

The Sagamine Satoyama Plan

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Abstract

The Sagamine Satoyama Plan is an initiative underway in the Sagamine district of Nagakute City in Aichi Prefecture, Japan. This is a comprehensive undertaking, aiming at the preservation of the agriculture rooted in the natural environment of the area, the creation of a distinctive local culture and enhanced human interaction between local residents. The initiative is carried out on the understanding that the locality's natural environment and agriculture form a single ecosystem, along with such elements as local festivals, the internet, and renewable energies.

Keywords

Agriculture, Natural Energy, Art, Music, The Internet, Local Festivals, Local(ity), Recycling-Oriented Society, Ecosystem.

Introduction

Given the occurrence in Japan of large-scale disasters such as earthquakes and volcanic eruptions, and the terrible chain of events at the Fukushima Daiichi nuclear power plant, public fears about disasters and radiation are on the rise; unease about dependence on such dangerous energy sources as nuclear power is also growing. Also, in recent years the natural environment has been degraded due to industrial development, and valuable local indigenous plant life has been facing habitat loss. Harvestable fields have been declining in number, and agriculture has been dying out due to the ongoing loss of the local community which formed its basis. Local cultures are also being lost in recent times due to the impact of globalization.

The nuclear accident in Fukushima Prefecture contaminated large areas of land, and even now there are large numbers of people living as evacuees. All of this reminds us of the importance of the land we ourselves live on, and keenly aware of the importance of the local community. This awareness in turn makes us feel that surely we should build relationships of mutual support between fellow-members of the locality, working from our normal everyday lives – relationships

that stand us in good stead if disaster should strike, and that can help protect the locality's natural environment and agriculture.

What is the Sagamine Satoyama Plan?

Located in the Chuubu region along Japan's Pacific coast, Nagakute City in Aichi Prefecture lies between the major cities of Nagoya and Toyota. Nagakute has seen a large population influx in recent years, spurring on the city's development. The formerly rich natural environment is being progressively lost, and the local communities of old are vanishing. On the other hand, Aichi University of the Arts lies within the Sagamine district, and the zone around the school, which is protected from development, retains a rich natural environment. And because this locality is at the edges of the Nagakute City urban area and of the Sagamine mountain area, it takes on the exact quality of **undeveloped woodland near a populated area** – a terrain known in Japanese as *satoyama*.

Satoyama terrain, then, is a domain where human society and nature intersect; from time immemorial, Japanese people have gone there to do a whole range of things, like collecting firewood and berries, and raking up fallen leaves for compost. Preserving the ecosystem as they went, local residents reaped a broad range of benefits from their *satoyama*. Nature in its turn, moderately disturbed by human intervention, was activated into increased floral diversity, making the *satoyama* a location of symbiosis and coexistence.

The word "*satoyama*" also had the broader meaning of mountains and the rivers that flowed from them, along with ponds, agricultural water-channels, rice paddies and dry crop-fields; it expanded to cover the whole agricultural environment, including the culture of the country-dwellers. The rainwater that falls in the uplands of the Sagamine district still flows into ponds and through water-channels to irrigate rice-farming inside Nagakute City, connecting the Sagamine district

with the cultivated lands within Nagakute City as an agricultural environment.

In other words, the *satoyama* was a place which amply supplied all the requirements for people to live self-sufficiently in the locality – fuel and foodstuffs, compost and building materials, along with artistic, cultural and local-societal resources. People thus protected the *satoyama* carefully down the ages. This terrain was the basis of people’s lives and livelihoods, and its disappearance would have been tantamount to depriving the people of their means of subsistence.

Under the Sagamine Satoyama Plan, a wide range of initiatives are being undertaken both in the natural environment of Sagamine and inside Nagakute City. There are eight different activity areas – Mountain (Yama- 山), Woodland (Hayashi- 林), Grassland (No- 野), Flatland (Hara- 原), House (Ie- 家), Crop-field (Hata- 畑), Local Festivals (Matsuri- 祭), and Country (Sato- 里) – all of them hosting their own range of activities (Figure 1).



