Tsuchi-no-ie (Maison en terre)

Possibilities of using earth in space design for new ecological paradigms

On some hints for post-humanist art and design in the
Cthulucene* which the experimental and pedagogical art project
Tsuchi-no-ie (Maison en terre) in Kyoto has given us.

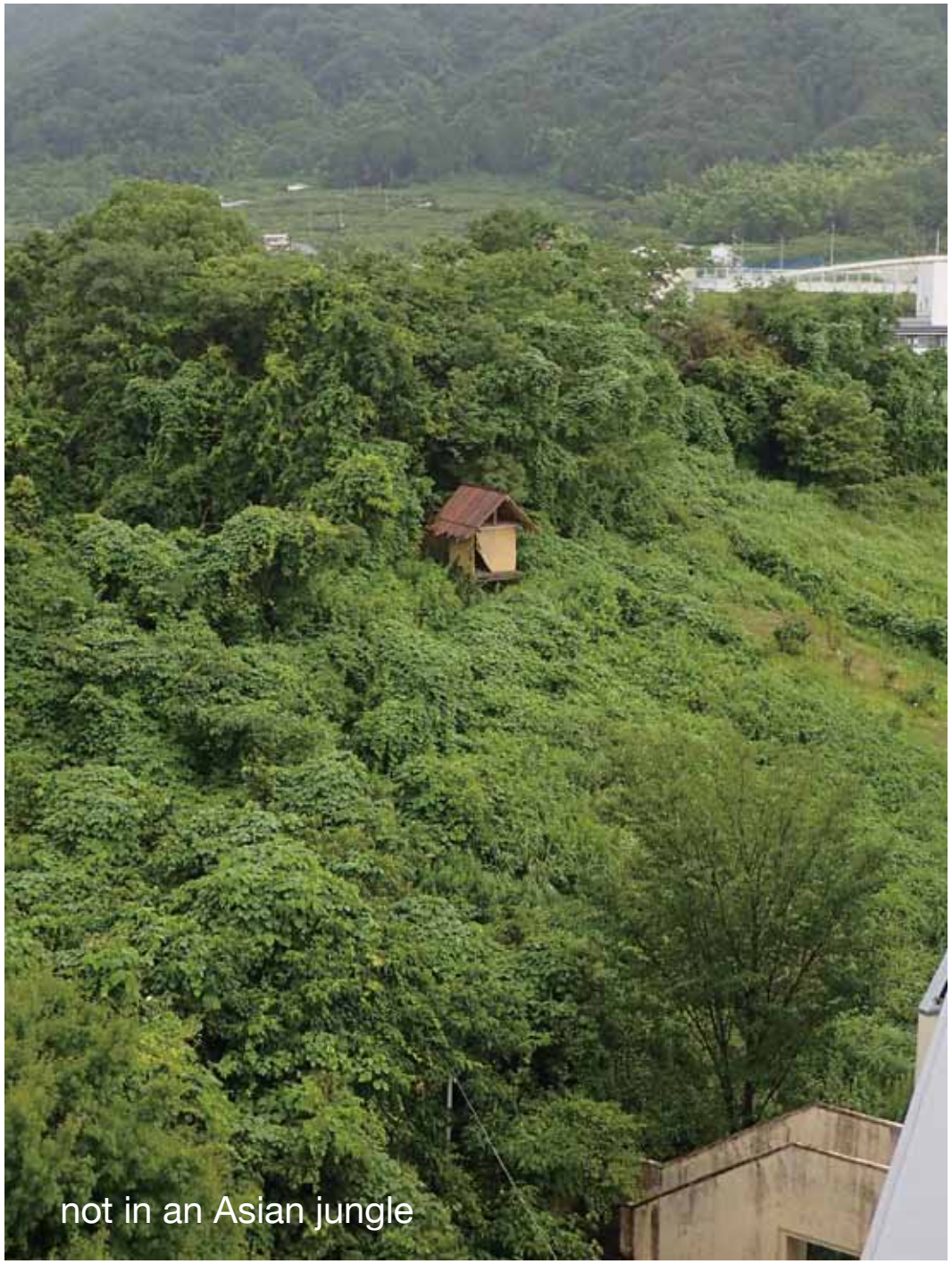
Akihiko Inoue

30 novembre 2022

* Cthulucene > Anthropocene = Capitalocene < Donna J. Haraway

Maison en terre

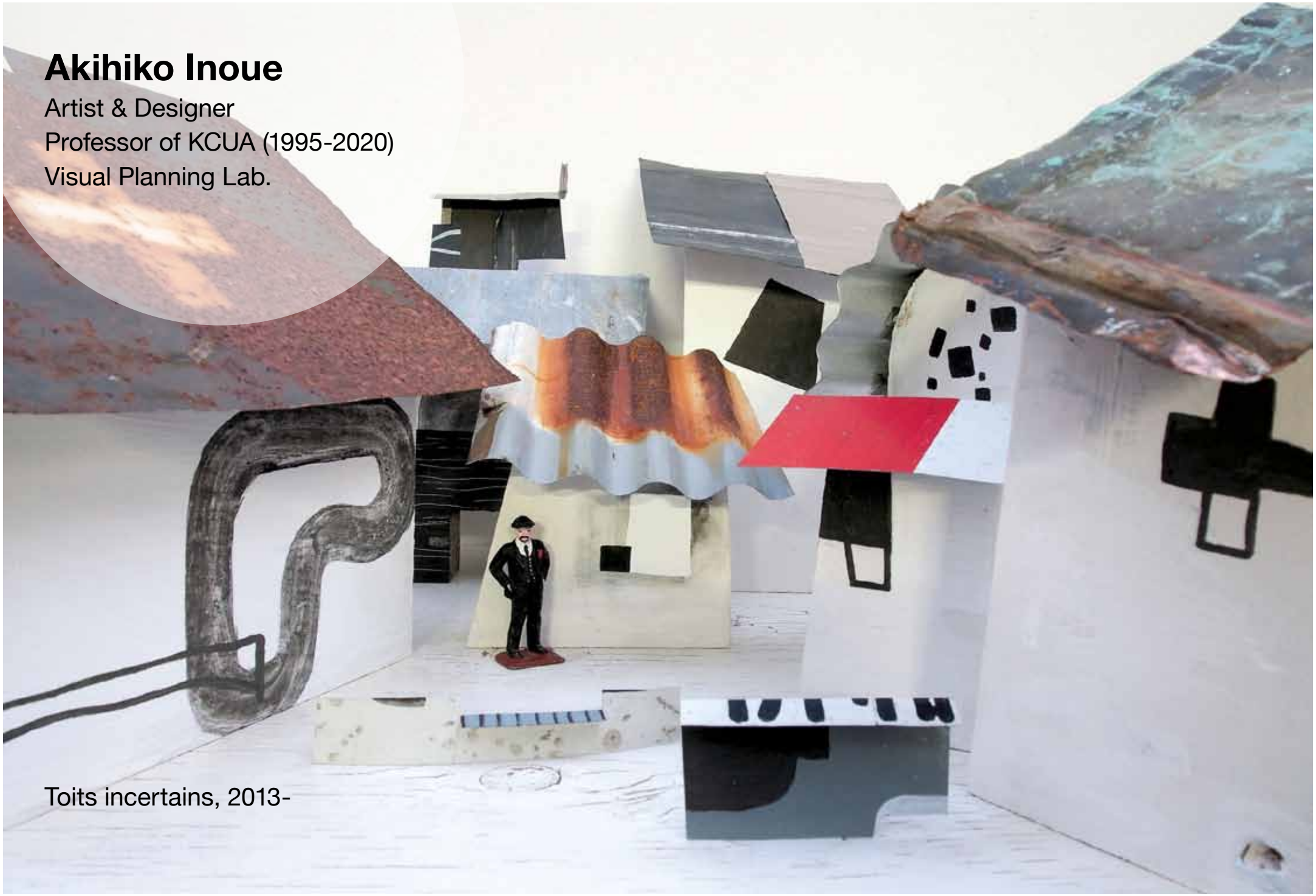
on the campus of KCUA



not in an Asian jungle

Akihiko Inoue

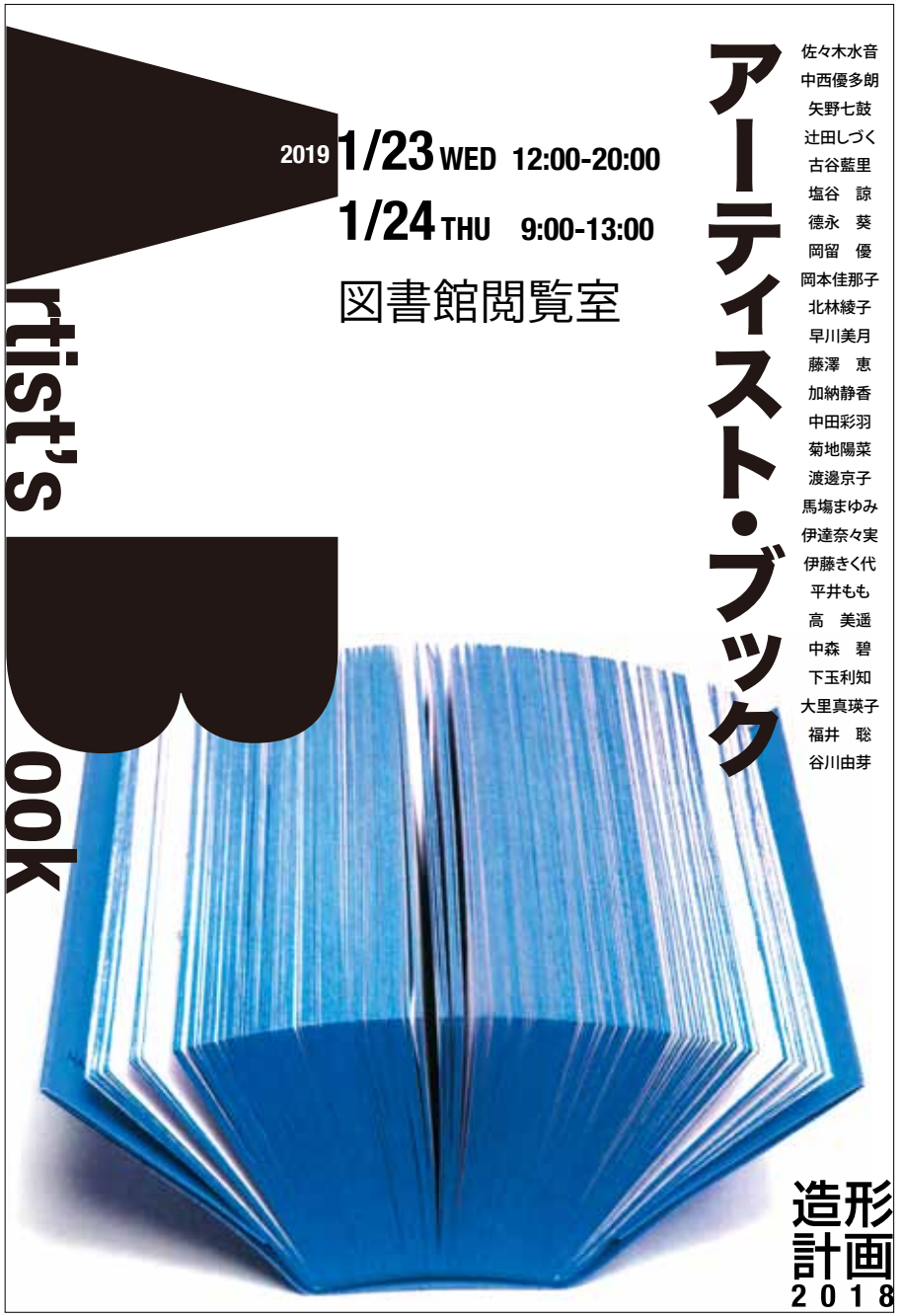
Artist & Designer
Professor of KCUA (1995-2020)
Visual Planning Lab.



