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Problems with the concept *Satoyama*

A critical review of satoyama as a concept in conservatism

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Abstract

This paper is a critical review of the concept of *satoyama*, the traditional cultural landscape of Japan. There are many academic papers presenting the positive aspects of *satoyama*, especially with an environmentalist or conservationist perspective. The aim of this paper is to present some of the problematic aspects of the concept of *satoyama*. The intention is not to deny the positive aspects of *satoyama*, but to provide a more balanced perspective by highlighting an area that has seen less academic interest.

The paper is not a criticism of *satoyama* as a landscape, but how *satoyama* is used by various actors for ‘greenwashing’. This is possible because the concept of *satoyama* itself is vague. After presenting the concept of *satoyama*, the paper analyzes how private companies are making themselves appear ‘greener’ by associating their name with the concept of *satoyama*. There are two main cases of corporate greenwashing presented in the paper. First, a recycling program for ink-cartridges started by printer manufacturers, the Ink-Cartridge Satogaeri Project. The second is the infrastructure contractor Taisei Rotec. Both are using their participation in the International Partnership for the Satoyama Initiative for greenwashing. The paper argues that this is greenwashing mainly because of the limited relevance of their businesses to *satoyama* landscapes. Finally, the paper investigates how Japan as a nation is using *satoyama* landscapes for ‘green’ image building by various means, including popular culture, tourism, and support for ‘green’ causes.

The paper argues that these *satoyama*-related greenwashing efforts are effective, especially regarding the image building of Japan as a ‘green’ nation.

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List of Abbreviations

CBD – Convention on Biological Diversity

CEPF – Critical Ecosystems Partnership Fund

EPI – Environmental Performance Index

ICSP – Ink-Cartridge Satogaeri Project

IGES – Institute for Global Environmental Strategies

IFOAM – Organics International

IPSI – International Partnership for the Satoyama Initiative

JBBP – Japan Business and Biodiversity Partnership

MAFF – Ministry of Agriculture, Forestry and Fisheries (Japan)

MoEJ – Ministry of the Environment (Japan)

SEPLS – Socio-Economic Production Landscapes and Seascapes

SDM – Satoyama Development Mechanism

UNDP – United Nations Development Program

UNU – United Nations University

WWF – World Wildlife Fund

These abbreviations will also appear in the bibliography where relevant.

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1 Introduction

When traveling from Tokyo to the countryside, one can see a picturesque landscape from the train window. A mosaic of rice paddies and vegetable gardens interrupted by small forests, streams, villages, farmhouses and small shrines. This is *satoyama*, seen by many as the traditional cultural landscape of Japan, located at the intersection between nature and civilization. This landscape can still be seen all over Japan, though it has been under threat from economic and demographic development since the end of The Second World War. Now, when an aging society is leaving the rural areas of Japan depopulated, the *satoyama* landscapes are over-growing, presenting new challenges for those still left working the land. There is, however, hope of reviving *satoyama* as it is seen as a more sustainable form of agriculture, more suited for a world becoming more and more aware of local and global environmental challenges.

There are many proponents of *satoyama*, arguing that the agricultural practices associated with the landscapes are more sustainable than conventional agriculture. *Satoyama* can thus be an important part of the needed ‘green shift’ to combat climate change. In this thesis I aim to critically examine the concept of *satoyama*, showing how its vague definition makes the term prone to be used by both private and public actors to promote their own interests. In this regard, I will show how the term is utilized for ‘greenwashing’ as well as political image building.

Satoyama as a concept does not have a fixed definition agreed upon by everyone. It can include almost any cultural landscape, across the globe. An example of this is the International Project for the Satoyama Initiative. IPSI’s main mission is researching cultural landscapes around the world with the goal of finding environmentally sustainable agricultural practices. I am not critical of these efforts in and of themselves, but the vague nature of *satoyama* as a concept lets companies with little relevance to *satoyama* participate. I will therefore investigate some of the companies participating in the Satoyama Initiative, seeing how their participation can be seen as ‘greenwashing’. For this I have chosen two main cases. The first case is the Ink-Cartridge Satogaeri Project, a recycling program in Japan led by Canon, Brother, HP, and Epson. The second case is the infrastructure construction company Taisei Rotec, which also participates in the Satoyama Initiative, while promoting its use of ‘green’ technology used in construction. I will also examine the Japan Business and

Biodiversity Partnership (JBBP), an organization that predates the Satoyama Initiative but has an overlapping members' list and similarly stated aims. I compare these two organizations with the World Wildlife Fund (WWF), which was criticized for allowing itself to be used for 'greenwashing' by associating with oil companies like Shell. I will also examine how *satoyama* can be used to make Japan itself appear environmentally friendly as a country, by examining various uses of *satoyama* in popular culture, and for tourism purposes.



Figure 1: Screenshot showing typical, contemporary *satoyama* landscape from *Non Non Biyori Repeat* (Beniya, 2015, p. 00:19:20) © Asahigaoka Kanri Kumiai (2015)

The ambiguous nature of *satoyama* also gives different actors with overlapping interests the opportunity to use the term in different ways, further fermenting confusion about its meaning. One example of this is that the Japanese Ministry of the Environment (MoEJ), one of the main supporters of IPSI, uses a definition that restricts *satoyama* to small, semi-natural forests, and the farmlands and villages surrounding them. Meanwhile the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) uses another, more expansive definition of *satoyama* that can include 40% of Japan. These government agencies, with overlapping areas of responsibility, will therefore have to mediate a shared definition when talking about *satoyama*.

I will first give an explanation of *satoyama* and related concepts, including its coastal relative *satoumi*. I will also compare these concepts to similar landscapes found outside Japan, and to 'organic' agriculture, which has significant overlap with agricultural practices

found in *satoyama* landscapes, before discussing the viability of extensive *satoyama* revitalization. Following this explanation, I will present my ‘greenwashing’ cases discussed above, starting with an explanation of the members of the Satoyama Initiative. Finally, I will discuss public uses of the concept in political attempts at improving Japan’s image.

In this paper I use modernized Hepburn romanization for transcribing Japanese, with the romanized reading appearing in *italics*. Organizations, etc. that have an official translation or use a proper noun with a Japanese word in the name will not be italicized.

1.1 Prior research

Satoyama appears as a research subject in many fields of study, from biology to the social sciences and landscape planning to area studies. ‘Satoyama: The Traditional Rural Landscape of Japan’ (Takeuchi, Brown, Washitani, Tsunekawa, & Yokohari, 2003) collects many different academic perspectives on *satoyama* in a single edited volume and gives a broad introduction to the topic.

‘Deconstructing *satoyama*’ (Indrawan, Yabe, Nomura, & Harrison, 2014) gives a good summary of the various definitions of *satoyama*. This paper analyzes the etymology and various contemporary uses of the term. Furthermore, it shows how *satoyama* landscapes represent a sustainable form of human-nature interaction. The authors conclude that there are many challenges to keeping the *satoyama* landscapes viable in Japan. Yet successful examples of land management in *satoyama* show that “it is possible to reconcile the goal of increased productivity without compromising sustainability” (Indrawan et al., 2014, p. 83). Another relevant paper here is ‘What is Satoyama?’ (Morimoto, 2011) which looks at the future of *satoyama*. This paper is more optimistic in its conclusion, seeing *satoyama* as a sustainable way forward for Japan and the rest of world, as a part of the solution for the global climate crisis. “‘Refueling’ *Satoyama* Woodland in Japan’, (Terada, Yokohari, Bolthouse, & Tanaka, 2010), is similarly optimistic on behalf of *satoyama* landscapes, looking at four case studies of *satoyama* restoration projects run by volunteer groups. This article concludes that using coppicing for biomass fuel can help offset climate change, and at the same time help maintain and restore the threatened *satoyama* landscapes.

Challenges for the Maintenance of Traditional Knowledge in the Satoyama and Satoumi Ecosystems, Noto Peninsula, Japan, (Cetinkaya, 2009) offers a case study where *satoyama* and *satoumi* are closely connected. This makes the landscapes able to support a

circular form of SEPLS (socio-ecological production landscape and seascape). This study concludes that ‘traditional knowledge’ (e.g., the use of edible wild plants) is being lost. This has negative effects for human health and other measures of wellbeing. Cetinkaya proposes some measures that can help preserve traditional knowledge, including using the landscape for tourism purposes, and giving support to the local community by setting up a culture center to pass on such knowledge. ‘Socio-Ecological Production Landscapes and Seascapes as Regional/Local Circulating and Ecological Spheres’ (Scheyvens, Mader, Lopez-Casero, & Takahashi, 2019) gives a good general introduction to ‘socio-ecological production landscapes and seascapes (SEPLS), a category that includes *satoyama/satoumi*. This paper proposes that SEPLS should be seen as existing within larger and larger ‘circulating ecological spheres’ (CES).

“Scandinavia Traditional Farming Landscapes for Sustainable Living in Scandinavia and Japan” (Berglund et al., 2014) compares *satoyama* forests to the Scandinavian “outfield” (*utmark*), showing how both have been used in similar ways, and face similar challenges today. The International Project for the Satoyama Initiative (IPSI) also presents many case studies of *satoyama*-like landscapes around the world in their reports and on their website (IPSI, 2019b).

Most academic papers where *satoyama* is a topic analyze the parts of *satoyama* that have positive connotations, like biodiversity, human wellbeing, or volunteerism. This paper is intended to present some negative aspects of *satoyama*, an area that has seen less interest as a research topic.

2 Satoyama

As already noted, *satoyama* is a diffuse term. The word itself, 里山, *satoyama*, consists of the kanji for “village”, *sato*, and “mountain”, *yama*. *Yama* is also associated with “the wild” or “woods”, e.g. *yamainu* (the extinct Japanese wolf) or *yamakaji* (forest fire). According to the Nihongo Kokugo Daijiten dictionary, *satoyama* are “the small woods close to human habitation, used for gathering lumber for fuel and edible wild plants, etc.” (Matsui, 2007) [author’s translation]. This is a fairly narrow definition, close to the first modern usage of the word as “the forests near the village” (Morimoto, 2011, p. 2). *Satoyama* in its modern usage was revived by professor Shidei Tsunahide in the late 1960s and early 1970s. *Satoyama* was also used in the Edo period, but the term quickly fell out of the everyday

vocabulary (Knight, 2010, p. 423; Morimoto, 2011, pp. 2-3). There are no set rules on what is or is not *satoyama*. There is no central certification agency designating an area as *satoyama*, in contrast to ‘organic’ agriculture in the European Union. In part, this makes *satoyama* what Ernesto Laclau would call an empty signifier: *satoyama* means very little by itself, but is filled with meaning through association with other signs, like ‘biodiversity’ or ‘rice fields’. (Jørgensen & Phillips, 1999, p. 63) I will return to the problems of defining *satoyama* in a later section of the paper, but first describe common attributes of the term as used in academic articles discussing the term. Looking at broader categories, *satoyama* is sometimes considered to be a ‘socio-ecological production landscape and seascape’ (SEPLS). Such landscapes are characterized by a high degree of biodiversity, sustainable management of resources using techniques with long traditions, a mosaic landscape of areas with a patchwork of land use, small fields, pastures, forests, etc. (Scheyvens et al., 2019). All of these attributes are also commonly connected with *satoyama* landscapes.