Figure 1. The Sagamine Satoyama Plan Map

Mountain (yama- 山)

The mountains of the Sagamine district still retain areas of untouched nature. The slopes are home to gentian and tri-dent maple, with white-flowered pipewort in the wetlands and Asarum nipponicum, Luedoehria japonica plants and Scarlet Dwarf dragonfly live in the woodlands. The area is home to a wide array of rare plants and animals unique to the locality. Under the Sagamine Satoyama Plan, local people, students and others take walks through the Sagamine upland areas, observing nature, surveying the fauna and flora, and creating craftworks using the resources of the natural environment. The Sagamine district’s uplands are also home to hand-dug agricultural tunnels (Figure 2), ponds (Figure 3) and water-channels, agriculture, an important surviving agricultural heritage. The Plan includes exploration of the agricultural tunnels by local residents and students, etc. Also, the water-channels are inhabited by rare fish species such as dark chub, and locals do an annual survey of these rare fauna and flora (Figure 4). The trees on the mountains, receiving the light of the sun, perform photosynthesis, producing oxygen. The waters trickle down into streams and flow into ponds, eventually getting used in the rice fields of Nagakute City. Water, then, is the source of our lives, and make sure that this mountain area is home to a range of important fauna and flora is also to make sure that the natural environment, which is the source of our lives, is being maintained in good condition.



Figure 2. Local residents and students exploring a cave in the outdoor experience workshop “Forest” (2007)



Figure 3. Local residents and students playing in a pond in the out-door experience workshop “Forest” (2006)



Figure 4. Local residents and students observing round- leaved sundew plants in the outdoor experience workshop “Forest” (2012)

Woodland (hayashi- 林)

The woodlands of the Sagamine district consist of wide-ranging copses of Japanese chestnut, harboring a wide range of nuts, berries and other foods – ginkgo-nut, june-berry, loquat, Japanese plum (Figure 5), bamboo shoots, propagule, chinquapin, mountain cherry, and Japanese pepper, among others. In the Sagamine Satoyama Plan, this natural bounty is picked by local people, students and others, and a work -shop on cooking foods making use of these woodland ingredients is held monthly. Fallen woodland leaves are made into compost (Figure 6), and logs and branches recovered from periodic forest thinning are used as cooking fuel in work-shops (Figure 7). As well as teaching appreciation for the bounty of nature, these workshops are also an effort to keep the

woodland environment in good condition by thinning the woodland’s trees. As well as this, the woodland provides cool shade in the summer, and a break against the cold northern winds of winter (Figure 8). And they serve as a play area for children and a spot for students and local people to take walks – a place where different people can get together.



Figure 5. Children picking plum in the outdoor experience workshop “Forest” (2012)



Figure 6. Student gathering fallen leaves to make compost (2014)



Figure 7. Parents and children using a saw to thin out the woodland in the outdoor experience workshop “Forest” (2016)



Figure 8. Children playing in the woodland shade in the outdoor experience workshop “Forest” (2012)

Grassland (No- 野)

The Sagamine district has wetlands where reeds grow, along with ostrich fern (Figure 9,10), horsetail, Japanese knotweed, butterbur and berries. A wide range of flowers of the field bloom according to season; and the area is home to varied animal and bird life – wild boar and field rabbits, raccoon dogs, snakes, pheasants and mountain turtledoves, among other species. The Sagamine Satoyama Plan includes nature-experience workshops, with walks through these grass-lands, picking the grasses and berries and cooking with them.

There are events to celebrate the grasslands’ grasses and flowers, which are also used both as ornaments at local festivals and as fertilizer for dry crop-fields. In this way, the grasslands bless us with a rich and varied bounty.



Figure 9. Parents and children walking through the reeds in the outdoor experience workshop “Forest” (2013)



Figure 10. Parents and children harvesting ostrich grass in the outdoor experience workshop “Forest” (2013)

Flatland (Hara- 原)

In flat places where relatively little grass grows, students and local people make various craft objects using the re-sources of the outdoor environment, with the wood, trees and grasses around them as materials – pottery, huts, and pizza ovens, among other things (Figure 11, 12). At a monthly workshop, using firewood from the nearby flatlands as fuel, they cook with vegetables from the nearby crop-fields (Figure 13). This area also sees the creation of artworks and dynamic expressive activities on a scale too big for a regular event schedule (Figure 14). Even if you have no money to spend, the natural environment provides us with a creative space and a wealth of materials. The flatlands of Sagamine offer nothing convenient, so people have the chance to work together and try out new approaches in making craft and art objects.