Toits incertains, 2013-

Visual Planning Lab.
at Kyoto City University of Arts (KCUA)

contemporary art and design :
from Book design to space design and installation



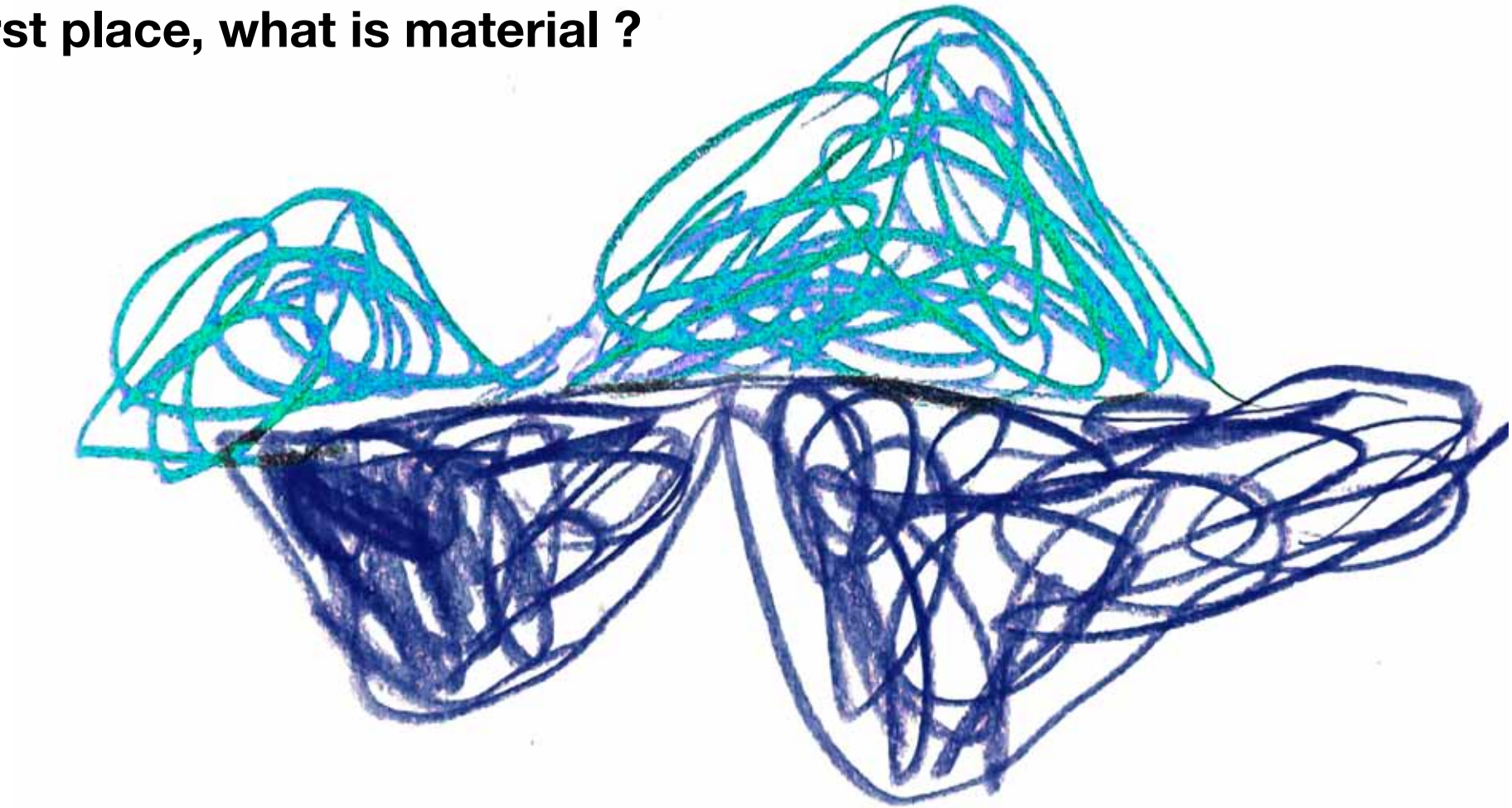
Keywords / my interests

- Art in-situ
- water, gravity, ground and roof as fundamental premises of human existence
- indigenous wisdom
- relationship between art and nature
- material and form

Can we return art back into the Biogeochemical cycles ?

As an artist, I had been interested in the relationship between material and form beyond the already existing art.
What material I can and should use for my artwork ?

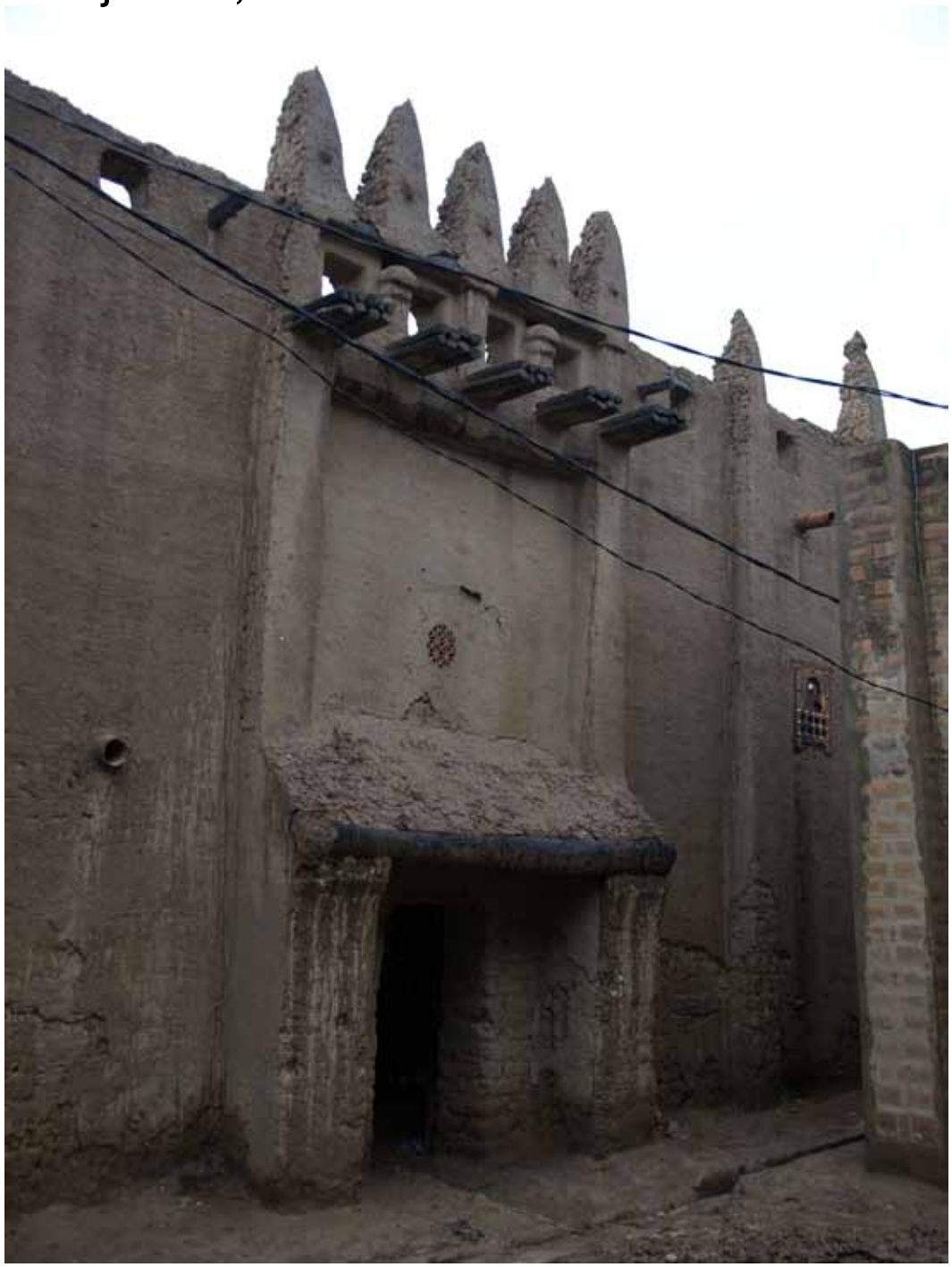
In the first place, what is material ?

