

A practical model for an application of research result

Planned site : Kamiyuge-cho, Keihoku, Kyoto

Site area : approx. 6.5 ha

Regreen

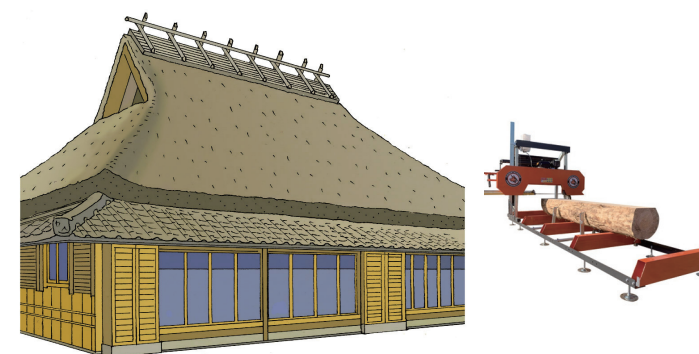


Master plan based on harmony with nature

One Health Forest, Keihoku, Kyoto, Japan

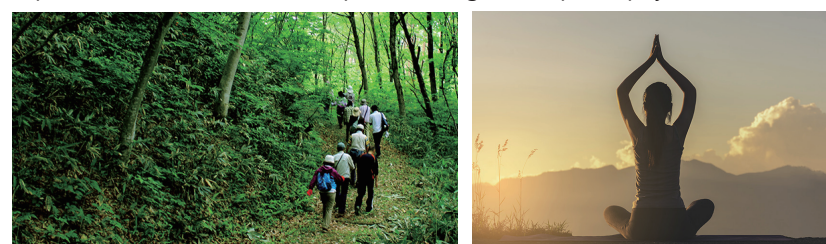
A practical model project using the research results. The site is in the satoyama area where had contributed to establish the former capital, Kyoto, and supported life of emperor and people in the capital. The theme is a health, circulation of nature and resource, healing and well-being for people and local community. The ancestors of the site owner had developed this region since the 14th century, one ancestor had established the sericulture industry in the 19th century and contributed for local employment. Once this forest was filled by diverse trees, flowers and plants, living creatures and mountain spring water, however, due to the prosperity of the forestry industry, which was the main industry of Keihoku, artificial cypress forests were planted several decades ago, and the diversity of the forest significantly disappeared. Recent years, due to absence of the owner, house and forests have been left unattended and have gradually fallen into disrepair.

However, the forest still provides water, wild vegetables in spring and persimmons and chestnuts in autumn, and has the potential to be used effectively as a place of relaxation for city dwellers. I made a plan to regenerate this area for contributing to sustainable local living landscapes both of people and nature using my research results. I hoped to create safe and secure food producing area that grows with the power of nature, a rich healing place for people, plants and living creatures, and as a demonstration site of cutting-edge research like as hypersonic sound effect and microbial environments. We started the practical work from making an edible biotope and educational program using its natural resources with participants since spring of 2023.