A typical *satoyama* landscape has relatively small fields, usually rice paddies, that are interrupted by variously sized forest areas (Miyanaga & Shimada, 2018, p. 336). This sets *satoyama* apart from high intensity agriculture, which maximizes land utilization with large fields of monoculture crops and the use of artificial fertilizers (Knight, 2010, p. 424; Uchida & Ushimaru, 2014, pp. 637-639). To maintain *satoyama* landscapes, human interaction with the forests surrounding the fields is required. By gathering fallen leaves and branches, coppicing trees for firewood and growing mushrooms, gathering edible mushrooms, plants and nuts, the farmers and villagers help maintain the *satoyama* landscapes (Satsuka, 2012, pp. 80-81). For a prototypical example of *satoyama*, the opening scenes of the animated movie *My Neighbor Totoro* gives a good representation. Here, the main characters of the movie are driving to their new home in the boondocks outside Tokyo. Newly planted rice paddies are interrupted by small woods, paths and farmhouses (Miyazaki, 1988). As noted before, there are no set rules for what defines agriculture in *satoyama* landscapes, but I will be referring to agricultural practices that are associated with *satoyama* landscapes throughout the text.

Satoyama forests are commons areas, meaning that they are shared by many farmers. The forests are shaped by human-environment interaction, a so-called secondary nature. Furthermore, the landscape is irregular, the forests are interrupted by rice-paddies, ponds and streams, villages and agricultural fields (Miyanaga & Shimada, 2018, p. 336). The Ministry of the Environment (MoE) operates with a wider definition of *satoyama*. In a 2002 report, they include the agricultural land and villages that surround the *satoyama* forests with the

forests of the narrower definition described above. This report states that both 8,000,000 hectares of secondary forests, and 7,000,000 hectares of agricultural lands are *satoyama*, amounting to roughly 40% of Japan's total land area. It is not unreasonable to include agricultural areas in the definition of *satoyama*, as the *satoyama* forests were used as an important part of the agricultural process (Indrawan et al., 2014, p. 79). Other studies also include large areas of forest in *satoyama* (Berglund et al., 2014). That being said, in this paper I will refer to “*satoyama* forests” as just the forests, while with “*satoyama* landscapes” I refer to the complete system of forests, fields, rice paddies, etc. It is in any case hard to draw limits when defining what is inside and outside the scope of *satoyama*. To a certain extent, all forests are touched by humans, whether intentionally or not. Acid rain destroying forests downwind from industry and the increase in wildfires connected to global warming and human forest management (Brändlin, 2017) are some examples of human impact on what is often seen as pristine forest lands. Not all forests in Japan are part of *satoyama*. As biodiversity is one of the key elements of *satoyama* landscapes, the large monocultures of *sugi* pine trees that were planted after the war are not to be considered part of *satoyama* (Totman, 1989, p. 5).

Satoyama landscapes are important hotbeds of biodiversity, and thus an important part of making Japan a so-called biodiversity hotspot (Knight, 2010; H. Kobori & R. Primack, 2003; Miyanaga & Shimada, 2018; Satsuka, 2012, 2014). This means that Japan contains at least 1500 endemic species of vascular plants, (most plants excluding lichen and algae) (CEPF, 2019). There are many species of mushrooms, insects and animals that to a large degree are dependent on *satoyama* landscapes, so maintaining these landscapes is therefore a concern for wildlife conservation (Satsuka, 2012, pp. 80-81). As an example, a 2014 study on biodiversity in *satoyama* landscapes concluded that human intervention supported several desired species of butterflies and grasshoppers. Both high intensity agriculture and reduced human activity in the forests and in agricultural areas are threats to this biodiversity (Uchida & Ushimaru, 2014, pp. 651, 656). Many other species are common in *satoyama* landscapes; some diverse examples include *medaka* (Japanese rice fish) (H. Kobori & R. Primack, 2003, p. 309), *tanuki* (raccoon dog) (Knight, 2010, pp. 430-431), *matsutake* mushrooms (Satsuka, 2014), and the crested ibis (Morimoto, 2011, p. 166).

The agricultural practices associated with *satoyama* have also been proposed as a sustainable alternative to conventional modern agriculture. Using coppiced wood for fuel is carbon neutral, as is green manure as an alternative to artificial fertilizers. This can then play

a small part in reducing global carbon emissions (Terada et al., 2010, pp. 258, 260-268). The Satoyama Initiative promotes this idea by studying and promoting agricultural practices found in *satoyama* landscapes and their analogues around the world (IPSI, 2010).



Figure 2: Satoyama in winter, showing small fields, forests, and farmhouses. Outskirts of Tokyo, December 2019. Photo by the author.

There are however a number of problems. Especially in developed countries, *satoyama*-like managed nature is rapidly disappearing due to decreasing rural populations. In developing countries where the rural population still is relatively large, agricultural practices are becoming more intensive (Miyanaga & Shimada, 2018, pp. 341-343; Uchida & Ushimaru, 2014, p. 656). On a more philosophical level, one can also argue that one should not force other societies to abstain from modernizing their agricultural sector. There is also the question of food yields in a world where the population is increasing.

2.1 The Decline of *satoyama*

Satoyama landscapes are in decline and have been since before World War 2. (Indrawan et al., 2014, p. 83; H. Kobori & R. Primack, 2003, p. 309; Miyanaga & Shimada, 2018, pp. 343-344; Uchida & Ushimaru, 2014, p. 656). Since the war, there have been two main causes of the destruction of *satoyama* landscapes. Demographic change and economic and technological development are two sides of the same coin. In the immediate post-war period, the population of Japan was rapidly increasing. Coupled with rapid urbanization, this meant that large areas close to the cities were needed for housing, services, employment, etc. many of these were *satoyama* landscapes. A good example of this is the housing project Tama New Town, some thirty kilometers west of central Tokyo. At around 3,000 hectares in area, and with a planned population of 300,000 people, it was one of Japan's largest housing projects (Kobayashi, 1971, pp. 95-96).¹ Before the project was built, this area was a prime example of a *satoyama* landscape, as documented on the website of Parthenon Tama, a local culture center (Parthenon Tama, 2017). This website has published pictures of the area from the 1960s onward, showing the typical fields and paddies interrupted by small woods before construction began in the late 60s. The construction of Tama New Town is also the background for the 1994 animated movie *Pom Poko*, in which a group of raccoons try in vain to stop the development project (Takahata, 1994). Furthermore, the film highlights many of the criticisms against the urbanization of Japan, and the destruction of the semi-natural landscapes this entailed. The landscape is changed from a lush, biodiverse cultural landscape, to a modern suburb filled with concrete apartment buildings, wide roads, a railway, etc., with less room for wildlife that is not able to adapt to the "concrete jungle". These movies clearly show how the post-war urbanization of Japan affected *satoyama* landscapes, especially close to the major urban centers.

Today, as Japan's population has begun to decrease, urban sprawl is a less pressing concern. The shrinking population, especially in rural areas, now makes abandonment a

¹ Parthenon Tama has collected historical pictures from the construction of Tama New Town on their website, this shows how a typical *satoyama* landscape was changed from an agricultural area to a modern suburb consisting of large concrete apartment buildings. <http://www.parthenon.or.jp/teitensatuei/gallery/teitengall.cgi>

bigger issue regarding *satoyama* landscapes. As stated, *satoyama* landscapes are dependent on human activity, particularly coppicing, gathering fallen leaves and branches, and the clearing of undergrowth. As Japanese farmers are growing older and retiring, these activities have decreased, and nature has started to “reclaim” the *satoyama* forests and surrounding landscapes. Depending on one’s perspective, that might not seem like a concern in and of itself, but there are several consequences. Many species thrive in these landscapes but are less adapted to life in “wilder” nature. Rice paddies are especially important in this regard, as a form of wetland, with shallow waters. This shallow water is used by many species of insect and fish as hatcheries (H. Kobori & R. B. Primack, 2003, p. 6), including dragonflies (Primack, Kobori, & Mori, 2000, pp. 1553-1554), and crucian carp (IPSI, 2010, p. 17). Many of these species are important sources of food for larger predators, including some species of endangered waterfowl (IPSI, 2010, pp. 16-17). Another important consequence is increased human-wildlife conflicts. As human activity in the *satoyama* forests is reduced, large mammals draw closer to human habitation and farming areas. Tanuki, sika deer, the Japanese macaque, bear, and wild boars are important examples. These species then become pests, as they destroy crops, mess up garbage, etc. (Knight, 2010, pp. 434-435). Rural depopulation is now in many ways the greatest threat to *satoyama*, as human-nature interaction decreases.

The other major cause of *satoyama*’s decline is economic and technical development. After the war, fossil fuels, electricity and artificial fertilizers have made the maintenance of *satoyama* forests less economically viable. Before the global post-war agricultural revolution, which due to mechanization saw increasing yields despite continuing rural depopulation, coppicing was an important source of firewood and charcoal. Readily available and cheap fossil fuels and electricity made this relatively labor-intensive practice less important (Miyanaaga & Shimada, 2018, p. 334). Artificial fertilizers had the same effect on the use of “green manure”. Before, the farmers would compost fallen leaves from the forests for use in rice paddies and on the fields, but cheap and more effective artificial fertilizers made this practice obsolete (Terada et al., 2010, pp. 252-254). Neither the demographic nor the economic development is unique to Japan, and similar problems are found in other traditional culture landscapes in other developed countries (Takeuchi et al., 2003, pp. 3-6). Another consequence of underutilization is forests overgrowth. This makes them less accessible to people who use the forests for leisure purposes, further exacerbating the previously mentioned issues. (Terada et al., 2010, pp. 252-253).