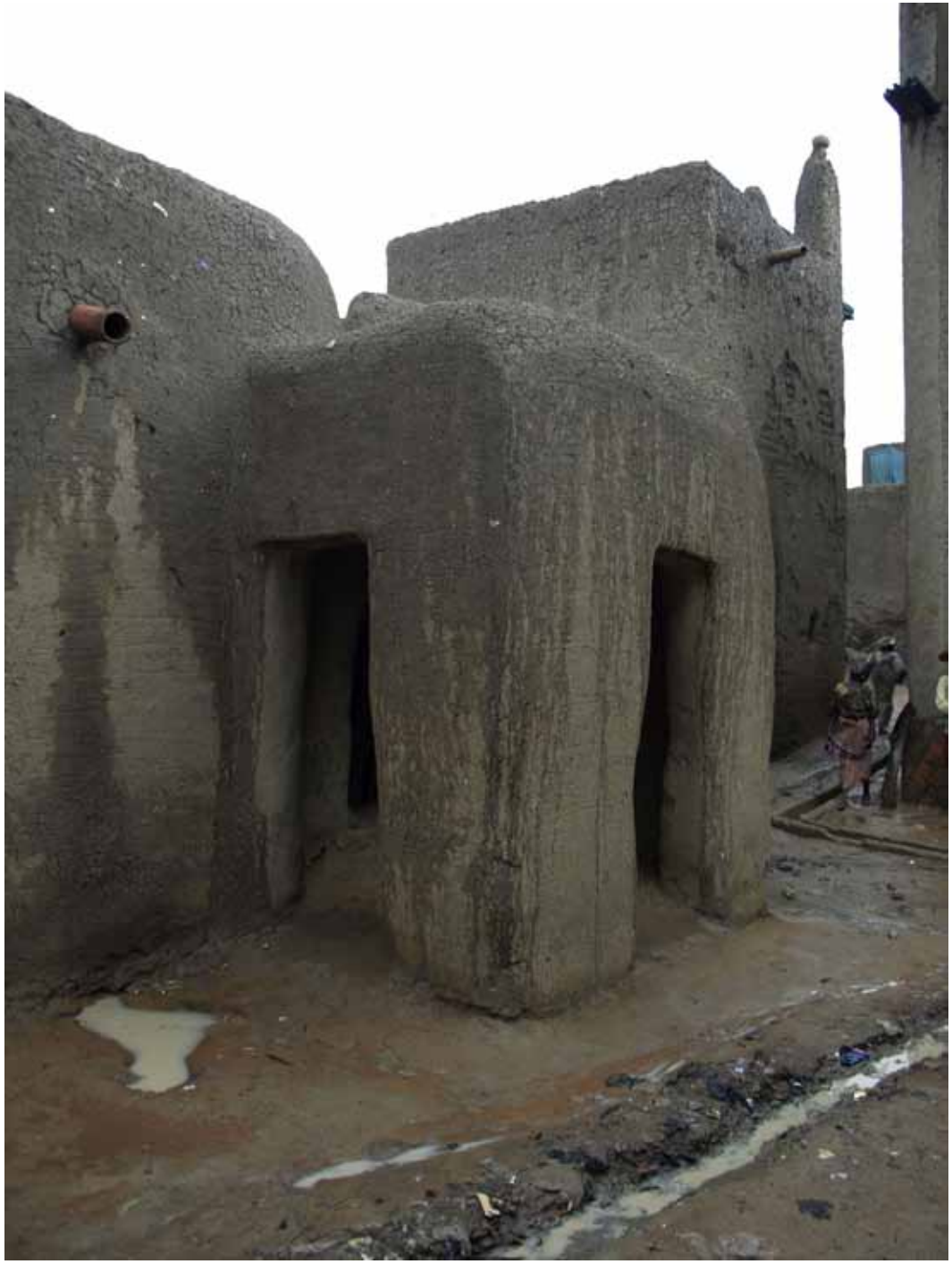


Another water : what comes around
1997

Installation of frozen polluted underground water on the street, Hirano, Osaka.

Djienné, Mali





When I visited Djienné, Mali, in 2008, I found buildings directly appear from and sink into the earth ground.

It suggested an unbelievable relationship between material and form and an eternal circulation of earth.

That was true art in-situ, in-situ resource utilization, not exploitation of resources.

But at that time, I didn’t know what could I do as a Japanese artist.

A backside view of Great Mosque of Djenné
Photo: Akihiko Inoue, 2008

About KCUA, its geographical context

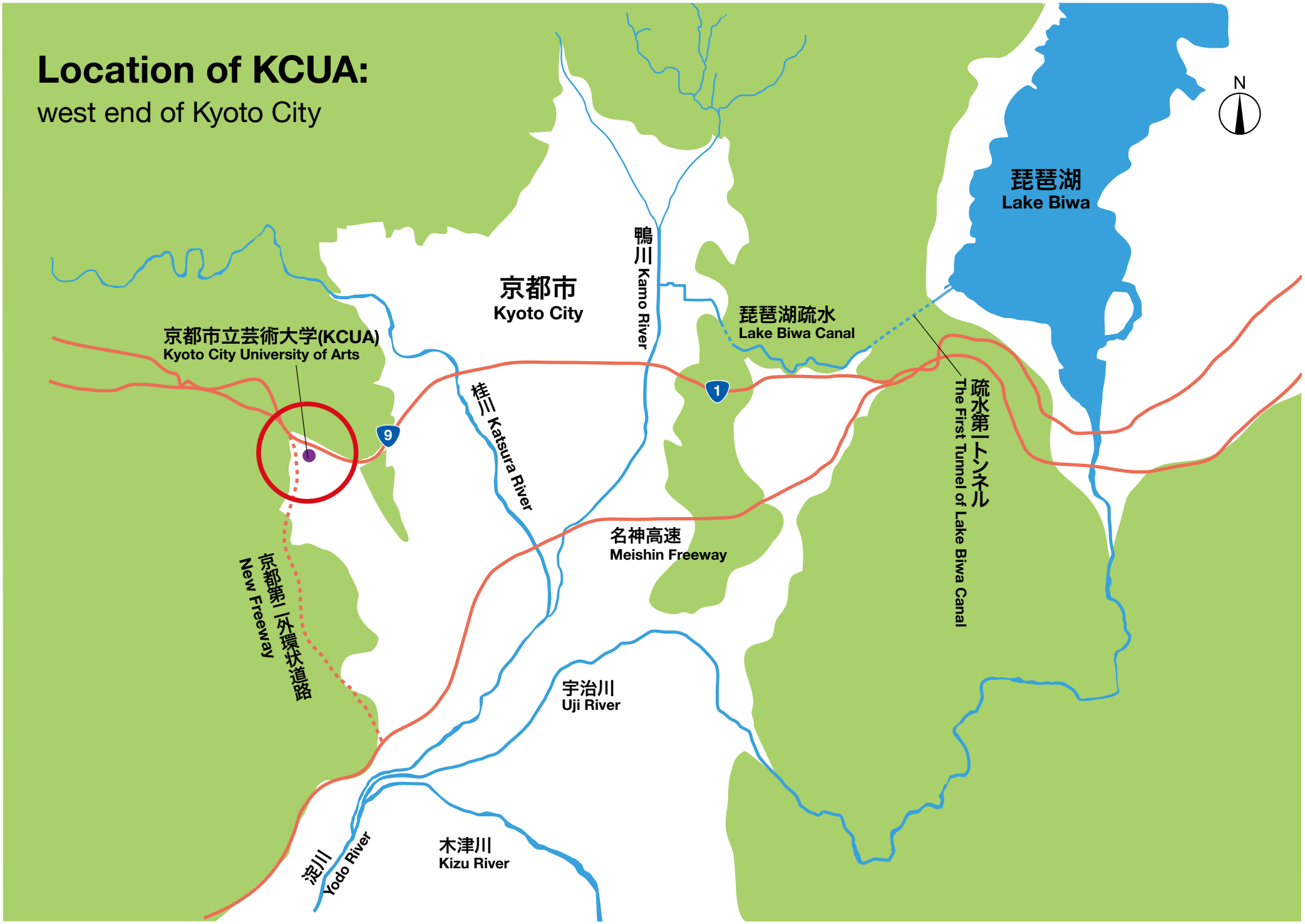
Kyoto City University of Arts is the oldest public art academy in Japan, founded in 1880 at the center of Kyoto City. But from 1980 it is located at the west end of the City.
The area has name of Kutsukake, which means “exit” of village or town.

Next year in 2023, KCUA will move to just near the Kyoto Station.
In 2016, I was asked to make the basic concept of new KCUA’s plan for competition of architecture.
Through this work, I reconsidered the geographical and topographical context of the old capital Kyoto.

KCUA’s location “ Kutsukake” includes the problems of the “periphery” of the capital.

Location of KCUA:

west end of Kyoto City



In 2008, the construction of Free way close to KCUA was begun.

The area Kutsukake, Oe and Oharano had suffered from ageing and shrinking populations.

I found the instability of landscape in the periphery of city.

Flow of massive earth

Destabilization and liquidization
of landscape

Destruction of local forests and hills near village and KCUA

Destruction of old houses close to KCUA

This old house and wall from Edo period close to KCUA was planned to be destroyed. But this road is an approach to an old Shrine at the foot of the mountain "Nishiyama" which is the west limit of Kyoto City.

Making “Tea house on the pass”

With students, I tried to extend the earth wall before destruction.
We used in-situ resources, earth from destroyed bamboo forest and woods from destroyed houses by the freeway construction.

The extended wall became a part of new tea house on the pass.

One of the most interesting things was that our working place became a new commons with local people, their feeling and knowledges.

Tea house on the pass with extended earth wall worked as a creative commons at the same time.

Tea ceremony with old residents and students

In May 2010, the day of destruction came.

We saved all the earth of the wall and house.
The demolition company kindly waited for our work.

The earth we saved by hand was over 10 tons, more than 420 sacs.