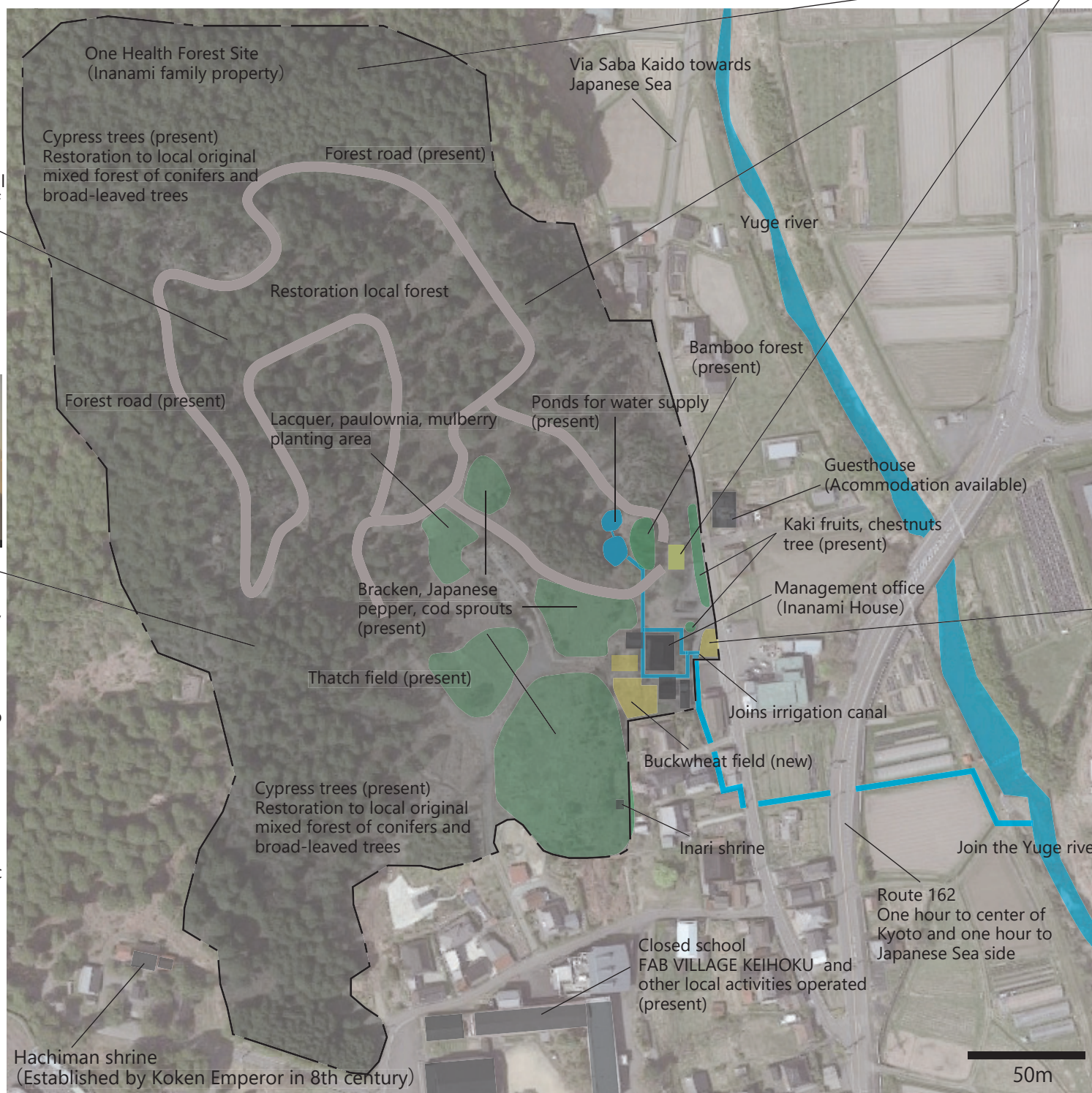
(A) Healing forests where people can connect with nature and themselves and refresh their body and mind

- Kurort walking
Moderate load walking increases the heart rate, improves immunity and cures illnesses.
- Forest bathing
Forest bathing to apply the research results about hypersonic sound, above 20,000 Hz, which reaches the brain through the skin, is effective in improving immunity, reducing stress, improving mental illness and activating the natural sensitivity of humans. Even now, the forest is a refreshing environment, but if the forest becomes a place overflowing with a diversity of plants and living creatures through this programme, it will produce even more hypersonic sound and lead to better mental and physical health for people.
- Yoga and meditation
Help to improve physical and mental health, refresh the brain, and inspire ideas and inspiration.
- Tea ceremony and other traditional activities
Japanese traditional culture helps to healing and improve physical health.