In response to these issues, several volunteer groups have started rehabilitation efforts in *satoyama* landscapes. While positive, these efforts are limited in scope, and tend to focus on making the forests more available for leisure, turning them into forest parks, rather than the “traditional” uses discussed above (Terada et al., 2010, pp. 252-253). There are also examples of more holistic efforts to preserve *satoyama* landscapes, with the Totoro Hometown Fund Campaign being a good example. Inspired by the depiction of Sayama hills west of Tokyo in the film *My Neighbor Totoro*, it seeks to preserve the landscape that inspired the movie. The area is home to about 1,250 different species of plants and animals (H. Kobori & R. Primack, 2003, pp. 209-210). This organization still operates, now known simply as The Totoro Fund, and owns almost 90 hectares of land in the Sayama area (Totoro Fund, 2019). This ownership protects the area from real-estate development, maintaining Totoro’s forest for future generations as a green lung on the outskirts of Tokyo. The foundation is financed by citizen donations, and the sale of Totoro branded goods, stressing that the government is not involved in the project. Rather, the foundation relies on volunteers, who in addition to making monetary donations also help maintain the forested hills and small fields of the Sayama Area. This maintenance and other human activities, like nature walks, are key to keeping the area from overgrowing and from attracting unwanted wildlife that can become a pest to the local farmers operating in the area (Totoro Fund, n.d).

There are over 2,000 organizations dedicated to preserving *satoyama*-forests throughout Japan. These are usually small citizen-led, volunteer organizations, that work to make or keep the forests accessible for nature walks and other leisure activities (Terada et al., 2010, p. 259). An example of this is an effort led by the Musashi Institute of Technology in Yokohama, that preserves 1,2 hectares of *satoyama* forest after they built a new campus area. The forest itself had been abandoned for thirty years and was overgrown before being restored in 1997 by volunteers from the local community and students and staff at the university. The area is now highly appreciated by the local community as a place of natural beauty, and resources like bamboo and bamboo shoots are harvested on a sustainable basis for use in community activities. Furthermore, the area has been monitored by the university, showing how human activity can help promote biodiversity. An example of this is the resurgence of wild spring orchids when the overgrown forest was cleared of vines and brushes which covered the forest floor (H. Kobori & R. Primack, 2003, p. 310).

To summarize, *satoyama* landscapes are semi-managed woodlands and farming areas characterized by medium intensity human intervention. This intervention creates easily

accessible, small woodlands that interrupt rice paddies, fields, and pastures. Agriculture in *satoyama* landscapes is traditionally characterized by the use of resources from the surrounding forest for fertilizer and fuel, although such use is not common today. *Satoyama* landscapes have been under pressure since the mid-twentieth century; the biggest threats to them were first a combination of rapid rural depopulation and urban sprawl combined with economic obsolescence of the *satoyama* forests. In recent years, urban sprawl, at least outside the Tokyo Metropolitan Area, has not been as big a threat, but rural depopulation still is. This is especially concerning now as Japanese farmers are getting older and older and not being replaced as they retire. Given the demographic evolution of Japan, this tendency may well accelerate in the future (Nippon.com, 2018).



Figure 3: Satoyama in winter (2019). Picture from Totoro's Forest. Note tools left by volunteers for maintenance. Picture by the author. Despite a light drizzle and cold temperatures there were many people using the trails going through the forest for nature walks.

2.2 Satoumi – satoyama on the coast

Satoyama as a concept is based on inland agricultural landscapes, and as such it does not apply to coastal areas. There is however a very similar concept known as *satoumi* 里海. The first character is the same, but mountain is changed to ‘sea’ or ‘ocean’. This is an entirely

modern concept, first used as late as 1998. As *satoyama*, it refers to semi-natural production landscapes that also have a long history of human-nature interaction. This includes pure resource extraction in the form of fishing, both commercial and for private consumption and leisure, or the traditional *ama* pearl diving, aquaculture, like the production of kelp or oysters (Saito & Shibata, 2010, p.25). Like *satoyama*, low intensity human interaction is needed to maintain the landscape, especially tidal landscapes. *Satoumi* is also under threat from depopulation, with many giving up the small-scale fishing that characterizes the landscape, and the average age of fishermen is increasing. There have also been problems with pollution; as an example, fish from Minamata bay on Kyushu was deemed unsafe for human consumption from the 1960s to the late 1990s (Pollack, 1997). I will return with a longer explanation of Minamata disease later in the paper.

A poetic, and perhaps a bit exaggerated summary can be found on the YouTube description of a United Nations University (UNU) documentary on the topic. It states that *satoumi* is a place where “[p]eople live in harmony with the sea by combining their traditional wisdom with scientific knowledge” (UN University, 2012). Given Japan’s problems with overfishing, how much ‘harmony’ this relationship actually has is perhaps up for debate (Waycott, 2016). That being said, contemporary overfishing is more associated with ocean fish, like tuna. These fish are not necessarily associated with *satoumi*, which usually refers to the coastline and water close to the land (Itoh, 2016). Looking at the UNU description of *satoumi*, there is a larger focus on aquaculture that does not require the larger ships required for oceanic fishing. The focus is instead on activities close to the shore, like oyster farming or net fishing in shallow coves (UN University, 2012, 00:48:00, 01:00:00).

Unlike *satoyama*, *satoumi* is often overexploited in the form of overfishing. There is also a problem of pollution, though this has to a certain extent been mitigated after heavy regulation of industrial pollution was enacted after the pollution scandals of the 1960s. *Satoumi* is also sometimes destroyed due to new construction, especially near cities. Some examples of this include the expansion of Haneda international airport, and the building of the Kansai international airport outside Osaka. Land reclamation was utilized at both airports to build runways. This entailed the removal of many acres of shallow seabed which are important for *satoumi*. These runways are also a threat to coastal birds, that have to be kept from nesting too close to airplanes taking off or landing.

Academia has shown less interest in *satoumi* than its inland counterpart. At the time of writing, *satoumi* yields 46 results on jstor.org, while *satoyama* yields 212. The disparity in attention between land and sea is also found in popular culture; looking at the works of Studio Ghibli with a focus on natural environments, only one, *Ponyo* (崖の上のポニョ 2008), has the coast as its central setting. On the other hand, there are several examples including the already mentioned *My Neighbor Totoro*, *Pom Poko*, and *Only Yesterday*, and also *Princess Mononoke* (もののけ姫), 1997 where *satoyama* is in focus. That is not to say that *satoumi* is ignored, the manga *Diary of Our Days at the Breakwater* (放課後ていぼう日誌) was animated for the 2020 spring anime season, although the anime was postponed until further notice after production problems related to the COVID-19 epidemic (Pineda, 2020).

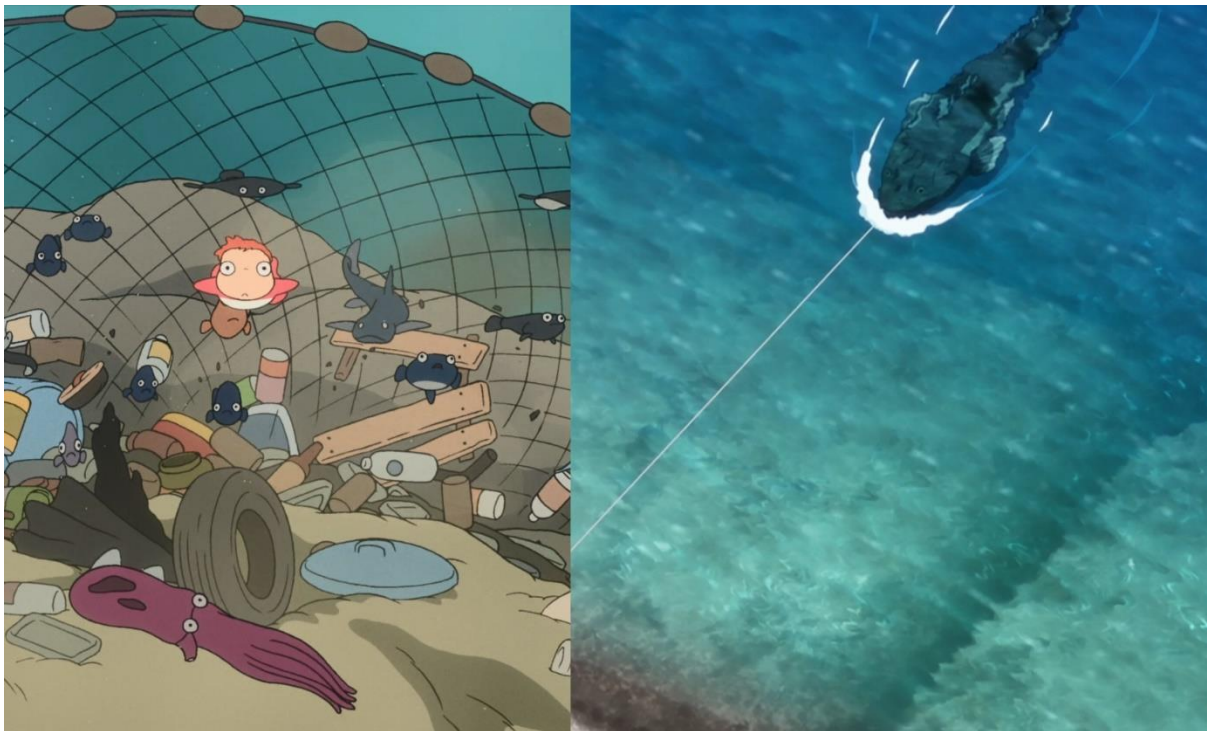


Figure 4: Left: *Ponyo* escaping a bottom trawling net showing a seabed polluted with trash (Miyazaki, 2008, p. 00:07:20)

©Studio Ghibli

Right: Reeling in a flathead through clear waters, screenshot from the first episode of *Diary of Our Days at the Breakwater*.