Akihiko Inoue

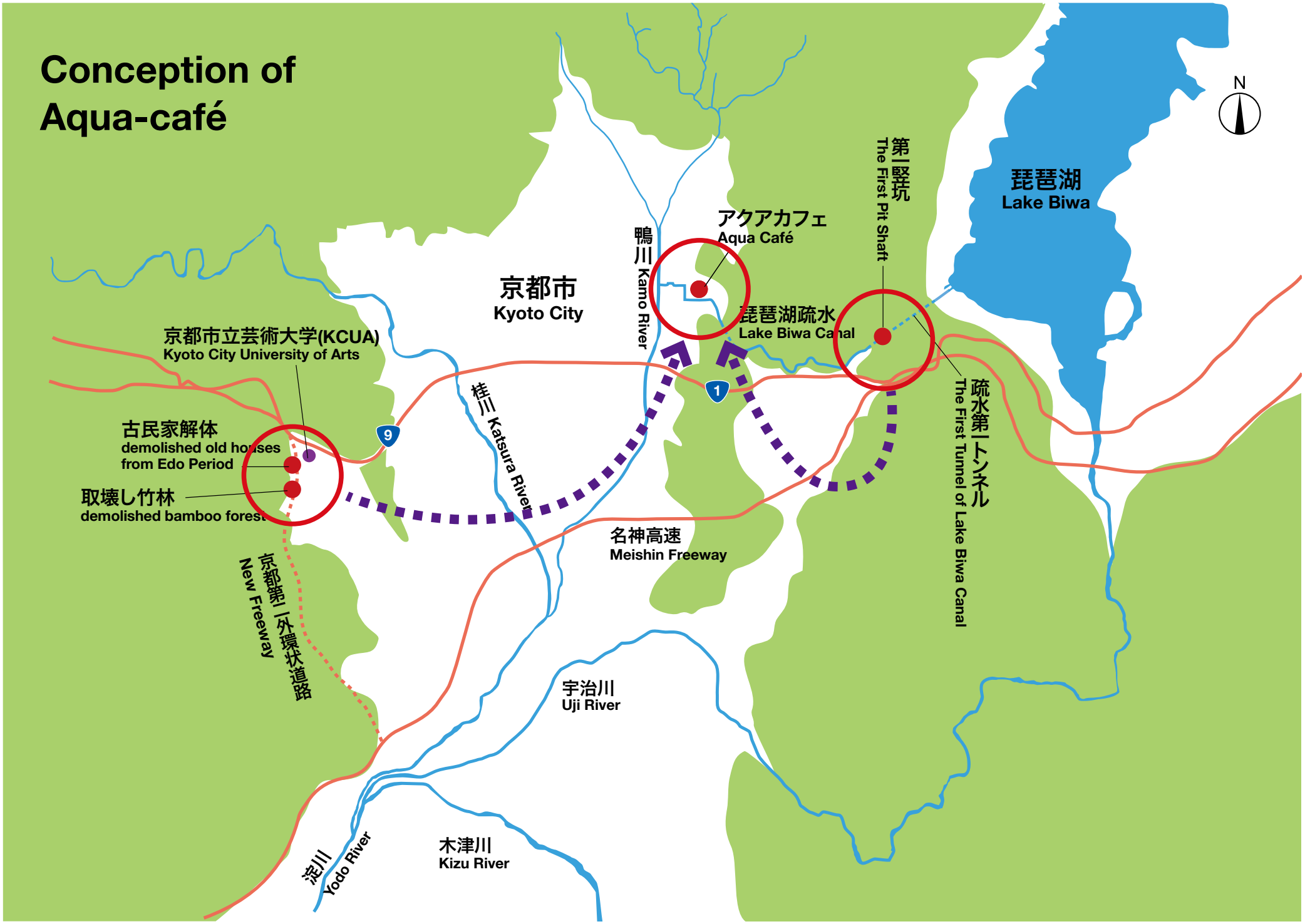
In 2010, I was commissioned to participate in the exhibition **Trouble in Paradise: Ethics of survival** organized by National Museum of Modern Art, Kyoto (MoMAK).

The year 2010 wad 120 anniversary of Lake Biwa Canal, which had conducted the modernization of Kyoto City in Meiji period supplying the infrastructure of water and electricity.

For making Aqua-café, I decided to be based on the geographical and historical context of Kyoto as modern city, KCUA and MoMAK.

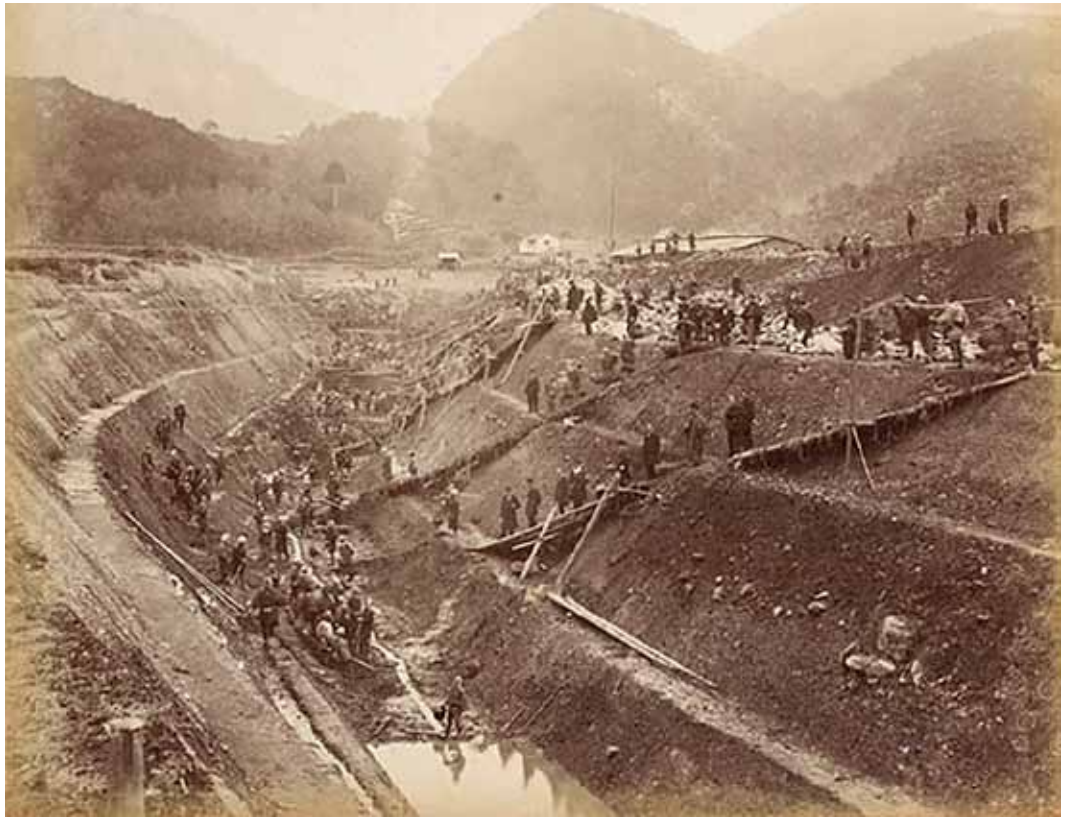
Flyer of the exhibition “Ethics of survival”

