

A Model Site for Ecotourism: Investigating Environmental Awareness and English Ability of Frontline Employees on Yakushima Island, Japan

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Abstract: Yakushima Island is a pristine environment located south of the prefecture of Kagoshima on the island of Kyushu, Japan. With breathtaking mountain walks featuring 1,000-year-old cedar trees, it is a unique habitat that contains a plethora of differing ecosystems. Though thousands of international tourists visit Yakushima each year, the environmental awareness along with English ability of its hardy ecotourism guides and employees has not been fully researched. To fill this gap, the author conducted an in-situ study in March 2024 to interview in length ecotourism employees who have contact with international travelers. Results found that 72% of respondents were from locations outside of Yakushima, 81% of respondents felt nature walks are useful for learning about the environment, 45% felt that English ability is very necessary for their jobs, and 90% of respondents participate in recycling activities.

1. INTRODUCTION

Yakushima is a small island in the prefecture of Kagoshima located about 60 km south of the southernmost big island of Kyushu in Southwestern Japan (see Fig. 1). The island is of granite formation, and as such, contains no active volcanoes; however, Yakushima does contain some of oldest cedar trees in the Japan archipelago, as well as a dynamic assembly of ecosystems, a vibrant living collection of floral and faunal activity, and a cohesive community, who are not only proud of their unique island but who are capable, communicative, robust, and steadfast. In fact, many of the community members living in the main towns work in tourism and, as such, probably have an extensive background knowledge of the environment around the island. Many people, both travelers and workers, have relocated to Yakushima through geographical transmigration for relaxation, searching for nature connectedness, or for purposes of “getting away from it all.”



Figure 1. Location of Yakushima

Source: behere.asia/blog/be-heres-guide-to-yakushima, 2025.

The island itself has a circumference of 132 kilometers and a total land area of 504 kilometers. Comprised mainly of its centerpiece, Mount Miyanoura, it is surrounded by small towns and villages located around the perimeter of the island. Yakushima has been known by the ecology-minded community, both international and domestic for decades, and as such, has taken root as a well-known “eco” destination for international and domestic backpackers alike. The attention to sustainability towards the conservation of the island is well known to all visitors, who do their best to adhere to the strict island policy guidelines which include: no excreting waste of any kind in all of Yakushima, no littering of any kind (trash must be taken with you), no feeding of any wildlife, and taking care not to forget items within its boundaries. In fact, Yakushima is very pristine and contains very clean and clear natural water preserves and has installed many eco treatments of waste (Fig. 2). While there are bathrooms, they are very sparse, and often one must use portable toilets and take waste with them.



Figure 2. Explanation of Recycling Toilet

Source: Photo taken by author, March 2025.

Since it was incorporated as a Unesco World heritage site in 1993, Yakushima’s true popularity as a global ecotourism destination has both risen and fallen, plateauing from around 400,000 visitors in 2007, dropping to 250,000 in 2019. further dropping during the COVID-19 pandemic that halted all global tourism (Usui, et. al. 2021). Kagoshima tourism data for hiking on Mount Miyanoura reported that the numbers of hikers to Jomon-Sugi and beyond from 2015-2019 dropped from over 60,000 in 2018 to 45,000 in 2019 (Table 1).

Table 1. Total Number of Hikers on Mount Miyanoura

Year	Number of Climbers
2015	56,994
2016	60,456
2017	65,413
2018	60,902
2019	45,882

Source: Kagoshima Tourism Statistics, 2020.

During the past several decades (pre-COVID and COVID) many people have moved to or returned to Yakushima for life pursuits that they have longed for in many cases. Usui, et. al, completed a study on ‘in-migrants’ (those who move to Yakushima), ‘out-migrants’ (those who move out of Yakushima) and ‘U-turns’ (those who have moved out and returned to Yakushima), and within this, conducted a longitudinal research study on employees of ecotourism and tourism businesses on the island. The study, which is similar to the author’s own research, characterizes the backgrounds of employees who had been working in several business types (restaurants, guesthouses, travel agencies, and the like) for several years. They were interviewed concerning their area of birth, length of time in Yakushima, and reasons for relocating to the island. The paper conducted questionnaires with 46 respondents working in accommodations, tour guide agencies, and souvenir shops. Results found that four migrated from southern Kyushu, 10 were from Tokyo and Osaka, two from other rural parts of Japan, and three did not answer. Interestingly, only one of those came from the island of Yakushima itself, upholding the notion that guiding and working in shops is quite easy for those from outside the island to do. Among those who had moved to Yakushima from elsewhere, 11 responded that their motivation to move to Yakushima was largely contained in five categories: 1) Early retirement, where many moved to the island to build accommodations in natural surroundings; 2) nature, where many in-migrants were attracted to nature, especially mountains and trees, and therefore, wanted to live and work in this environment; 3) family reasons, where other respondents moved to Yakushima to provide good natural environments for their children; 4) chance, where yet other respondents were invited to join or participate in an activity with friends or family and decided to stay, and 5) change, where some respondents were looking for something different and therefore moved to Yakushima.