(Ookuma, 2020, p. 17:20) ©Umino Kōkō Teibō-bu

2.3 *Satoyama* outside Japan

As described above, there are many definitions of *satoyama*, some more restrictive than others. This allows different actors to use their own definitions as it suits them. As an example, this happens even within the Japanese government. The Ministry of Agriculture,

Forestry and Fisheries (MAFF) operates with a definition that makes 40% of Japan *satoyama* landscapes. This then helps make Japanese agriculture seem environmentally friendly, whether or not it actually is. The Ministry of the Environment (MoEJ) on the other hand, has a definition more akin to the more restrictive definitions found in academic studies. It should be said that MoEJ do not use the term *satoyama* alone, rather calling it *satochi-satoyama* (里地里山), the second character meaning land in this context.

The MoEJ definition, which they have borrowed from The Satoyama Initiative, is very similar to that found in Nihongo Kokugo Daijiten (MoEJ, n.d-b), but including *satochi*, that is the farmlands and villages. The mandates of MAFF and MoEJ do to a certain extent overlap, so the definitions in use by the two ministries compete with each other and may lead to confusion in inter-ministerial communication. MAFF might have an interest in as broad a definition of *satoyama* as possible, one that can include all Japanese farmlands, villages, forested areas, etc. to give an impression of Japanese farming and forestry as more sustainable than it actually is by associating all Japanese farming with *satoyama*. I will get back to this ‘greenwashing’ in section 3. The Ministry of the Environment may, on the other hand, want to work for the restoration or expansion of what they may see as ‘true *satoyama*’, creating a concern that *satoyama* is under threat by using a more restrictive definition.

One organization that takes advantage of this confusion is the Satoyama Initiative. The organization was founded by the United Nations University and the Japanese Ministry of the Environment, and receives most of its funding from Japanese organizations. UNU is “a global think tank and postgraduate teaching organization headquartered in Japan” (UNU, n.d). Given the name, the International Partnership for the Satoyama Initiative, it is not only concerned with *satoyama* as is found in Japan, but works to highlight other landscapes that share some characteristics with *satoyama* across the globe, especially those that are important for local biodiversity and that retain ‘traditional’ agricultural practices and knowledge. This takes the form of case studies representing all continents and several different states and regions. Some examples include the Schwabwald forest in Germany, Syrian olive fields, The Kaya forests of Kenya, the ‘working wetlands’ of Louisiana, and the Abrolhos seascape of Brazil. These case studies are not just descriptions of the landscapes, but include proposals that if implemented will help to fulfill the organization’s mission of harmony between mankind and nature (IPSI, 2019b).

The Satoyama Initiative is not the only entity that has ‘found’ *satoyama* outside Japan. Berglund et al. compare *satoyama* landscapes to infield/outland, the “Traditional Farming Landscapes” of Scandinavia (Berglund et al., 2014). The Scandinavian ‘outfield’ (*utmark* in Norwegian) landscape is analogous to the *satoyama* forests, both in form and function. Here too, the forest is utilized for fuel and other resources. Furthermore, in the post-war period the outfield also saw a similar decline in use and subsequent afforestation and reduction of biodiversity (Berglund et al., 2014, pp. 560-564).

2.4 IPSI and the Satoyama Development Mechanism

As IPSI features throughout this text, a brief explanation of their activities is in order. Information on members and more background on the initiative can be found in section 3.1. The International Partnership for the Satoyama Initiative, hereafter IPSI or Satoyama Initiative, is an organization “dedicated to working together to realize societies in harmony with nature” (IPSI, 2019a). The organization is headed by a ‘steering committee’, consisting of 11 to 22 representatives selected from the initiative’s members. The steering committee is elected at the general assembly, and serves as the executive body, managing day to day decision making (IPSI, n.d).

As of September 2019 IPSI had 258 member organizations, including government agencies, UN organizations, private enterprises, and NGO’s (IPSI, 2019d). The organization was initially established with 51 founding members in 2010 in conjunction with the 10th Conference of the Parties to the Convention on Biological Diversity (CBD COP 10). These efforts were initiated by the Japanese Ministry of the Environment in conjunction with the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS: then known as the United Nations University Institute of Advanced Studies) to “undertake and facilitate a broad range of activities to implement the concepts of the Satoyama Initiative by diverse stakeholders” (IPSI, 2019a). Most of the initial funding came from the Japanese government through a \$2 million grant from the Japan Biodiversity Fund (IPSI, 2011). Another early contributor was the Japan Business and Biodiversity Partnership, although the amount contributed by this organization is not stated. I will comment more on this organization in section 3.5. The Satoyama Initiative itself initiated its first projects in 2013 (IPSI, 2018).

What does the Satoyama Initiative actually mean by its mission statement to “realize societies in harmony with nature” (IPSI, 2019a)? As the organization was founded during a meeting of the Convention on Biological Diversity, biodiversity is a central focus in this regard. This biodiversity is under threat due to “the unsustainable use of natural resources around the world” (IPSI, 2019c). To counter this threat, the CBD set up twenty targets for biodiversity grouped under five strategic goals: raising awareness on biodiversity, reducing direct pressure on biodiversity, eco-system protection, increasing the benefits from biodiversity, preparing for implementation of measures to increase biodiversity (CBD, 2018).

The Satoyama Initiative itself is mostly concerned with researching SEPLS around the world, and the human activity connected with it in a broad perspective. What the organization learns from these initial research projects is then used to select six projects every year that are deemed especially promising for further research. These projects are then given special seed funding to gain additional knowledge and experience over longer periods of time, with projects having a maximum duration of one year. The goal of these more thorough research projects is to find practices and conditions that are key to promoting three main aims that are supported by four different project types. Two of these aims are internal to the Satoyama Initiative, by strengthening cooperation between members of the organization, and the implementation of IPSI activities. These two aims are fulfilled by two different project types that simply state that they are projects which are intended to achieve the stated aims (SDM, 2019).

The third aim is to “Promote the development of model practices for living in harmony with nature through sustainable use of SEPLS and contribution to the Aichi Biodiversity Targets” (IPSI, 2018). This third aim, then, is essentially the mission of the Satoyama Initiative. To find SEPLS around the world, to analyze what is done in these areas to make them sustainable, and to determine what factors are at play in these areas that promote biodiversity. Finally, IPSI makes its findings available to the world, so others can learn from and implement the techniques the initiative sees as beneficial. These aims are supported by two types of projects, “community-based activities for field implementation”, and “research activities”. The first are focused on supporting communities in *satoyama*-like landscapes that already exist around the world. This is in order to make them more robust in dealing with economic and political challenges that could be a threat to the long-term viability of the landscapes. The research projects are focused on finding factors important for maintaining biodiversity, finding and preserving local, traditional knowledge, etc. What

projects to implement is decided by the Executive board, consisting of representatives from the Japanese Ministry of the Environment, the United Nations University, and the Institute for Global Environmental Strategies. They make these decisions based on advice from the Advisory Group, which consists of the Chair of the IPSI steering committee, and member organizations of the Satoyama Initiative that vary from project to project according to relevancy.

The Satoyama Development Mechanism has so far selected 42 projects for further research. These projects are presented in yearly reports showing the potential of new projects, and the findings of those funded previously (IGES, 2020). There have been projects on all continents, except North America. Japan itself is also conspicuously absent from this list, despite having submitted several project proposals.

2.5 *Satoyama* and organic agriculture

In this section I will compare the agriculture associated with *satoyama* landscapes to organic agriculture, as these have many overlapping features. These examples are case studies done by local actors through the Satoyama Initiative. When incorporating these areas in their reports, the Initiative acts as a gatekeeper and is in effect the only agent working to certify locations as *satoyama*. IPSI does not, however, do anything other than publish reports on their studies of landscapes in their journal and on their website. It does not give out labels that producers of e.g. rice can put on their packaging, certifying it as '*satoyama* rice'. This is in stark contrast to 'organic' or 'fair-trade' agriculture, which has several private and public agencies working to certify specific consumer products. In the European Economic Area alone, there are at the time of writing 263 individual organizations responsible for certifying organic production (European Commission, n.d). These certifications are also valid in other jurisdictions, including Japan which has a mutual certification agreement with the EEA (ICEA Certifica, 2018).

That is not to say that 'organic' is a fixed concept, but with rules and regulations it is possible to certify products within specific jurisdictions. The Satoyama Initiative itself might not be interested in acting like a certification agency in this way, but this is at least an opportunity. Certifying a process for *satoyama* agriculture may not be as useful given that 'organic' is an already established label that encompasses some of the practices associated with *satoyama*. Many of the same positive effects on biodiversity seen in *satoyama* are also

found in areas that utilize organic agriculture (Tuck et al., 2014). With that in mind, certifying specific areas as *satoyama*, akin to the ‘protected designation of origin’ (PDO) certifications of origin found in Europe, areas with traditional products like Champagne, Stilton cheese, etc. could in the author’s opinion be a better alternative for monetarily capitalizing on *satoyama* as a consumer-directed concept. This is also close to what the Satoyama Initiative is already doing in their case studies of specific landscapes around the world. The aim of the initiative is different, focusing on learning from the practices found in *satoyama* like landscapes, instead of defining the landscapes themselves as *satoyama*. That being said, it could be an alternative revenue stream, making the organization more independent from its donors.

Going back to organic agriculture, although there are clear rules and definitions, at least within single regulatory areas, international definitions are not as set. As an example, Organics International (IFOAM), an umbrella organization promoting the interests of organic producers around the world operates with this definition:

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved. (IFOAM, n.d)

This is also a very broad definition, using generic terms without specific references to the use or avoidance of pesticides, artificial fertilizers, or other tools often associated with the popular imagination of what ‘organic’ means. Many of the terms associated with *satoyama*, or more specifically the Satoyama Initiative, are also found in this definition of organic agriculture, like ‘biodiversity’, ‘local traditions’, ‘sustains the health of soils, ecosystems and people’. Comparing the text quoted to the initiative writing about *satoyama* on their website one can find many similar examples; such as “sustain and improve their daily lives and production activities” or “maintaining ecosystems and biodiversity” (IPSI, 2019a).

Given the similarities between organic and *satoyama* agriculture, many of the criticisms of the former can also be applied to the latter. A 2012 metastudy on the environmental and ecological impact of organic agriculture found that organic agriculture is generally better for the local environment, especially in terms of biodiversity. On the other

hand, conventional agriculture produces more calories of food per acre farmed. Greenhouse gas emissions are also higher for some organic products, including cereals. Given the central position of rice in *satoyama* landscapes, organic production of this staple may have an adverse effect on global climate (Tuomisto, Hodge, Riordan, & Macdonald, 2012).