Conception of Aqua-café



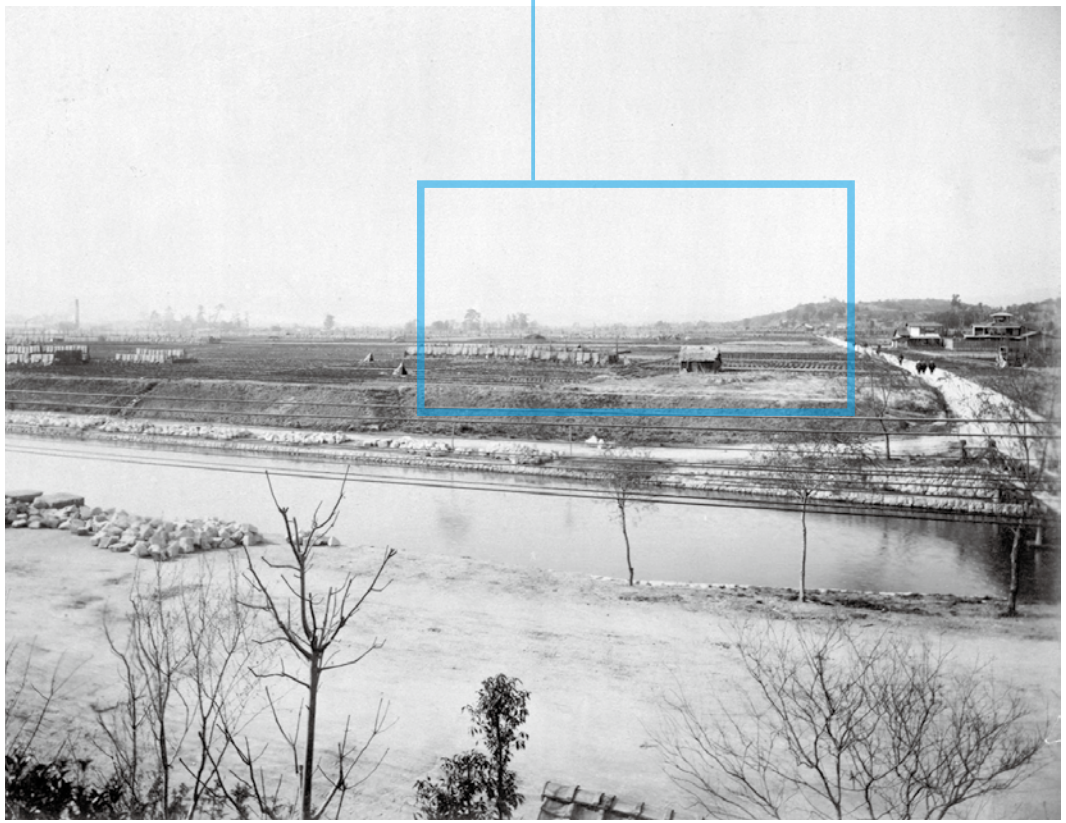
Lake Biwa Canal

Its construction begun in 1885



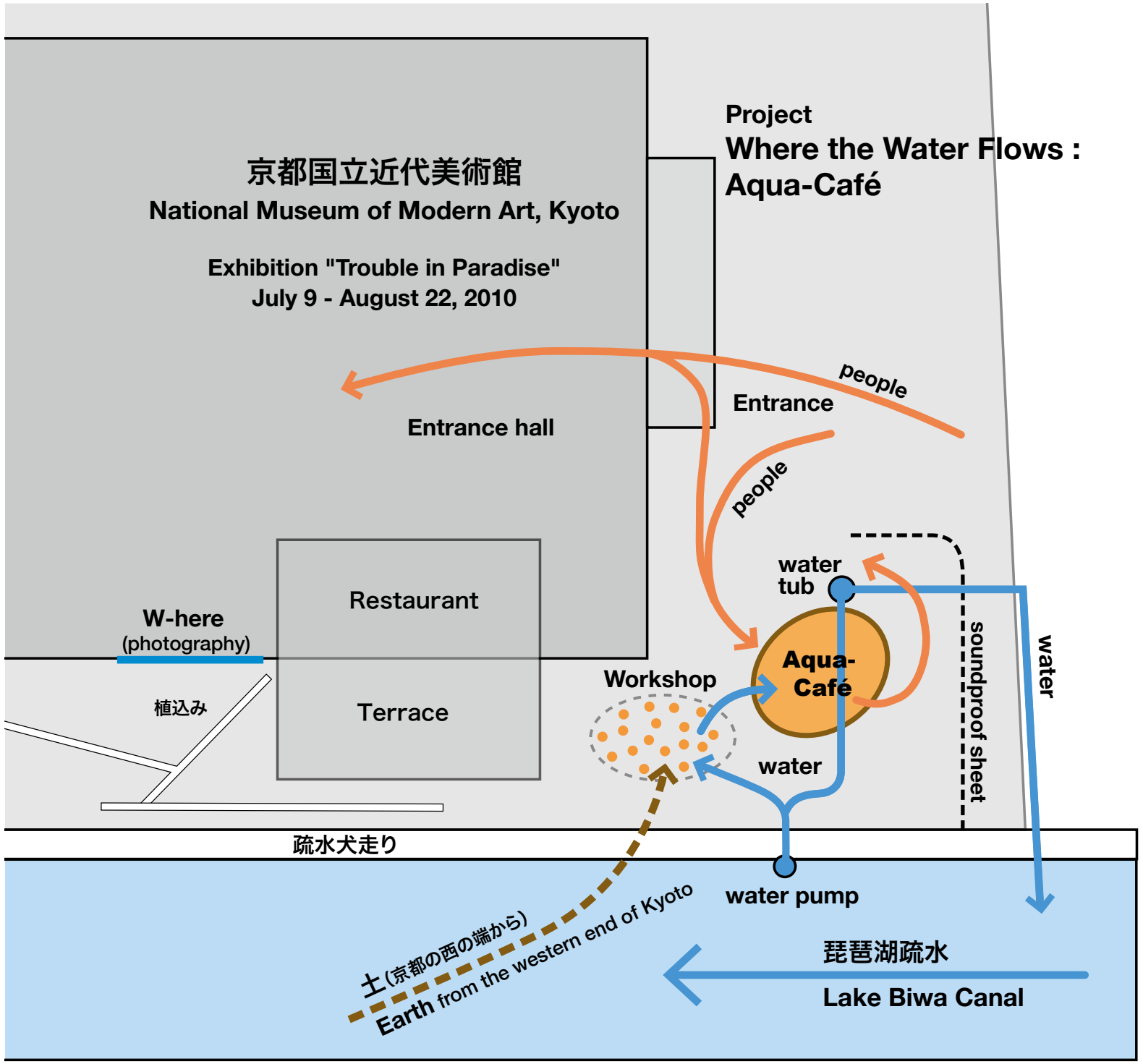
Lake Biwa Canal had conducted the modernization of Kyoto City in Meiji period, supplying the infrastructure of water and electricity.

The site of National Museum of Modern Art, Kyoto



New opened land "Okazaki park" by Lake Biwa Canal, 1892

Conception of Aqua-café



Aqua-café

Bringing **earth** from west end of Kyoto City and mixing it with **water** from Lake Biwa Canal which flows from east end of Kyoto City in order to build a temporary space for drinking water in front of Museum.

For the construction, using bamboos and earth from destroyed land of west end of Kyoto and water from Lake Biwa Canal from the east end, and purchasing nothing for art work.

The model was the **First Pit Shaft** which was digged at first to make the first tunnel of the Canal.
It was almost forgotten and unknown, but one can say it "**the vertical birth canal**" of Kyoto as a modern city with infrastructures of water supply and electricity.

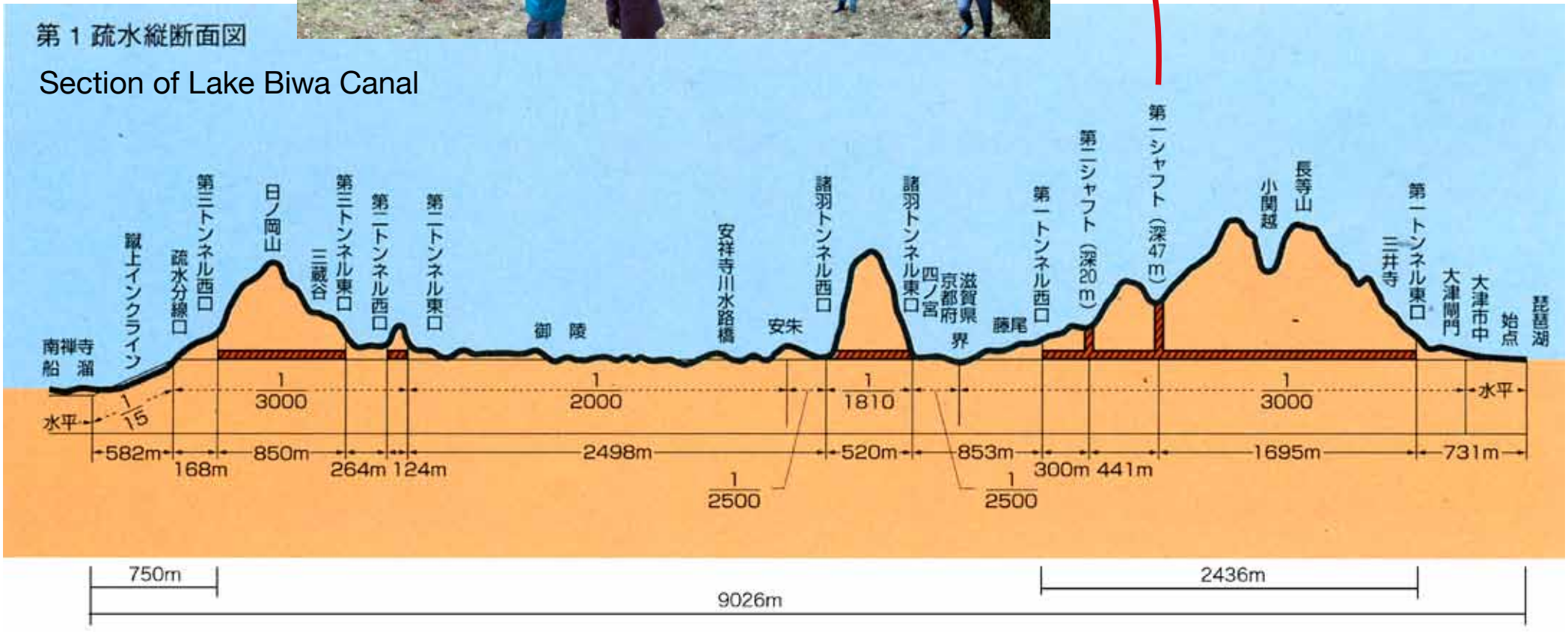
The model : First Pit Shaft of First tunnel of Lake Biwa Canal

← KYOTO

Lake Biwa →

第１疏水縦断面図

Section of Lake Biwa Canal



Construction of Aqua-Café in front of MoMAK.

Ellipsoid form is from the First Pit Shaft.

Using bamboos, earth and water without money

The technic is traditional Japanese earth wall using bamboo lattice “Take-komai”,
but modified radically in order to build cylindrical form, that is “Double Bamboo Lattice”.

Double bamboo lattice

Normally in Japanese wooden architecture with post-and-beam structure, bamboo lattice is one layer.

But with double bamboo lattice that I invented, one can build round wall with invisible pillar.

↑ Normal post-and-beam construction with one layer bamboo lattice

Double bamboo lattice enabled us to realize an African house or cylindrical building with earthen blocks.

In the double bamboo lattice,
earth dries in-between two lattices.

And one can realize thick and round
wall at once without making and
laying lots of earth blocks.