Of the total, 68% of respondents migrated to Yakushima after it became a UNESCO World Heritage Site in 1993 to start businesses or live; 52% were from outside of Yakushima, while 41% were from Kagoshima; (7%) did not respond. Of the total, 45% owned accommodations, 20% restaurants, and 9% souvenir shops, while 5% were guides, and 21% were in other businesses or did not respond. In fact, there were also international in-migrants in the study, consisting of five males and one female. Three of the respondents were from the USA, two were from New Zealand, and one was from the UK; four respondents were guides in English, one was a graphic designer, and one owned an Air BnB. These results show that many respondents moved to Yakushima to be guides or work in accommodations. Although no language or environmental knowledge was measured, we can infer that since those who moved are guides or working in shops, they must be somewhat proficient in English in order to communicate with international guests. In addition, several in-migrants stated that they like Yakushima because nothing else can be found like it in Japan. Of the international in-migrants, before their jobs in Yakushima, four worked in tourism, one worked in gardening, and one was a graphic designer, showing that they most likely had environmental awareness knowledge and communication ability before moving.

Morrow (2024) found in a study in a similar study of 29 respondents working in ecotourism and tourism in Hitoyoshi Kuma Region, Kyushu, Japan, that 58% were concerned with garbage and 38% were concerned with rebuilding after a disaster, to which Japan is prone to experiencing. Of the total, 62% stated that learning about the environment is very important, while 38% felt it was important. As for the meaning of ecotourism, 69% of respondents felt that it meant eating local food, while 48% felt that it meant learning about nature, showing that people do consider the environment when working or choosing employment in mainland Japan. In Hitoyoshi Kuma, 26% of respondents stated that international travelers using English visited their establishments once per week and 17% stated that they visit every day. Therefore, 69% stated that English ability is somewhat necessary, while 31% felt it was very necessary (Morrow, 2024).

D’Hauteserre, et. al. (2016) conducted a comparison study on Yakushima and Tahiti Islands. In their study, approximately 160 accommodation facilities were found on Yakushima to cater to tourists both international and domestic, and that they were largely operated by retirees who decided to spend their lives there, a case similar to Tahiti’s (d’Hauteserre. 2016). Outsiders who moved to Yakushima have since created new markets of guiding such as “healing” tours, in which guides bring clients to forests for relaxation purposes. In 2004, Yakushima was chosen as a model for the promotion of ecotourism and introduced a registration system for guides. In 2015 the registration system was updated and continues to this day. Initiatives by individuals led to more establishment of eco-businesses and guide

businesses and was later reflected in the Law of Promotion of Ecotourism, which states that ecotourism is a “guided, educational activity” (d’housetter, 2016, p. 235). Although not researched directly, with the influx of international tourists, one can certainly infer that both English ability and environmental awareness are two key acquired skills that are largely important in the ecotourism industry in Yakushima.

Yakushima has faced a number of obstacles in ecotourism maintenance over the years; high visitor increase has led to roadway congestion on roads leading to park entrances. In addition, there has been overuse of beaches where giant sea turtles lay their eggs. In peak seasons, trails to Mount Miyanoura, including access to Jomon Sugi has been swamped to 1,000 visitors per day, requiring park rangers to carry out trash (d’Hautessere, 2016). This fact has changed, and upon the author’s visit in 2024, one is no allowed to distribute waste or trash of any kind in the confines of the park. In addition, sea turtle viewing can only be undertaken after lectures and are offered only on a guided observation basis. These point show that employees and citizens have become fully aware of the environmental importance of maintaining tourism to reasonable levels on Yakushima.

While some research such as the above has been completed in Yakushima with regards to environmental conservation, and even though it became a UNESCO world heritage site in 1993, there has been little research into environmental awareness among ecotourism employees that includes English ability within the arena of ecotourism to Yakushima. Although many may take the role of English ability for granted, its importance in the realm of international tourism and ecotourism is often overlooked but remains solid. To fill the gap of environmental awareness and English ability not being fully researched, the author completed an in-situ study in Yakushima in March of 2024 in order to examine the role of environmental awareness with English ability on the island. Section two explains the study method and materials, and section three shares the results of the study. Section four discusses, while section five offers a conclusion.