These similarities are perhaps to be expected. *Satoyama* as a concept was, as mentioned in section 2.1, ‘re-introduced’ in the 1960s and 70s. This is the same timeframe as the awareness of organic agriculture started to grow, with IFOAM being founded in 1972. An important event for the rising awareness of organic agriculture was the release of *Silent Spring* by Rachel Carson in 1962, problematizing the use of agricultural pesticides, especially DDT. That being said, with no regulations surrounding *satoyama* specifically, one cannot say that *satoyama* agriculture by definition minimizes the use of pesticides, etc. However, when looking at popular representations of *satoyama* landscapes in documentaries, the use of pesticides is never mentioned or shown, giving *satoyama* agriculture an ‘organic’ image. If anything, just like with organic agriculture, there is at least an image of *satoyama* as sustainable, producing healthy agricultural products, and being environmentally friendlier than conventional agriculture.

2.6 Is the promotion of *satoyama* restoration and expansion a futile effort?

Promoting agricultural practices found in *satoyama* landscapes has been proposed as an ecologically friendly alternative to modern, high intensity agriculture. To a certain extent this is also true. If you use ‘green manure’ instead of artificial fertilizers, wood for heating instead of electricity or coal, and utilize the forest to supplement food supplies, greenhouse gas emissions connected with the use of artificial fertilizer from agriculture can be reduced. The *satoyama*-landscapes are also biodiversity hotbeds, helping to maintain the existence of several species that rely on it. Those would be positive outcomes, but it could be argued that a large-scale transformation of the agriculture sector to rely more on *satoyama*-like agricultural practices, like using green manure, coppicing for fuel, etc. is unrealistic for Japan.

Firstly, *satoyama* agriculture traditionally relies on ‘green manure’ which requires farm workers to gather fallen leaves, composting them, and spreading the nutritious soil that results on the fields. This requires much low-skilled, low-paid labor, especially as compared

to the use and production of artificial fertilizers. Secondly, the small, interrupted fields that characterize *satoyama* preclude the use of more efficient, larger fields. This also limits the size and effectiveness of agricultural machines like combine harvesters, requiring even more labor. Use of robotics may also be harder to implement because of the irregular nature and many obstacles presented by the small fields of the *satoyama* landscape. All this might be especially problematic in Japan, where suitable agricultural land is at a premium because of the mountainous terrain. On top of this, the rural population is rapidly aging and not being replaced as urbanization continues (Nippon.com, 2018).

Furthermore, Japan relies on foreign imports to cover more than half their caloric intake (MAFF, 2015). As such, given the relatively high labor needs and fewer calories per area farmed, changing over to this kind of farming will require a major restructuring of society. It might even increase Japan's reliance on food imports, which is both against current government policies, and less environmentally friendly as the food will need to be transported from the major food producers. It can however be positive for the local environment in Japan.

Moving towards more use of agricultural practices traditionally connected with *satoyama* landscapes may very well have long-term benefits, but would require the reversal of several trends, which might be hard to accomplish. Opening up the borders to low skilled workers willing to settle and work in the relatively low paid agricultural sector might be one solution. This might also build international sentiment towards Japan as becoming a more humanitarian nation. Lately, Japan has seen a loosening on the restriction on labor immigration for low skilled workers. However, these are meant to be for temporary, intern-like, training positions, not the permanent settlement that a robust rural repopulation would require. It has in any case seen little success even for what it is meant to accomplish as is (No byline, 2019). Given the recent political upheaval seen in Europe after the 2015 'migrant crisis', wide-scale opening of immigration to Japan might be harder than ever to accomplish, as more countries are taking a hardline stance on immigration, at times skirting human rights to asylum in the process. Japan of course, already has an extremely tight asylum and immigration law helping to maintain the illusion of Japan as a monoethnic society. Japanese agriculture is already heavily subsidized, small scale, highly labor-intensive farming even more so. If this sector is to be expanded subsidies would also have to be increased, and food prices may also increase as a result.

More popular, at least in the short term might be incentives that allow Japanese nationals to have more children, and encourage de-urbanization. Tax-breaks, expansion of collective early childhood care facilities, parental subsidies, maternity leave, etc. are some measures that could be introduced or expanded to encourage rural resettling. Given today's demographic situation, agricultural practices associated with *satoyama* landscapes may be hard to expand in Japan. The Satoyama Initiative does however show how the landscapes themselves can be preserved. To this end, the initiative has done research into what factors are important in insuring the sustainable use 'socio-ecological production landscapes.' The Initiative has however not selected any Japanese projects for further study. The use of *satoyama* for tourism purposes may also be an alternative revenue stream to supplement the income from selling agricultural products.

3 Satoyama as a tool for 'greenwashing'

Satoyama, with its semi-natural beauty, and an image of biodiversity and sustainability, is well suited for use in 'greenwashing'. Greenwashing is the act of making a product or service seem more environmentally friendly than it actually is, for example by emphasizing a products recyclability instead of reduction of resource use, or comparing the product to less sustainable alternatives while still not being environmentally friendly, etc. (Laufer, 2003). More overtly, major polluters can use support for environmental causes to cultivate an image of themselves as friends of nature. Petroleum producers can support e.g. the World Wildlife Fund monetarily to show that they care for nature instead of reducing the production of oil, which would have a much larger impact. That being said, not all forms of green advertising are necessarily greenwashing; many businesses are started out of a genuine concern about the environment. These businesses might also become more economically viable as awareness about environmental concerns builds in the general population. This is perhaps especially true amongst the younger generations, exemplified by Greta Thunberg and the recent school strikes against greenhouse gas emissions (No byline, 2020).

As academics, we are to a certain extent equipped to help in uncovering greenwashing by researching actual impacts of seemingly green policies implemented by various actors. To this end, I wish to investigate some cases that I interpret as greenwashing. For the purposes of this paper I define 'greenwashing' as making token environmentalist efforts, such as small

contributions to environmentalist organizations like the Greenpeace or the Rainforest Foundation or the promotion of your own development of ‘green’ technology without actually applying it in your business. ‘Greenwashing’ is not an academic term, but rather political or rhetorical, often employed by people with more radical, ‘green’ agendas to shame companies or governments not living up to their stated environmental standards.

The first two cases described in this paper concern the private companies participating in the International Partnership for the Satoyama Initiative. I do not wish to imply that the other private companies participating in the Satoyama Initiative do not do so without ‘greenwashing’ being a motivation. These two cases are however quite clear in that the two companies are not directly related to *satoyama*, as they do not operate in agriculture or forestry. Most of the other companies participating in the initiative do however directly operate within *satoyama*, as food producers using agriproducts, or paper manufacturers using trees. These businesses may very well be taking advantage of ‘greenwashing’ to appear more sustainable. Secondly, I will look at how Japanese society uses the positive environmentalist image given by *satoyama*, to help maintain and promote its image as a green nation ‘in tune with nature’. I will also give an overview of the members The Japan Business and Biodiversity Project, an organization that predated the Satoyama Initiative. Most of the private sector members of the Satoyama Initiative are also members of the JBBP.

3.1 Private industry using the Satoyama Initiative for Greenwashing

While the organization takes its name from a landscape closely related to agriculture and forestry, there are more members whose name contain environment, biodiversity, wildlife, or related terms than terms related to agriculture. Where “environment” alone accounts for 44 organizations, the terms “agro-“, “farmers”, “farming”, “agriculture”, “agricultural” combined only amounts to 22 unique results, there are also 18 actors with forest, forestry, etc. in their name. Looking at the 22 national-level governmental actors in the initiative’s members list, there are a total of 15 ministries taking part, of these 12 are primarily involved with environmental protection, 2 with natural resource management and extraction, but only one directly related to agriculture, the Italian Ministry for Agriculture Food and Forestry Policies. Looking at Japan, it is telling that The Ministry of the Environment (MOEJ) is a member, while The Ministry of Agriculture, Forestry and Fisheries

(MAFF) is not (IPSI, 2019d). Japan Agriculture Cooperatives Group (JA), the powerful agricultural coop, lobby organization, financial institution (Yamashita, 2013), is also not a part of the IPSI.

Though supposedly international, 54, or just over a fifth of the members, are Japanese organizations. This makes Japan by far the largest country in the initiative based on the country of origin of the organizations. This includes seemingly unrelated private enterprises like the Japanese division of Dell computers or electronics manufacturer Canon (IPSI, 2019d). There are also members that are more directly related to *satoyama* as a production landscape, like, Sumitomo Forestry, Chuetsu Pulp and Paper inc., or Aleph inc., a food producer focusing on environmentally friendly and healthy food (Aleph, 2020). The latter of these focuses heavily on health and environment in their promotional materials, and all are directly involved with production utilizing resources found in *satoyama*. That is not to say that these examples do not try to ‘greenwash’ themselves, they are after all for-profit businesses, with incentives to appear ‘greener’ and therefore attract consumers with ‘green’ values. These companies do however operate directly with the resources of *satoyama*, like trees or agricultural land, giving their membership in the Initiative more legitimacy. The companies are themselves also stakeholders in *satoyama* landscapes and can benefit, at least in the long term, from the sustainable use of resources in the *satoyama* landscapes. That being said, I have not researched these companies as deeply as those in the two following sections, and there may be other companies that are also utilizing the Satoyama Initiative for ‘greenwashing’ purposes.

3.2 ‘Greenwashing’ the printer-business

As previously mentioned, Canon inc. joined the Satoyama Initiative in 2011 together with other printer manufacturers. This was not to reduce paper use, where lumber of course is the main raw material. As reduced paper use would not be in their economic interest, they rather joined IPSI as part of the ‘Ink Cartridge Satogaeri Project’. *Satogaeri* means ‘returning to one’s village’, and refers here to the printer cartridges being sent back to their manufacturers for recycling. The Satogaeri Project started in 2008 as a cooperation between 6 major printer manufacturers, the Japanese companies Canon, Brother and Epson, and American manufacturers Hewlett-Packard, Dell, and Lexmark. The latter two have since left the project.