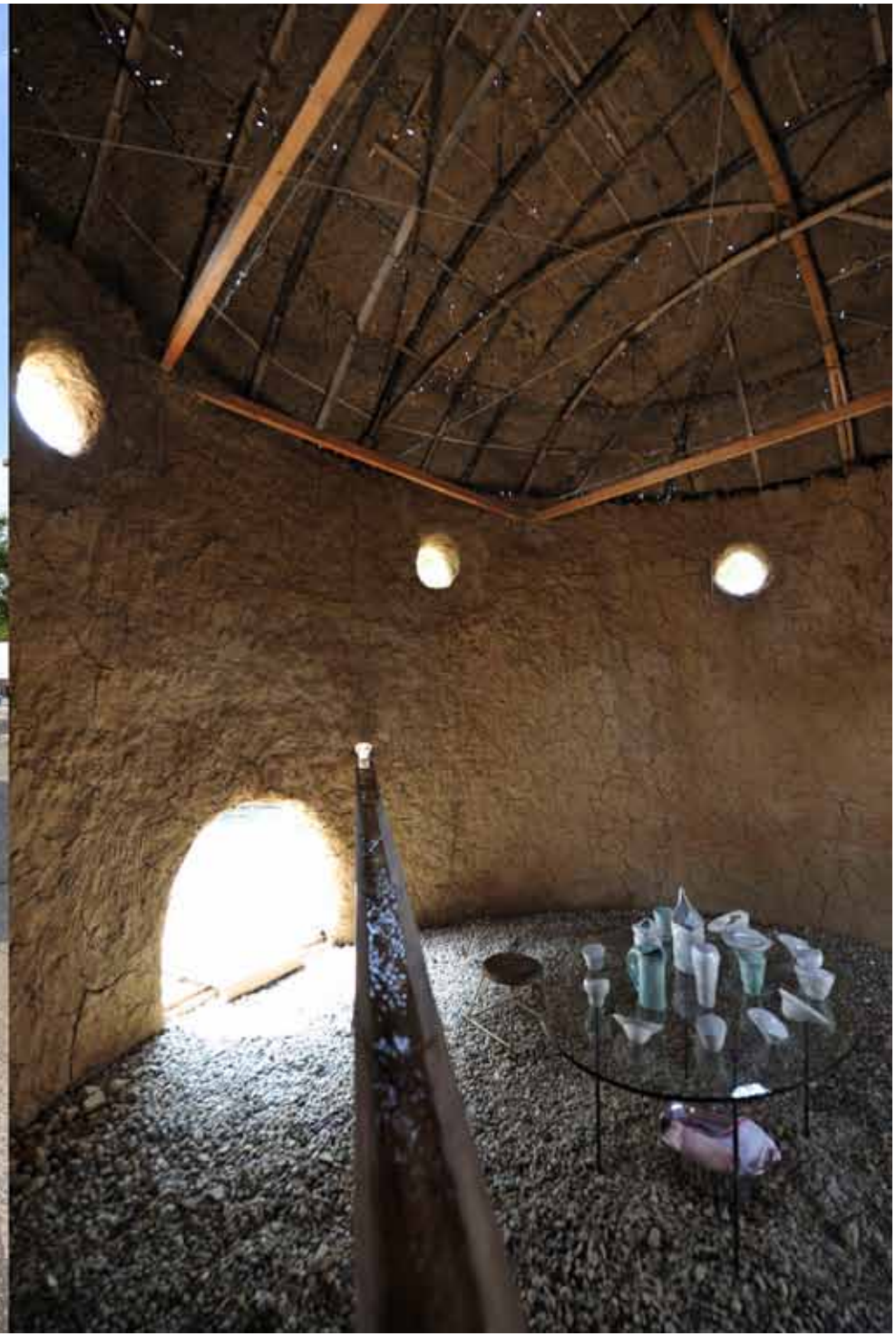
The outdoor working place for Aqua-café became a kind of creative commons with many people and visitors of various backgrounds and diverse generations.

A French architect from Nîme.

Aqua Café

Water from Lake Biwa Canal penetrates through Aqua-café and returns to the Canal.

Aqua Café



Contrast of the material and shape of window

National Museum of Modern Art, Kyoto, designed by Fumihiko Maki, is one of representative post-modern architectures in Japan.

Director of the Museum joined in a tea ceremony in Aqua-café.

Deconstruction of Aqua Café

After the exhibition, we showed the process of deconstruction as well.

In Aqua-Café project, to be independent of the market economy and to get materials without purchasing them were so much important as making the art work itself. Today, in art as well as in architecture, we use materials bought at the market. All those materials are industrial products and they will be waste after life.

Against this current trends, our approach consists of :
1_getting natural materials directly from the regional environment without purchasing them,
2_reusing the materials after removal for another work or project.

This project also refers to the reconsideration of the relationship between material and form. According to Aristotle, **hyle** (material or matter) is a potential and passive element which comes into being as **energeia** (actual thing) with a given **eidos** (form). But hyle remains constant throughout the process of change. It is **dunamis** (potentiality) inherent to everything.

We destroy the form of an actual thing, for example, that of Aqua-Café, but not the material. In other words, **through destruction, hyle is liberated from the eidos (form) forced by human beings and turns back to the state of dunamis**.

We human beings tend to see the world from the viewpoint of the form which we pressed upon the material. This leads to the dualism of creation and destruction, which is connected with anthropocentrism.

But if we see the world from the viewpoint of **hyle** (material or matter), all things are **dunamis** (potential beings) in the state of flux without end.

Aqua-Café is neither an "art work" nor an "end", but simply is a temporary form or a network of relations which the primary material (hyle)—earth and water—takes in the process of constant change.

After deconstruction of Aqua-café, we bring all the earth back to campus of KCUA to reuse for new space design, that is Tsuchi-no-ie.

Reclaim of the site

For the site of Tsuchi-no-ie in the campus, we reclaimed the site on the top of the hill overgrown with weeds.

Kyoto City is too poor to maintain the entire campus of KCUA, so there are some neglected areas. We found an abandoned and buried flower garden on the hill and digged it up.

construction with natural curved trees and bamboos

Instead of purchasing sawn woods from a market, we use in-situ resources in/around campus of KCUA. It is a trial to be independent of the capitalist economy.

That asks us to invent new ways of constructing. For example, two curved trees are jointed by abandoned woods to be transformed to two pillars.

Pillars are not embeded, they stand up on the foundation stones. In tradiitonal japanese wooden structure, it's called "Ishiba-date".

Thatching the roof

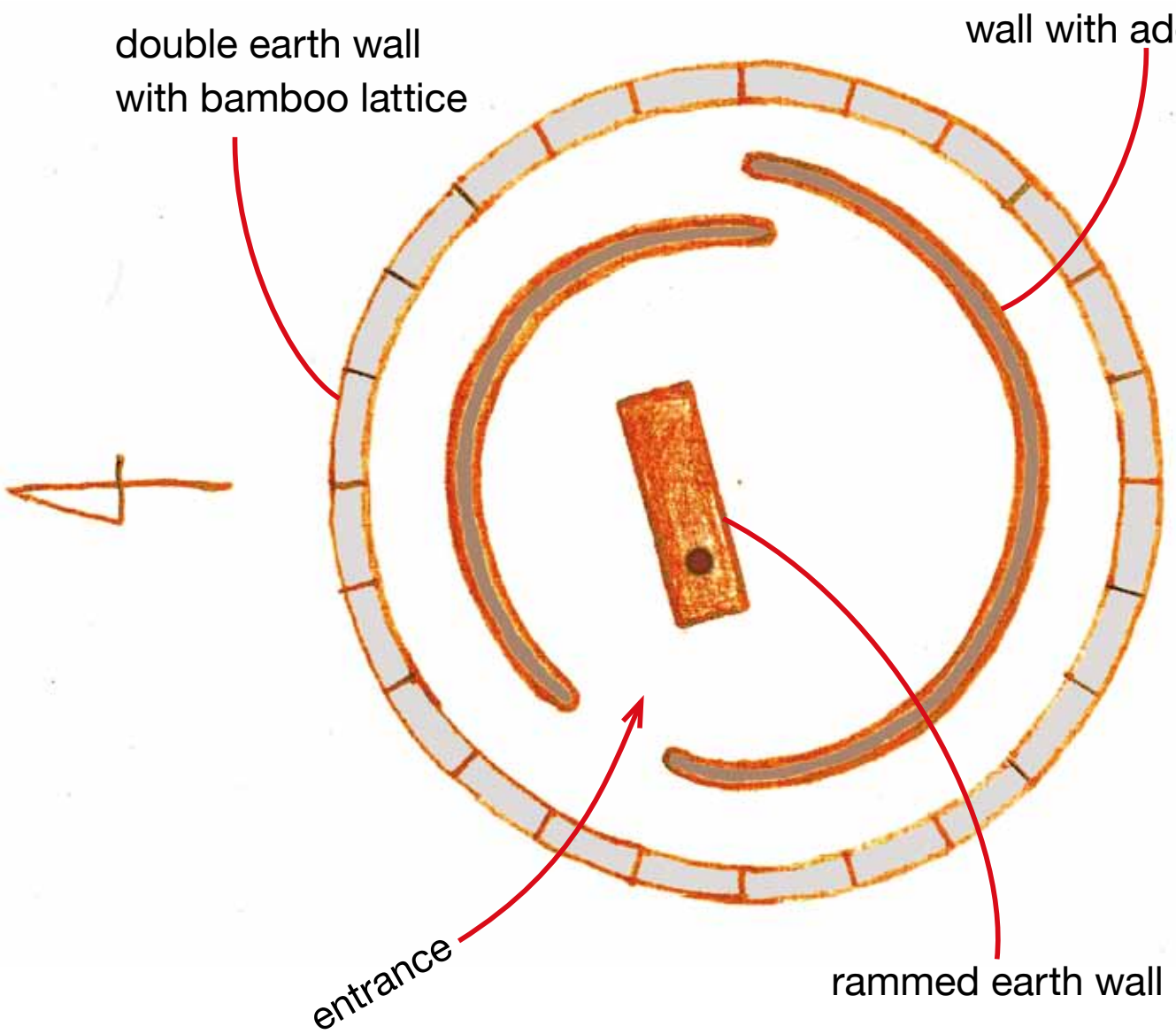
Gathering bamboo and thatch for the roof

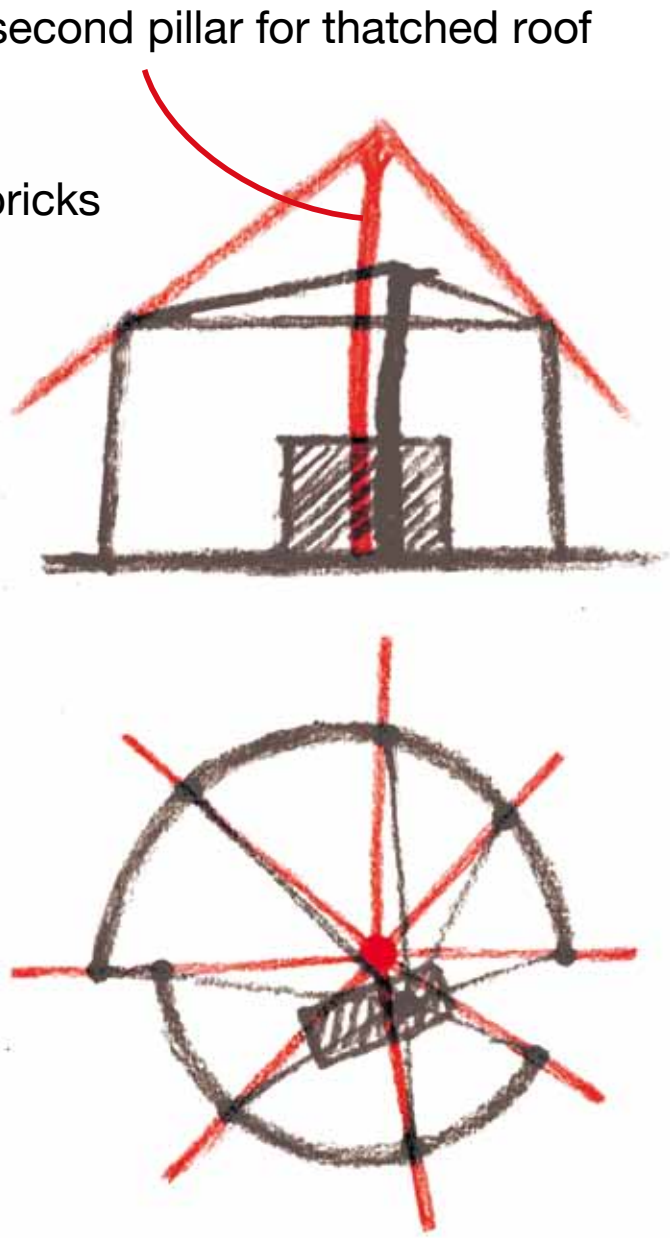
Thatching the roof

Learning from artisan.

