2. Organic matter; 3. The nature and abundance of iron; 4. Moisture content/drainage. The most influential colours in a well drained soil are white, red, brown and black. White indicates the predominance of silica (quartz) or the presence of salts; red indicates the accumulation of iron oxide; and brown and black indicate organic matter. Grey appears in poorly drained soils and indicates a lack of oxygen (anaerobic conditions).

Rammed Earth is a traditional construction technique using compacted natural raw materials such as earth, chalk, lime or gravel. It is an ancient method which has been used around the world for millenia that is currently being revived as a sustainable building method. Ballenberg cultivates this traditional technique and offers various courses in this respect. By choosing to ram **3 soil pyramids****, we root this project in the local context in a tangible way and builds bridges from ancient practices to the present day.

For the production of the soil pyramids, we partnered with Ralph Künzler, a Swiss earth construction pioneer.

The **pyramids** are inspired by the iceberg of systems thinking. This is a way of addressing complex problems at their root cause by going beneath the surface (symptom level) and consider the invisible, often unconscious levels of structures, processes, mental models and paradigms which lie below. The pyramids lift soils, normally hidden below our feet, into people’s eyesights and attention, representing the invisible part below the “tip of the iceberg” as an invitation to dive deeper.

**Soil pyramid descriptions



Tomasee (CH)

Lake Toma is a lake in the canton of Graubünden in the Swiss Alps. It is crossed by the Rein da Tuma and lies in the Gotthard Group near the Oberalp Pass. Lake Toma belongs to the catchment area of the Vorderrhein and is regarded as the source of the Rhine.
masl: 2344
Soil type: Regosol
Texture: rough
Color & horizons: elements of red (iron oxidation), grey (rock)

Zürich (CH)

Zürich, Switzerland’s largest city, lies at the northern end of Lake Zurich in the valley of the Limmat and the lower valley of the Sihl, nestled between the heights of Uetliberg and Zürichberg. It is considered as one of the cities with the highest quality of life in the world.
masl: 408
Soil type: Braunerde
Texture: mixed
Color & horizons: dark (humus), brown (B-horizon), grey (C-horizon)

Sunderbans (IND)

The Sunderbans are the largest mangrove forests in the world. They cover an area of 10,000 km² between Bangladesh and the Indian state of West Bengal. They are located in a low-lying estuary and floodplain of the Brahmaputra, Ganges and Meghna rivers.
masl: 0
Soil type: mangrove (saline alluvial)
Texture: fine
Color & horizons: grey, not layered