Figure 11. Children using the flatland soil to build a house in the outdoor experience workshop “Forest” (2009)



Figure 12. Parent and child using wild grasses to create a shape in the outdoor experience workshop “Forest” (2014)



Figure 13. Parents and children cooking in the flatland in the outdoor experience workshop “Forest” (2014)



Figure 14. A workshop for making pottery with the flatland earth, baked using fuel from the woodland (2008)

House(Ie- 家)

Under the Sagamine Satoyama Plan, students built a house in the grounds of Aichi University of the Arts, using locally gathered materials (Figure 15). Constructing a house together has allowed the students to have the experience of working as a team and to learn about many things, from forestry and architecture to the local environment (Figure 16). The finished house is used to store equipment for a wide range of activities, and also for workshops, exhibitions, concerts and other performances. It is equipped with solar panels, a wind-power generator (Figure 17). and batteries, etc., and the renewable energy is used to power local festivals and events. Rainwater from the roof is also stored in tanks and used to water crops.



Figure 15. Raising the house beams (2008)



Figure 16. Making the walls of the house (2010)



Figure 17. Solar panels and windpower generator (2016)

Crop-field(Hata-畑)

As part of the Sagamine Satoyama Plan, students and local people make crop-fields in the Sagamine district, growing crops such as pumpkins and cucumbers, tomatoes, egg-plant, okra, Japanese radishes, and carrots (Figure 18,19,20). The fertilizer used is a compost of grasses from the grasslands and fallen leaves from the woodlands, along with cow manure from the district's livestock farms. Local materials are used as far as possible. The vegetables and grains grown in these fields are eaten at nature-experience workshops, local festivals and so on. Recent years have seen significant crop damage from wild boars and other animals, so there is a need to develop a strategy to protect the fields.



Figure 18. Harvesting okra in preparation for a local festival (September, 2014)



Figure 19. A harvest of summer vegetables (September, 2014)



Figure 20. Students who participated in harvesting (2014)

Local Festivals(Matsuri-祭)

The Sagamine Satoyama Plan includes two local festivals a year, to draw the local community together. (Figure 21, 22, 23, 24) Through music and art, nature and food, these events are intended to provide local people with a forum for meeting each other. Cooking is

done at these festivals with seasonal vegetables brought by the local people themselves, and vegetables gathered locally. Branches are cut from the trees for fire-wood, and seasonal plants and grasses decorate the festivities. Local produce and materials are used as far as possible to create an atmosphere of the locality's nature and seasons. With cultural globalization, the area's distinctive local culture has been disappearing in recent years. The Plan aims to create a distinctive local culture for the area, witnessing the traditional local arts, crafts and performances (Figure 21) on display at these local festivals, and holding dance workshops with dancers from the area.

These events and local festivals are planned so that the people who attend them can also have a hand in cooking, setting up the meeting place, decorating the meeting place, joining dance workshops, and can get the opportunity to have a lot of different experiences together with the other participants. At present, social ties between people in the locality are becoming weaker, so these local festivals offer local people a chance to meet and get to know each other by having the same mutual experiences. By getting used to having fun and working together at festivals, they are simultaneously training themselves to offer each other mutual aid and support if and when a disaster strikes. After the Tohoku Earthquake of 2011, numerous artists and musicians went to the evacuation sites to create artworks and give performances as a way to encourage the victims of the disaster. In this way, art, music and local festivals can play a major role in offering psychological support to local people.



Figure 21. A performance of traditional women's dance at "Summer festival of Aichi Children's Art University" (2007)



Figure 22. A dance workshop at the "Fifth Nagakute Picnic" (March, 2016)



Figure 23. Participants joining in with the cooking at the "Sixth Nagakute Picnic" (September, 2016)



Figure 24. An outdoor live performance at the "Sixth Nagakute Picnic" (September, 2016)

Country (Sato- 里)

When the Fukushima tsunami and nuclear accident happened, the social infrastructure and systems failed, leaving local residents to help each other escape the dangers. It became clear that the social systems in place during normal times will be paralyzed when a disaster strikes, leaving the local community all there is to fall back on. But now that social ties between people in their localities are becoming weaker in Japan, it is possible that the local community will fail to fulfill its role. With this in mind, we first compiled a database to visualize what activities local residents of Nagakute City were getting involved in, and put it on a website to share this information with the local community (Figure 25, 26). Working with the local administration of Nagakute City and with community activists, we also set up the Civic Activities Exchange Assembly to provide local people with a forum to interact with each other.