To inherit the traditional technic in danger now is important to art students.

Plan
and three types of earthen wall





3 type of earth construction
3-1_Rammed earthwork

Rammed earthwork uses formworks to ram down the soil. It was used since thousands years ago, for example, Great Wall of China.

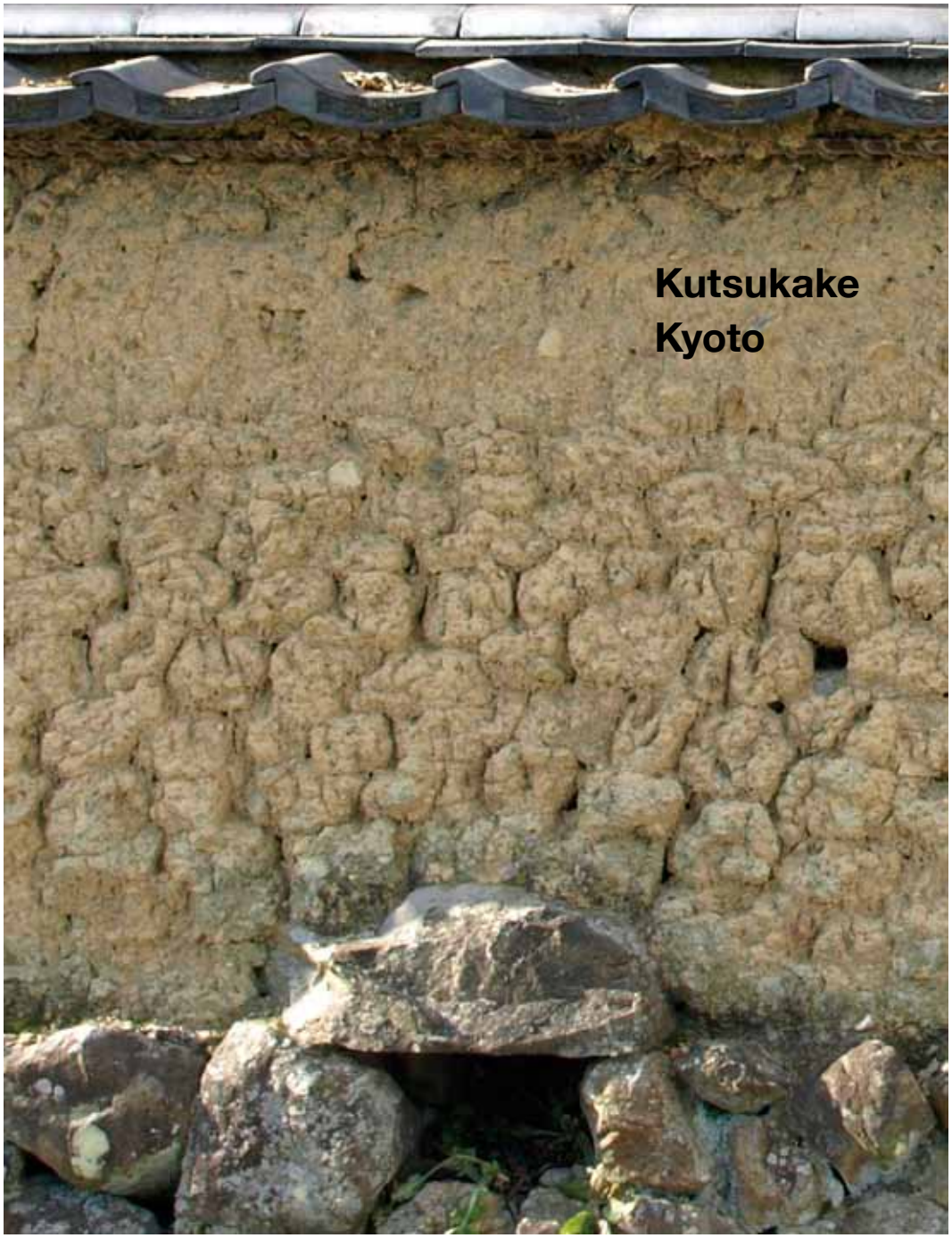
First earthen wall of Tsuchi-no-ie was that of rammed earthwork.

Rammed earthwork is universal technic for millennia.

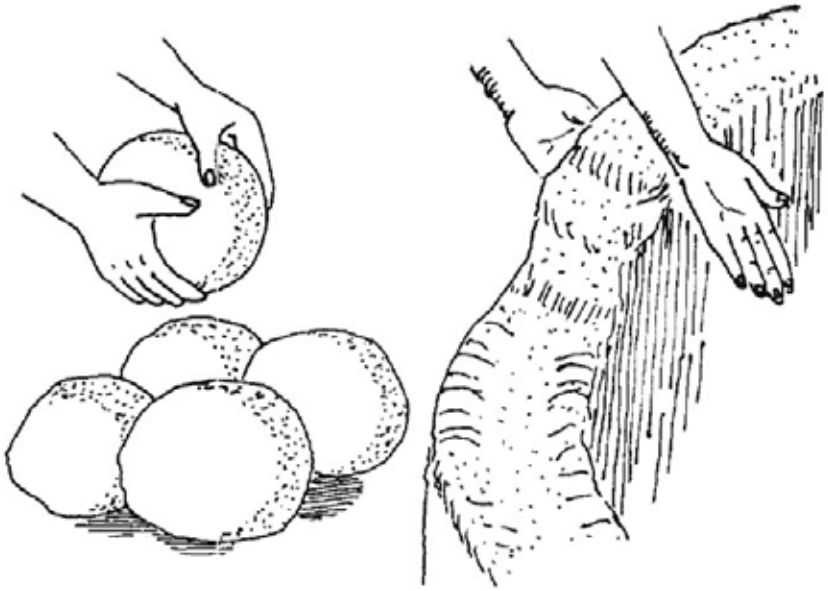
When I visited Tata, Maroc, in 2016, I saw the same technic.

3-2_Working with earth blocks (adobe)

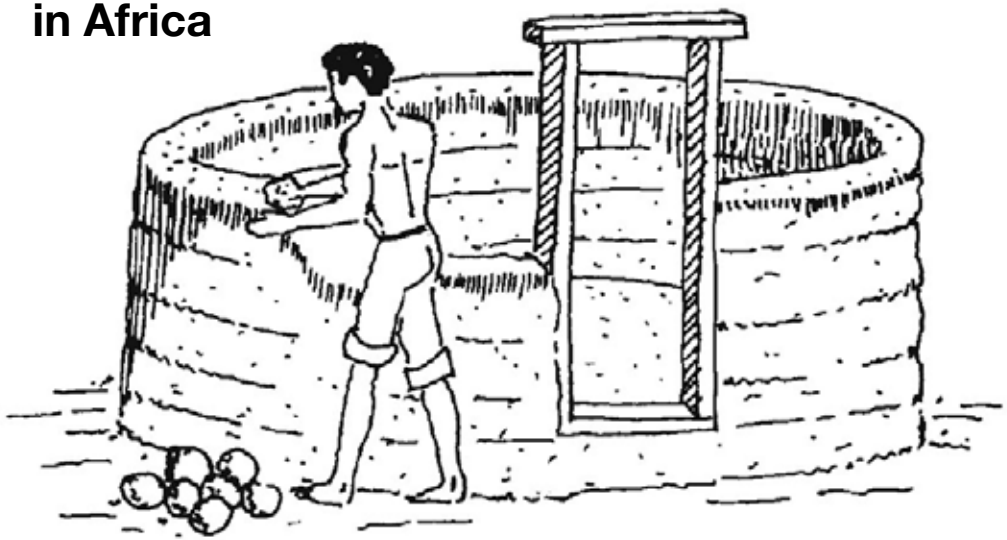
Sun-dried earth blocks



Laying wet earth balls
(Nerituchi-zumi)



sample
in Africa



3-3_Working with ouble bamboo lattice

Our double bamboo lattice enables to realise a thick and round wall at once.

How to knead earth with straw

At first, by foot.

After 2010, with mixer

Famous plasterer Mr.Akira Kusumi taught us that one can use cut grass instead of straw and the essence of traditional technic is not fixed but flexible and inventive.