(B) Restoration of local diverse forests with producing traditional products

The project builds a model thatched house using the research results that proposes a locally produced and consumed, enriched lifestyle surrounded by high quality craftsmanship, and an improved natural environment. The cypress trees on the site will be effectively used for construction and fittings, and after logging, a vacant lot will be used for planting lacquer, paulownia, mulberry and other local original trees for producing local traditional products that will be used in the house. Half of vacant lot will be remained to encourage the transition to a local forest through natural succession. In addition, the thatch from the thatch field in this site is used not only for roofing materials but also for interior and exterior materials, furniture, fittings, and products. Regular maintenance and management of the forest and thatch fields will help nurture the ecosystem, purify the soil and groundwater, while producing high quality timber and thatch. Thatch has a higher carbon dioxide absorption and carbon fixation capacity than forests. The microorganism in thatch improves people's immunity, inhibit pathogenic bacteria, and create a microbial environment similar to being in nature while indoors. My experiment found out that even babies and people with insomnia can sleep soundly under thatched houses. After several decades of use, the thatch and other materials will be used as fertilizer for the fields on the site. The trees, thatch, soil and bamboo on the site are used to promote natural cycles while the rich soil, water and microorganisms nurtured here are used to produce safe, delicious and hassle-free food. The nutrients from the soil and water pass through the garden and are connected to the downstream areas of the river and the sea via the irrigation canal, the Yuge River, the Katsura River, the Yodo River and Osaka Bay, enriching the creatures in rivers and sea and returning to the blessings of people, thus improving the forest-source-ocean connection.



Current vegetation

- Edible plants (e.g., bracken, Japanese pepper, cod sprouts, bamboo shoots, royal fern, sweet Japanese persimmon, sakaki, chestnuts, fig, akebi, loquat, chicory, dandelion, Japanese mugwort, butterbur sprout, Japanese butterbur, wild strawberry)
- Usable for tea and medicinal herbs (e.g., canada goldenrod, horsetail, dokudami, mugwort)
- Usable plants (e.g., paper mulberry, ramie, paulownia, flowers for tea ceremony, etc)

(C) Architecture with cutting-edge research and traditional wisdom

The project cuts cypress trees down on the site and lumbars are milled on the site using a portable sawmill, and the research results as like hypersonic sound effect and microbial environments are applied to thatched modern healthy house as model of verification test. The project includes an accommodation facility, a tea ceremony room, and an exchange facility. This will allow the forest to grow into a forest with a balance of conifers and broad-leaved trees due to local vegetation and a cycle, which will be passed on to future generations. The data measuring on microbial environments have been progressed in some thatched houses in this area already and some thesis are published by researchers. In this project, we focus on application of research and take data on practical model to further update.

(D) Building materials and products using thatch

Making building materials and products using thatch from the thatch field in the site. In the future, local employment will be made by partnering with companies. Thatch contributes to people's mental and physical health, the global and local environment, and improve water retention capacity. Trial of some products have been made already and making further ideas. Ex) thatch healing charm, thatch bedding, pillows, insulation panel, interior materials for buildings and cars, waste stations, etc.



(E) Edible Biotope

A healing biotope for people and creatures with mountain water that never dries up all year round. The area used to be overgrown with grass, but water has been drawn in to create a variety of environments, including cold water flows place, warmer water flows place by stored sunlight, land, water and in-between, and has become a home for living creatures such as water striders, frogs, dragonflies, and newts. Hypersonic sound is emitted from flowing water, which can contribute to mental and physical health. The cultivation of crops that can be grown without much care, such as water bamboo, watercress, Japanese parsley, water spinach and rice on the water's edge, and tomato, paprika, water melon, taro, and buckwheat on the land, has been carried out, and this entire garden were turned into an edible place. By the improvement of the forest and the surrounding environment through workshops, including the garden inside the house and the condition of the under the ground, the whole site will be a place of healing open to the community with natural sunlight and wind flow comfortably.