Figure 25. Nagakute Yuimaaru Website. <http://www.nagakute-yuimaaru.com> (2014)



Figure 26. Nagakute Yuimaaru Website. <http://www.nagakute-yuimaaru.com> (2014)

Satoyama as an Ecosystem

In the Sagamine Satoyama Plan, mountain and woodland, grassland, flatland, house, crop-field and country mutually combine with energy sources, information, people management and art to form a single ecosystem (Figure 27).



Figure 27. Satoyama as an Ecosystem

- The sunshine pouring down on the mountains powers photosynthesis, giving growth to the trees of the forests and woodlands and the grasses and flowers of the grasslands, leading in turn to the generation of oxygen.
- The rain falling on the mountains courses through water-channels to be collected in ponds, to be used in the paddy fields of Nagakute.
- The leaves that fall in the woodlands are gathered and used as compost for the crop-fields.
- The small branches that fall in the woodlands and the trees that are thinned out from them are gathered and used as energy for cooking. And the woodlands, moderately thinned out, maintain a good environment.

- The edible wild plants harvested from the grasslands are used in cooking at events and local festivals, and the flowers and grasses are used as decoration.
- The grasses of the grasslands are cut and used as fertilizer for the crop-fields.
- The vegetables harvested from the crop-fields are presented in the meals eaten at events and local festivals.
- The energy produced by the solar and wind power generators at the house is stored in batteries and used to power lighting and sound at events and local festivals. Also, the water collected in the tank is used to water crops in the crop-fields and powers pumps, etc.
- The water falling on the roof of the house is collected in the tank and used to water crops in the crop-fields, etc.
- The music, art and cuisine at the local festivals draw the people of the country to the satoyama, and the local festivals become a forum for many experiences and encounters.
- The satoyama offers the people of the country the chance to engage in activities in the midst of nature, along with a wealth of knowledge and experience of the natural environment and the fauna and flora. It also gives people the chance to interact and find recreation and refreshment.
- Local communication is activated through the website and other information media, playing a useful role in the preservation of the agricultural and natural environments.

Conclusion

In presentday Japan, the many and varied negative effects stemming from colossal, vertically integrated systems such as mass media and nuclear power generation are becoming strikingly noticeable. On the other hand, personal information and distribution systems such as the internet and renewable energy are being developed. While the traditional local community – with its agricultural roots reaching back into time immemorial – is in the process of vanishing from the Japan of today, today's local community is arming itself with the smartphone, the internet and social net-working services – and this makes it possible to create a local community anew. In place of the fading, agricultural-based local community of old, the aim of the Sagamine Satoyama Plan is to create a satoyama for today, deploying traditional patterns of living and culture along with technologies such as natural energy

and the internet in combination with nature, agriculture, cuisine art and music in a comprehensive manner to create a recycling-oriented society.

Rather than partial approaches and strategies, a comprehensive approach combining solutions from a broad range of areas is required in order to resolve the diverse problems confronting modern society today. The farmers of pre-modern Japan were referred to as “peasants” (hyakushou). The Japanese spelling of the word includes the character for “one hundred,” implying that these were people who performed a myriad of different tasks. Pre-modern peasants were engaged in agriculture, but also in forestry, crafts, performance and culture – these were people of many talents. However, with the progress of industrial specialization, the specialized workers of the modern world lost the totality of perspective whereby they could see around them in a comprehensive fashion. Today, however, the progress of the internet, of multiple various systems of information and production, have made it possible for people to recover a broader viewpoint and equip themselves with diverse capabilities.

Large-scale systems such as nuclear power generation and the mass media lack the spontaneity which local areas and individuals have to think things through for themselves and to take action on their own initiative. The Sagamine Satoyama Plan will continue to strive for a self-sustaining, independent local way of life.

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Author Biography

Author is a media artist and design director who has been engaged in making interactive installations and design. He has made various pieces with a view to constructing an environment where anyone can participate freely without any restrictions. He is an Associate Professor in Aichi University of the Arts. His work has been shown at SIGGRAPH (93,94,96,98,99,01), at ARTEC (93,95,97), at ISEA (95,98), at Lovebytes(02), at Prix Ars Electronica(97,03), at European Media Art Festival(94,99), at sightsonic(03). He has made oral presentation at Japanese Society for the Science of Design (14,15,16), and presented poster at ISEA2016. You can visit his web site at <http://kankyo-media.com>, <http://sagamine-satoyama.com>, <http://forest.org>, <http://nagakute-picnic.com>