Interior design

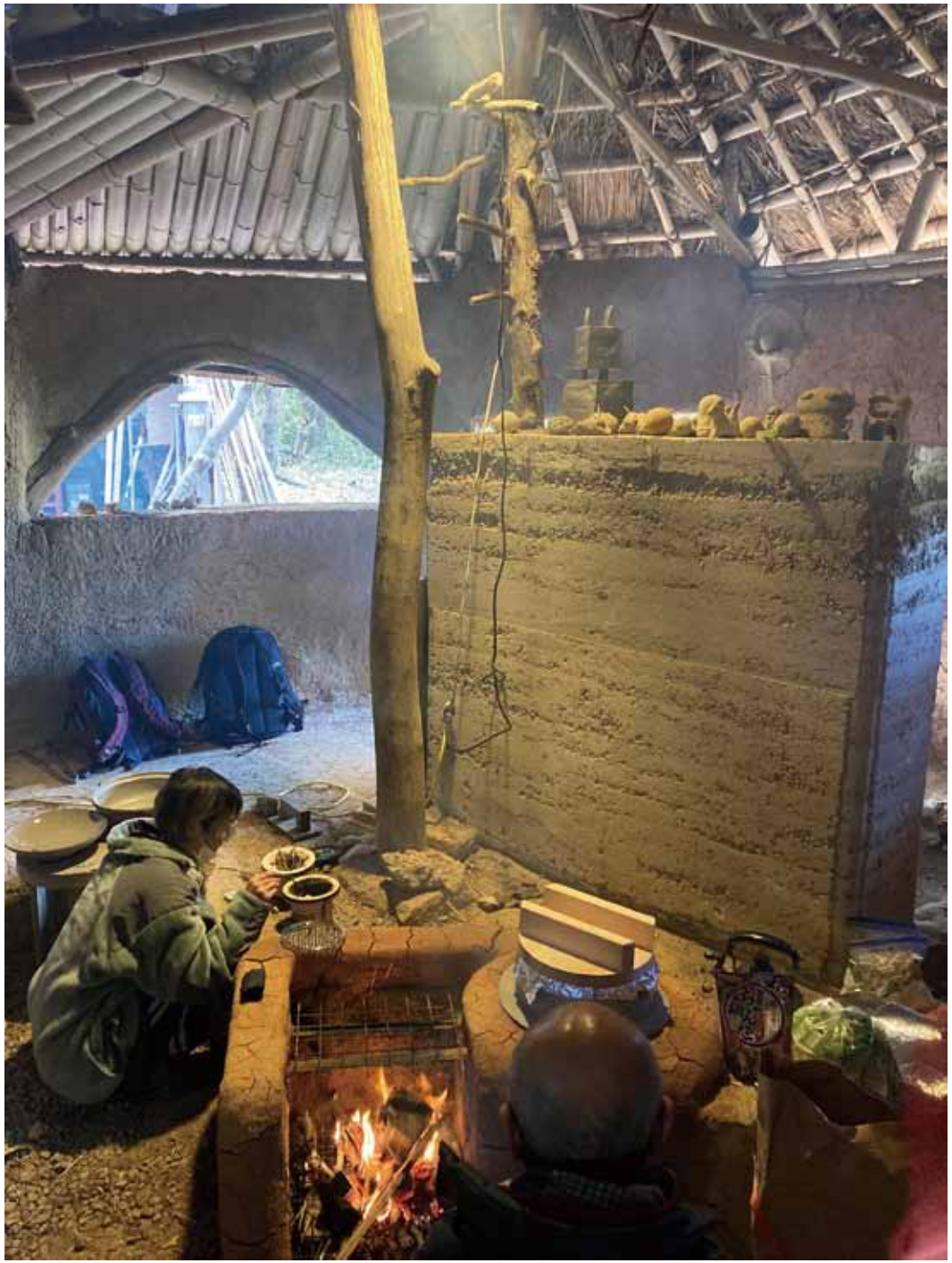
Making “earth bench” by digging the ground

It generates new earth as material.

Doma-za

“Doma” means dirt floor. “Za” means seat.

The earth generated by digging the floor were transformed to earth blocks for making a furnace. Doma-za accept more people than common bench.



Working place as new space for creative commons

Concert Feb. 2012

Roof was not yet completed, but people enjoyed the space in mid-flow.

Wall painting with pigments from earth

Motifs are living creatures around Tuchi-no-ie.

Making Tsuchi-uki-an (Floating earth room)

second Tsuchi-no-ie

Finding another site for second house.

Study of location and scale

Making Tsuchi-uki-an

Tsuchi-uki-an is planned as a small tea house floating on the slope of the hill. The floor is 180 cm^2. All the materials were gathered in/around KCUA'S campus.

Tsuchi-uki-an is not with double but normal bamboo lattice.
This way of setting pillars is called "Ishibadate".

The diagonal beam, called "Sujikai", is by natural wood.

"Ishibadate" is a traditional construction method in Japan with many earthquakes. It doesn't fix pillars into ground in order to correspond to earthquake.

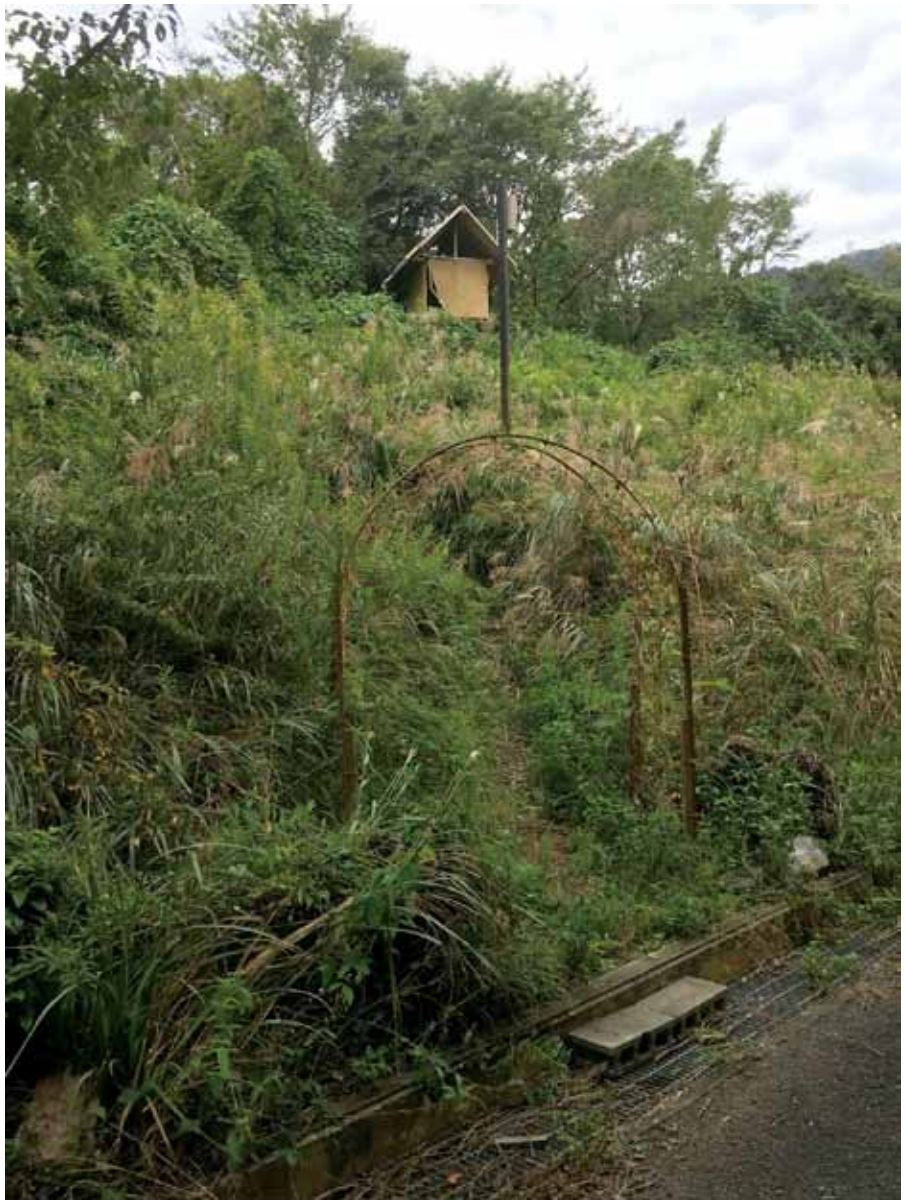
In Tsuchi-uki-an, Nijiri-guchi (entrance of tea house) is a hole opened at the floor.

View from the loft space

Ordinary Nijiri-guchi of traditional tea house

Tsuchi-uki-an

Tsuchi-uki-an has a loft space in which 4-5 persons can enter and have a good view.
And It has aloso a small terrace.

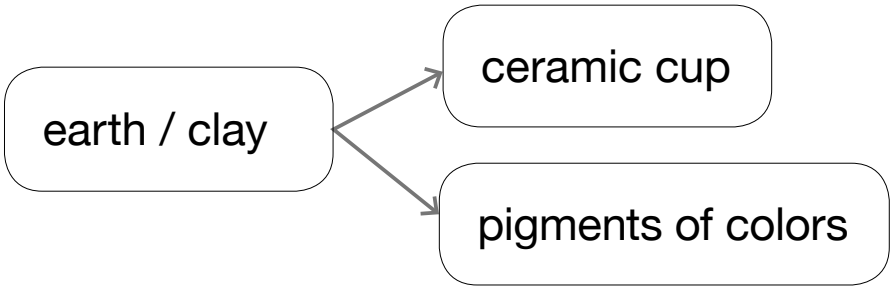


We also made a new path to Tsuchi-uki-an and Tsuchi-no-ie.
Making a new path is realizing a new perception and a new landscape.

In searching for the in-situ resources,
we cultivated a farm on the hill

harvests

Discovery of our in-situ resources:



Ninni Maklin, student of ceramic from Finland, made original cups from clay she had found on the ground of the hill.

Climate change has become harder in these years.
The biggest tree on the hill was broken by the violent typhoon in september 2018.

But Tsuchi-no-ie and Tsuchi-uki-an had little damage .

How shall we live on this planet ?

Through the praxis with earth and various natural materials in outdoor space, I realize that it is important to reconsider all human products including art works in larger biogeochemical cycle.

Human being is an only creature who produce waste that cannot turn back to nature. But productive activity with raw earth does not produce any waste.

Earth is primary material and Mother of all materials, and among the most cost effective, low carbon, low embodied energy solutions for sustainable world.
40 % of the world population lives in earthen dwellings.

If we, artist and designer, should redefine the objects of art and design and their roles on this planet so as to elaborate new ecological paradigms in the Cthulucene, we must learn from earth itself.