While this project is commendable as an environmental perspective in and of itself, the relation of this project to the Satoyama Initiative is only tangential at best. It is also a *recycling* program, the least favored of the three Rs of waste management after *reduction* and *reuse* (Brataas, 1999, p. 86). Recycling of printer cartridges also requires large dedicated facilities to prepare the ink and toner cartridges for refilling. This is not to imply that recycling in and of itself is something that should be avoided; it is certainly better than producing all new cartridges with the plastic and electronic waste of all printer cartridges going to landfills. It is, however, doubtful whether the printer manufacturers are willing to promote a reduction of use, as a large portion of the profits of their businesses is from the sale of ink-cartridges. This is especially true in low-end consumer printers, where individual ink-cartridges can cost more than the printer itself, even with ink-cartridges included. Canon Pixma TS3351 is a good example of this, which at the time of writing costs NOK 299, while refill cartridges cost NOK 319 and NOK 329 (Elkjøp, 2020). Unfortunately, what type of cartridges come with the printer is not specified. If, however they are not modified to have less ink, it would be more economic to just buy a whole new printer each time one runs out. In a waste perspective that would be a disaster.

The manufacturers do however contribute one yen for each cartridge delivered for recycling to a Tohoku rebuilding effort led by the Satoyama Initiative, acting as a form of legitimization for their membership (IPSI, 2012). In 2011, 200 million cartridges were sold, and of these, only 15 million were recycled. These numbers do however include laser toner cartridges usually used by medium sized businesses, which have had a much higher degree of recycling from the start, as a part of their leasing and maintenance agreements (Matsumoto & Umeda, 2011, p. 7). In any case, the actual monetary contribution is minimal. Looking at the Satogaeri Project as a whole, 3,550,000 ink-cartridges were recycled in 2018 in Japan (ICSP, 2020b), amounting to just under 32,000 USD of donations at the time of writing, Canon alone had a 14.8 billion USD operating profit the same year (macrotrends, 2020).

While having a small economic impact on the manufacturers, the Satogaeri Project lets the manufacturers of printer cartridges seem both generous and as if they are supporting two good causes. Tying the amount of money to environmentalism and the rebuilding of the Tohoku coastline helps the printer cartridge manufacturers appear environmentally friendly at a very low cost compared to their profits. All the while, the manufacturers can give an unspecified value that is dependent on how many cartridges are recycled. At only 1 JPY per cartridge, the value of the donations will never be high per annum. This also means the

consumer must go digging to find any real information on what is actually contributed. Furthermore, the Satogaeri Project also gives the manufacturers a good opportunity to get ‘green’ advertising in 3600 post offices around Japan. This is where the collection boxes for ink cartridges are found. The name or logo of each member of the project is prominently displayed at the top of the collection boxes (ICSP, 2020c).

The program has facilitated the collection of 30,000,000 ink-cartridges since its start until December 2019, corresponding to just under 280,000 USD at the time of writing (ICSP, 2020a). As a point of comparison, the Japanese government was prepared to spend up to 30,000,000,000 USD for the 2011 disaster reconstruction efforts (Uranaka & Slodkowski, 2014). Given the low monetary value that is directly contributed to the project, the cost of actually setting up the recycling plants for the printer cartridges is in all likelihood much larger than the donations made through the Satogaeri Project, although I have not been able to find the actual construction costs, or the salary and maintenance expenditures associated with the plants each year.

There are also other issues. In 2018, Dell left the printer manufacturing business (Curcuo, 2018), and thus also left the ‘Ink Cartridge Satogaeri Project’, with their cartridges no longer being accepted for collection if you are to believe the collection boxes (ICSP, 2020c). Their name is however still connected to the Satoyama Initiative, even though they are no longer contributing monetarily to the ICSP, or by collecting the waste created by their former printer business for recycling. Lexmark has also left the program, even though they are still manufacturing printers. In any case, now only Canon, Brother, Epson, and Hewlett-Packard participate in the Satogaeri Project.

That being said, the ‘Ink Cartridge Satogaeri Project’ and other international recycling endeavors for printers has seen some success, with the tonnage of ink-cartridges collected world-wide by Canon nearly doubling worldwide from ca. 1200 tons in 2011, to 2241 tons in 2019. At the same time the tonnage of collected toner cartridges rose from just under 300,000 tons to 408,000 tons (Canon, 2019, pp. 80-81). This increase comes even though there is no financial incentive for private consumers to recycle the cartridges, unlike that of e.g. beverage bottles in various parts of the world. Extrapolating from these numbers, the collection of ink-cartridges for recycling has doubled, but looking at the Japanese numbers, this is a doubling from less than 10% of the total number produced. Extrapolating from the 2011 Japan

numbers, Canon is still giving far less than 100,000 dollars yearly through the Satogaeri Project, at 1 yen per cartridge recycled.

Around 80% of the ink cartridges are still not recycled. Furthermore, this is in Japan, which with a centralized collection system and dedicated recycling plants is a best-case scenario. As an example, in Norway, ink-cartridges are classified as either paint, or with modern cartridges as electronic waste. As such, the recycling is done with material recycling, melting down the plastic for reuse, and extracting valuable metals from the silicon chips that control the printer cartridges. This is a more resource intensive process than washing and refilling the cartridges for reuse. Furthermore, it is also dependent on the end-users' knowledge and willingness to deliver the cartridges for recycling (Norsk Gjenvinning, 2015).

Given the limited relevancy of the Ink-Cartridge Satogaeri Project to *satoyama* as a cultural landscape, and how limited it is in scope both in environmental impact and direct monetary support for the Satoyama Initiative, I argue that IPSI is letting itself be used by the printer manufacturers for greenwashing their businesses. Expanding the scope of the project to also include countries outside Japan, and creating a deposit-refund system for consumers to incentivize collection might help further legitimize this, but it would still only be related to *satoyama* protection in a waste-reduction perspective.

The Satogaeri Project was not selected for further study through the Satoyama Development Mechanism. Although there is no stated reason why it was not selected, looking at the project proposal, the low relevance to IPSI is perhaps why. Within this context they branded the Satogaeri Project as 'Community development and capacity building', stating that "A Mizube branch was established for sorting the collected ink-jet cartridges; it employs physically challenged individuals to undertake the sorting process" (ICSP, 2013). This is of course laudable, but not relevant to the Satoyama Initiative in and of itself.

Expanding the Satogaeri project to also include some actions on sustainable paper production, and the reduction of paper use overall could be an alternative to make the project more relevant in this regard. Paper does use wood as its main raw material after all, which is much more directly related to *satoyama* as a landscape. A reduction of paper use for printers would however directly impact the printer industry as the sale of both printers and ink- and laser-cartridges would be reduced. To summarize, while this project certainly has a positive impact on reducing the impact of ink-cartridge production and waste, this is not a direct concern for *satoyama* landscapes, excluding improper waste disposal by private consumers.

However, blaming the ink-cartridge manufacturers for what consumers do with spent cartridges seems unreasonable. All these examples make the Ink-Cartridge Satogaeri Project a clear case of the ‘greenwashing’ of the printer industry.

3.3 ‘Greenwashing’ infrastructure projects

Another corporation represented in the Satoyama Initiative is the Taisei conglomerate. Their daughter-company, Taisei Rotec is a major contractor for infrastructure projects both in and outside Japan. They have amongst other projects been involved in the 2010 expansion of Tokyo International Airport (Haneda), and the Shin-Tomei Expressway connecting Tokyo and Nagoya (Taisei-Rotec, n.d). Taisei is a part of the IPSI, although there is no information on when or why they joined on the IPSI website. Reading about their corporate profile however shows that they are now trying to brand themselves as an environmentally friendly contractor.

How does Taisei market itself and its projects as a green alternative? First, they have some vague wording in their marketing material on designing “land development that is in harmony with nature” (Taisei-Rotec, n.d, p. 14). This is very much in accordance with the Satoyama Initiative, though there are no descriptions on how this harmony is achieved. Another technology is manufacturing asphalt with a brighter albedo, in effect making the asphalt grey instead of black, to increase the direct reflection sunlight. As more light is reflected, this leads to less heat-absorption and subsequently less infrared (heat) emitted as the asphalt cools. Infrared light is more easily trapped by greenhouse gasses, as such, this asphalt has less impact in a global warming perspective.

Looking at the projects Taisei is involved with gives another picture, one that is in conflict with the Satoyama Project and the protection of biodiversity. First, the expansion of Haneda was done with reclaimed land in the Tokyo bay, not just because new land is created, but also because the surrounding seabed would provide the soil necessary for the expansion. This led to habitat loss for the local sea life, and irked fishermen operating in the area that ultimately was reclaimed (Kyodo, 2006). The ministry of the Environment had similar concerns, both for wildlife and local water quality, as well as noise pollution and many other issues. That being said, MoEJ was more concerned about the unknown effects of the expansion, calling for more research before building would commence, and did not ultimately

give a hard ‘no’ to the expansion (MoEJ, 2006). Habitat destruction is one of the main problems for biodiversity (Brooks et al., 2002), and the use of reclaimed land needed for the construction of the new runway contributed to habitat loss for the marine life in Tokyo bay.

Secondly, instead of working to expand the existing Tomei Expressway, the government decided to build a brand-new connection. There are several good reasons for building a new connection, especially to have a robust transport system between Nagoya and Tokyo should one of the roads be severely damaged due to e.g. a major earthquake in the Tokai region. This concern is one of the reasons for the building of the new maglev Chuo-shinkansen line (Barrow, 2019). On the other hand, one might also ask how necessary an expansion of highway capacity is at a time when the population of Japan is sinking. Furthermore, while the Chuo-shinkansen might also not be needed when looking at the sinking population, it does at least make Kanto, Kansai and Chūbu areas of Japan more accessible for regions that previously were not connected by high-speed rail. In any case, as far as transport goes, trains are of course better in a climate perspective than all the road traffic that a new expressway will enable.

Taisei may very well build infrastructure that is more environmentally friendly than other contractors; that does not, however, make them a ‘green’ company. Many of the projects they work on lead to habitat loss, and facilitate more traffic both on the roads and in the air. The Haneda expansion started as the Tokyo bay was recovering from the heavy pollution of the 20th century, and altered the seabed affecting local wildlife. Airports are also not just problematic in the form of CO₂ emissions, but also in the form of fuel and chemical leakages, as has been the case on military bases on Okinawa (Mitchell, 2016). The Shin-Tomei expressway is similarly problematic in habitat-loss and CO₂ emissions. Looking at pictures from the expressway, the more environmentally friendly grey asphalt mentioned above does not seem to have been used as it is as pitch-black as new standard asphalt. That might be a cost-measure to compete for the contract if the use of more environmentally friendly technology has not been mandated, but what good does this new technology do if it is not used? As a private company, Taisei cannot really be blamed for trying to maximize profits. They can however be criticized for trying to appear ‘greener’ than they actually are. This in turn reflects poorly on the Satoyama Initiative.

Given the inclusion of Taisei and the printer-manufacturers in the Satoyama Initiative, I would argue that the Initiative is letting itself be used for other actors’ greenwashing

purposes. The list of private companies in the Initiative has 24 entries, but is not kept up to date or properly explained. One example of this is Kasho Maeno (株式会社花匠前野 *Kabushikigaisha Kashō Maeno*) (IPSI, 2020), an *ikebana* (Japanese flower arrangement) company. This company no longer exists, with their former website URL being for sale by a domain parking company (Sedo, n.d). There is also no explanation for why the company initially joined the Satoyama Initiative, although as an *Ikebana* studio, they were at least directly involved with using resources found in *satoyama* landscapes. Leaving aside the company's reason for joining, this indicates that the Initiative is also interested in propping up their member numbers to make them seem bigger than they actually are, as well as actually working with them to achieve the initiative's goals.

While the Ink-Cartridge Satogaeri Project at least made a project proposal to IPSI, and followed up with this despite not being selected for further study, I have not found any evidence of actual participation in the Initiative by Taisei and the abovementioned *ikebana* company. This indicates that the initiative is letting itself be used for 'greenwashing' by letting companies associate with the organization. I will discuss this form of greenwashing in more detail in the following section.



Figure 5: Sayama Hills before and after the construction of 'Tama New Town'. This is the area where Miyazaki Hayao, the director of *My Neighbor Totoro*, grew up © Parthenon Tama

3.4 The Japan Business and Biodiversity Project

A classic form of ‘greenwashing’ is to support ‘green’ organizations, projects and causes. An early criticism of the World Wildlife Fund (WWF) was their intimate relationship with the oil giant Shell. In this case, WWF let Shell use the values connected with their Panda logo to make itself appear as a friend of wildlife and the environment. As one of the world’s major petroleum companies, Shell did not have a good environmentalist track record. However, WWF has later itself become more restrictive with whom it partners, and now excludes oil companies. The organization also no longer associates itself with other businesses with negative connotations, including those not exclusively related to the environment, like tobacco or drugs (Paddison, 2013).

One of the early contributors to the Satoyama Initiative was the before-mentioned Japan Business and Biodiversity Partnership. This is another organization established during the Aichi conference on biodiversity, but the Biodiversity Project was implemented and grew faster than the Satoyama Initiative. A reason for their fast growth can be found in the so-called ‘action policy’ which the members of the JBBP must adhere to, the third section of which stresses the voluntary nature of the whole organization. There are also no provisions for punishments, like expulsion, if the companies do not actually follow up with concrete measures promoting biodiversity. The action policy does have many measures for promoting biodiversity by reducing the impact of their activities, supporting local communities in biodiverse areas, etc. (JBBP, n.d-a). The condition for joining the partnership, however, is that the business can be “Supporting ‘Action Policies’ and willing to implement more than one actions among them and to broaden such actions are required for joining the Partnership” (JBBP, n.d-c)

The member list of JBBP is a veritable who’s who of contemporary Japanese businesses, many of whom have a bad environmental track record. First, all of the above-mentioned printer manufacturers and Taisei Rotec corporation are on the list. Another standout is Japan New Chisso (JNC), the now renamed company responsible for Minamata disease. The big *keiretsu* conglomerates are also all represented by their subsidiaries, including Sumitomo Metal, Mitsubishi Chemical, JFE Steel (Fuyo/Yasuda). Both major Japanese airlines, All Nippon and Japan Airlines participate, as does Tokyo Electric Power Company, the operator of the Fukushima nuclear reactors stricken in the 2011 tsunami/earthquake (JBBP, n.d-b). All these corporations have no direct connection with

biodiversity concerns. Most of the Japanese corporations participating in the Satoyama Initiative were a part of the JBBP before joining the initiative. This shows that the initiative has stricter rules for accepting new members. While some member corporations are less directly using *satoyama* resources than others, the initiative has some vetting of members and did not just invite every member of the Business and Biodiversity Project.

The WWF is still criticized for letting itself be used for greenwashing purposes, but less so than before they started vetting their list of associates, making it more in line with the values associated with the foundation. In a similar manner, the Satoyama Project can still be criticized for associating with companies that are less concerned with sustainability than promoting their ‘green’ initiatives. IPSI does however seem to have a stricter process of accepting new contributors than the JBBP. The JBBP is also mostly led by private businesses, whereas the Satoyama Initiative is mostly made up of government entities mainly concerned with the environment, and educational institutions. This different portfolio of members, with a relatively low number of private business members, may be a factor that makes the Initiative more concerned with who joins them. That being said, the cases presented earlier in this paper shows that IPSI has some issues with ‘quality control’ regarding private sector members when analyzing them through a sustainability and biodiversity perspective.

3.5 Helping to ‘Greenwash’ the image of Japan

Japan, like many other industrialized countries, has been the scene of multiple manmade environmental disasters. Some examples include the Niigata ethyl mercury poisoning case as in Minamata and organic mercury in waste water from Showa Denko which led to mercury building up in the Agano river basin (George, 2001, p. 187; MoEJ, 2002) or the still ongoing disaster at the Fukushima Dai’ichi nuclear reactor following the 2011 earthquake/tsunami (Kyodo, 2020). The latter has also led to increased CO₂ pollution in Japan, as the use of carbon-based energy generation is needed to offset the energy lost from nuclear power production. Japan was also the sixth highest CO₂ polluter in 2017, with a per capita level double that of the world average according to a 2018 EU-report. This is not to imply that Japan has uniquely high emissions in this regard, its per capita CO₂ emissions being lower than the Netherlands, but higher than Germany (Muntean et al., 2018, pp. 5, 12,

125). The use of fossil fuels does not only lead to CO₂ emissions, but also local air-quality problems.

Mercury poisoning has also been a problem outside Japan, one example being the devastation of native communities in Canada since the 70s (Goldberg, 2017). I do not wish to imply that Japan is ‘worst in its class’ when it comes to pollution; it was for example one of the first countries in the world to ban leaded fuels in 1986. Furthermore, looking at the global Environmental Performance Index, Japan is ranked twentieth at the time of writing. Unfortunately it has sunk from tenth place from its 2008 baseline, not only because other countries have done better. Rather, Japan’s performance has sunk in several of the indexes used for the report. This includes the category of biodiversity emphasized by the Satoyama Initiative (EPI, 2018). Japan has of course also recently resumed commercial whaling, giving Japan a bad reputation amongst nature conservationists.

Despite these examples, Japan has successfully cultivated a picture of itself as somehow being ‘in tune with nature’, proud of its green, unspoiled forests that cover the island nation. This image has also been exported abroad, being prevalent from at least from the late eighties (Totman, 1989, p. 1). This is also reflected in material promoting tourism in Japan, a common trope being the large amount of Japan covered in forests, the Japan-guide, a travel site aimed at English speakers touts that “over two thirds of Japan are covered by forested mountains and hills” (Japan-guide, 2020). This was not always the case, but came about after a period of reforestation after World War 2. As such only 17,9% of these forested areas are natural forest. Furthermore, the newly replanted forests are to a large degree monocultural, reducing their value when measured in biodiversity. It is also problematic when viewed in regard to soil erosion, with landslides being a common result as some of these trees have smaller root systems, making them vulnerable on hills. Being monocultures, they are also very susceptible to pests and disease, and have a lower degree of biodiversity (Totman, 1989, p. 5).

To this end, *satoyama* is used to maintain the ‘green image of Japan. There are several examples of this, especially in popular media. One example can be found in the Cool Japan program made to promote Japanese ‘soft power’ abroad. As the world is becoming more aware of the effects of human influence on the environment, this program is perhaps a good strategy to pursue, both complementing and in cooperation with popular culture like anime and manga. In an NHK talk show as part of the Cool Japan initiative, *satoyama* is presented

as an environmentally friendly form of farming, showing off a biodiverse landscape to foreign commentators, marveling at the ‘natural beauty’ of the Japanese countryside. This episode shows off Kamogawa in Chiba focusing on rice paddies and all the wildlife found there, and Sado island, with its population of crested ibises (Unknown director, 2012).

Another example is a nature documentary co-production by the BBC and NHK narrated by none other than David Attenborough, one of the great symbols of environmentalism today (Mizunuma, 2004) Here, too, the biodiversity and natural beauty of *satoyama* are in focus. Furthermore, the limited human involvement is shown as positive for this biodiversity; for example, when the opening of irrigation ditches lets migratory fish ride the shallow waters up from lake Biwa to the surrounding rice paddies. After the fish lay their eggs and return to the lake, and the humans have planted their rice seedlings, the waters of the fields erupt with microscopic life. One commenter on a version of the documentary uploaded to YouTube states that “I think a lot of countries with polluted rivers and polluted nature should learn from Satoyama. it is so very refreshing watching this.” (Ohyeah, 2018).

Using the term *satoyama* in IPSI may also function as a form of green washing of Japan. IPSI is not the ‘International Project for the SEPLS Initiative’, rather they employ the specifically Japanese term ‘*satoyama*’. SEPLS is more sterile and academic, but arguably more correct and inclusive in the context of an international organization. IPSI was however set up during the 10th Conference of the Parties to the Convention on Biological Diversity in Nagoya, making *satoyama* a part of the zeitgeist. Furthermore, the Japanese Ministry of the Environment was one of the key initiators and early funders, giving the organization an incentive to cater to Japanese wants. With the Satoyama Initiative, a Japanese term has been connected to an environmentalist organization and biodiversity. This can then also help to associate Japan with environmentalism and biodiversity, as a form of soft power in an age of increasing awareness of such issues.

Anime and manga, especially the animated movies from Studio Ghibli, also help in contributing to the image of Japan as a nature-loving nation. Of course, this is not a conspiracy between Hayao Miyazaki and the Japanese government. Miyazaki himself is often critical of the central government, not just in environmental matters as can be inferred from his movies (Brzeski, 2015; Kelts, 2013). That being said, the government may use characters like Totoro *post factum* in tourism advertising, or as a form of soft power. In any case, movies like My Neighbor Totoro (1988) or the aforementioned Only Yesterday (1991) show

both past and contemporary examples of the beauty of Japanese cultural landscapes, and how the humans living in *satoyama* take care of their semi-natural environs. More recently, *Non Non Biyori*, a still ongoing manga and anime that has been serialized since 2009, has seen popularity abroad. Here too the natural beauty of *satoyama* is in focus, as is biodiversity with the main characters interacting with or admiring different species found in *satoyama* landscapes. Shinkai Makoto, the director of the 2016 hit film *Your Name*, has also used both *satoyama* and *satoumi* in his animated movies.

MAFF's definition of 40% of Japan's total area as *satoyama* helps to paint a picture of Japan as an environmentally friendly country. Agriculture is after all a large contributor to global greenhouse gas emissions, especially the meat and dairy industries. Looking to the Satoyama Initiative, some of their case studies actually include animal husbandry as a central point, (IPSI., 2010, p. 15-19). International organizations also agree; for example the Critical Ecosystems Partnership Fund (CEPF) has declared the whole country of Japan as a "biodiversity hotspot" (CEPF, 2020). Another indicator of Japan's success in branding the country as 'green', is the name of the IPSI itself. Instead of using a descriptive English name, like 'sustainable cultural landscape' or other more neutral term, IPSI took the Japanese word *satoyama*, without even trying to translate it. We also see this in academia, where several use the term *satoyama*, also outside Japan. I am not negative to this per se, rather noting that Japan has successfully exported a term connected to 'green' values. Like karaoke (カラオケ, *karaoke*) or tsunami (津波, *tsunami*), that have become relatively common loanwords in English, *satoyama* may see the same development.

One interesting contrast to the mostly positive comments regarding Japan as an environmental nation is the official videos on *satoyama* and *satoumi* published by the United Nations University, one of the main members of the International Partnership of the Satoyama Initiative. In these videos you find some of the same positive comments on Japan. One commenter notes that "While Japanese have put forward ideas and act to sustain marine life, Vietnamese have done nothing to protect their seas" (Bùi Hằng, 2018). However, there are also negative comments about the UN being the body to deliver this message. "UN always jump on the bandwagon whenever good things happened, yet most UN are part of the big problem." (SBUL Lis, 2018).

Japan's green image building is in many ways successful, as can be seen when reading the comments under these videos. Some examples include "satoyama is the best for

every life” (Asif Khan, 2019), or “I become a prime mister of my country, I will definitely learn everything from Japan, especially the farming methods.” (Free Mind, 2018). The one critical panelist on the Cool Japan talk show is shot down in the comments: “ditch Sandrine, she's a negative reviewer of whatever it being discussed. she is a never happy, always complaining person!” (Beth Fukumoto, 2019). You can also see it in reviews of *Non Non Biyori*, with one reviewer saying that he “would like [the main characters] to explore the beautiful land they're living in” (SakeMaster, 2013) in a review published early in the run of the first season of the anime version.

'Green' image building is not the only positive effect of popular culture portraying satoyama. Especially anime-related ‘contents tourism’ has become popular in the last decades. Already mentioned *Non Non Biyori* is one of these, amongst other things being featured in the anime-tourism ‘mook’ (a portmanteau of magazine and book) *Anime Holy Lander 88 Walker*, which is published on an annual basis (Matsuoka, 2019, p. 73). The main show presented in this issue was the animated version of *Laidback Camp* (ゆるキャン), that takes place mainly in rural Yamanashi and the other prefectures surrounding Mt. Fuji. As the name implies, camping is a central part of the show, and the rural *satoyama-landscapes* of Yamanashi have inspired a small camping boom in Japan. *Laidback Camp* was originally a manga, and after the success of the anime, both a second season, a spinoff animated short series, and a live-action remake have been announced (Spartan chef, 2019).

Japan’s efforts through the Satoyama Initiative also help to build and maintain Japan’s environmentalist image. Commenting on Japan’s leadership of the Initiative, Helen Clark, then administrator of the United Nations Development Project (UNDP), said in 2013 after an expansion of COMDEKS, a part of the Initiative, “We are grateful to the Government of Japan and partners for their continued collaboration in building resilient communities and landscapes” (UNDP, 2013).

The tourism industry itself is also using *satoyama* in its promotional material. This includes general Japan tourism, and companies specializing in *satoyama* tourism. As an example of the first, Japan Travel, a travel agency is using *satoyama* to promote their tours to Gifu prefecture. This page gives a general explanation of *satoyama*, explaining how Hida Furukawa is a good example of the landscape, especially because of the restoration efforts put into keeping the *satoyama* landscape as it has supposedly been for over 1000 years.

Writing about the farmers in the area they say that “what they want is that the balance between man and nature is maintained at a consistent level” (Patisse, 2014).

Another, more specific example is Satoyama Experience, a tour operator specializing in walking and cycling tours, also in Gifu. Like Japan Travel, Satoyama Experience also emphasizes the beautiful landscape and sustainable nature of life in *satoyama*: “Living in Satoyama, Japanese people have become part of the ecosystem, realizing what is now called a sustainable lifestyle” (Satoyama Experience, n.d). These examples show that the tourist industry not only uses the perceived beauty of *satoyama* landscapes, but also the ‘green’ values, especially perceived sustainability, that are associated with them. While the bike and walking tours promoted in the area are by themselves fairly sustainable, and have little negative ecological impact on Hida Shirakawa itself, tourists going there from overseas is another matter entirely. A vast majority will be traveling to Japan on airplanes. There is also the question of getting the tourists to the destination, which requires infrastructure that may have to be expanded to cope with the increasing number of tourists coming to Japan - at least before the corona virus crisis stopped world travel at the start of spring 2020.

On a more spiritual level, the image of Japan as environmentally friendly is also supported by *satoyama*. An example of this can be found on the blog ‘Satoyama Spirit’ with the subtitle “Musings about living with the land, not just on it” (Zulch, n.d). In a blogpost commenting on the establishment of the Satoyama Initiative, he notes that:

I’ve long had a deep attraction to the Japanese satoyama landscapes, both from an aesthetic angle but also for the way in which the inhabitants are living “in the land” rather than simply “on the land”. They are embedded in their environment, and this depth of connection is reflected in their sense of community, their intrinsic respect for nature, their tools and artwork, and their spirituality. (Zulch, 2010)

Its essentialistic view of life in the Japanese countryside aside, this shows how the positive associations connected to *satoyama*, help to reinforce the image of the Japanese as more in tune with nature. When comparing Japan to other ‘modern’ societies he states that: “Japan is the only culture I know of who modernized (during the Edo period) while maintaining that spiritual connection to nature through Shintoism and Buddhism” (Zulch, 2010).

With this, I do not wish to imply that all these examples are some coordinated conspiracy to spread the gospel of Japanese environmental superiority. Other than the Cool Japan talk show and the Attenborough documentary, both produced by NHK, neither have any direct connections to the central Japanese government. Some of the anime examples are however supported by local governments, especially for tourism purposes. An instance of this is the movie version of *Non Non Biyori*, where the Ishigaki Island Film Office (石垣島フィルムオフィス, *Ishigaki-jima firumu ofiusu*) and local tourism related actors are mentioned as collaborators in the end credits (Kawatsura, 2018, p. 01:09:34). One commonality between all the examples is that they show a form of essentialization of the idea of the Japanese countryside, idealizing life in the countryside, while ignoring the problems. There are of course examples of popular culture exposing some of the modern problems connected to life in contemporary *satoyama* landscapes, but these have not seen the popularity of media that idealize life in the countryside. One example of this is *Diary of Our Days at the Breakwater* and *wana gaaru* (罾ガール, lit. Trap Girl), both serialized since 2017. The main premise of *wana gaaru* shows how wild animals are becoming pests as they draw closer to human populations when forests are overgrowing, but unlike *Breakwater*, which does not problematize water pollution or other such issues, *wana gaaru* has not been animated.

4 Conclusion

There is much to learn from *satoyama* landscapes. The sustainable practices found in *satoyama* can be a part of a solution for feeding a growing world population while also maintaining biodiversity and reducing the carbon footprint of food production. That is not to say that *satoyama* as it exists in Japan is the only viable solution in this regard. IPSI's approach of studying SEPLS around the world offers an opportunity to find best practices that can help in maintaining and promoting biodiversity and promote sustainable forms of agriculture. However, unbridled optimism is also not warranted. Many of the problems associated with organic agriculture also apply to agriculture in *satoyama* landscapes, including lower yields and uncertainty regarding the global environmental impact of traditional farming methods. Political reform would also be needed to initiate large-scale revitalization efforts of *satoyama* landscapes in Japan, given the country's demographic challenges.

Satoyama as a concept is not well defined, making it open to interpretation and use by various actors. One example is the use of greenwashing, as exemplified by the Ink-Cartridge Satogaeri Project and Taisei Rotec who use their support for International Project for the Satoyama Initiative to show concern for the environment and support for ‘green’ causes. Arguably, they are only paying lip-service without making appreciable changes to their core businesses. That is not to say that there is no positive environmental or ecological impact of their ‘greenwashing’ activities, but their connection to *satoyama* landscapes is tangential at best. I would argue that the problem here is not the ‘greenwashing’ that these companies are engaged in, but rather that IPSI is letting itself be used for these purposes. This opens the organization up to a form of ‘guilt by association’.



Figure 6: *Satoyama* in late summer (2012). Photo by the author, from the train between Koriyama and Aizu-Wakamatsu, Fukushima.prefecture.

Japan itself also benefits from the green values associated with *satoyama* landscapes. First, its natural beauty and positive associations make *satoyama* attractive to ecologically conscious tourists. This helps disseminate the semi-mythical idea of Japan as ‘the green archipelago’. Even more successful in this regard is popular culture, especially anime which

since the 80s has helped to spread Japan's green image abroad. *My Neighbor Totoro*, *Only Yesterday* and *Non Non Biyori* are all popular movies and TV series that use *satoyama* landscapes as backdrops, idealizing life in the countryside. Even films like *Pom Poko*, critical of the post-war destruction of *satoyama* landscapes, end optimistically with the racoons that were driven from their former forest homes managing to adapt to life in green patches in the new urban landscape (Takahata, 1994, p. 01:51:00). The Japanese state also uses *satoyama* for creating a green image of Japan as a form of soft power. This is achieved by associating Japan with entities that have a 'green' image, like IPSI, or using *satoyama* landscapes in national promotion efforts like the Cool Japan project.

Satoyama landscapes have a natural beauty and are associated with 'green' values. These positive aspects are emphasized, while the negative aspects are glossed over.

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