2. METHOD AND MATERIALS

In order to investigate further the impact of environmental awareness with English ability on Yakushima, the author conducted an in-situ experiential and observational study there from March 1 to March 7 2024. The study consisted of in-depth, face-to-face interviews with ecotourism employees in varying capacities; questionnaires were completed during these interviews in the following style: each question was asked by the author and clarified if necessary and then wrote the answers to the questions himself. This was done to ensure accuracy in asking and answering questions and also to avoid misdirection and biased answers in self-reporting. In addition, to ensure randomness, each target business was assigned a number which was drawn out of a hat before interviewing began. The business was entered and the first person to be approached became the participant for that particular location. In addition to interviews, photographs were taken of noteworthy attractions, such as Mount Miyanoura, Mount Mocchomu, various beach, the lighthouse, and other interesting locations. and also included amenities such as guesthouses, hotels, and small ecology museums, such as the local sea-turtle museum called Yakushima Umegami Kan.

The questionnaire used during the interviews contained basic socioeconomic items such as age, gender, marital status, living situation, place of birth, and highest education level attained. This was done to acquire a detailed background knowledge of employees who work on the island. This was deemed important by the author because it is ecotourism employees who not only know the island but also know the kinds of people who visit and what their desires are. In addition to basic socioeconomic questions, the questionnaire also contained environmental questions such as: what are you most concerned with regarding the environment? How important is environmental sustainability to you? What does ecotourism mean to you? What outdoor activities do you participate in? What is the best way to teach young people about the environment of Yakushima? and - What is the best place in Yakushima to learn about ecotourism? among other questions. Questions regarding English ability, such as: What does English play in tourism in Yakushima? How often do you use English on a daily basis? What is your own English level? And How proficiency in English do you want to become? were also asked.

The questionnaire was originally written in English and translated to Japanese to avoid language complications. Respondents were able to answer in English where possible, Japanese where it was

impossible. In cases where English was impossible, the Japanese answers were translated into English post-interview.

3. RESULTS

Table 2 contains demographic information. The gender breakdown contained nine female and two males; the average age of respondents was 43 years. Of the total, eight were married and three were single, and of those, seven had children at an average of one point eight children. As for living conditions, six live with husbands and wives, four live with parents (in multi-generational households), and one lives alone. Nine reported that they live in houses, while one lives in an apartment, and one lives in a different situation. Highest educational level data show that the majority (five respondents) graduated from high school, where four had some university education, one graduated from university, and one went to trade school. As for places of birth, three respondents were born in Yakushima, while three were born in the largest city in Kyushu, Fukuoka. One respondent was born in Nagoya, one was born in Aichi, one was born in Okayama, and one was born in The Philippines.

Table 2. *Yakushima Tourism Employee Demographics*

Gender	F	9
	M	2
Children	Y	7
	N	4
Living situation	Alone	1
	W/husband, wife, children	6
	W/parents	4
	Other	0
Accommodation	House	9
	Apartment	1
	Other	1
	Dormitory	0
Highest educational level	HS grad	5
	Some univ	4
	Univ grad	1
	Other	1
Place of birth	Yakushima	3
	Kagoshima City	1
	Fukuoka	3
	Nagoya	1
	Aichi	1
	Okayama	1
	Philippines	1
Place of residence	Yakushima	10
	Kagoshima	1

Source: *Compiled from Survey Data, 2025.*

Table 3 contains environmental concerns of Yakushima employees and business owners. As can be seen, eight respondents (72%) were mainly concerned with garbage and recycling. Three respondents (27%) were concerned with water and soil pollution, and three were also concerned with rebuilding after a disaster. As for what conservation practices people participate in, ten participate in recycling activities; six participate in using environmentally friendly items, and four respondents stated they participate in saving electricity. Three respondents save water, and one grows their own food in a garden. As for the meaning of ecotourism, the majority (eight people respectively) feel that it means eating local food and touring or traveling in natural locations, while four people respectively feel it means learning about nature and participating in outdoor activities such as hiking. Six respondents (54%) answered that they spend time outdoors, and participate in activities such as hiking, mountain climbing, camping, and studying about nature, while one participates in birdwatching. As for the question, what outdoor activities are useful for learning about the environment, nine (81%) responded nature walks, eight felt that hiking was useful, seven mountain climbing, and six camping, two responded river fishing, and one felt that mountain biking was useful. In the question, what activities are useful for teaching young people about the environment, seven (63%) responses were share an outdoor experience course, five

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reported that taking young people on treks was a good way to learn, and four respondents felt that taking young people to a lecture course was the best way to learn. As for the best place to take people or recommend that people visit, six felt that Shiratani Unsuikyo Valley was the best, followed by Yakusugi Land (five respondents), Nagata Inakayama and Torogi Falls with three respondents respectively, and Jomon Sugi had two respondents.

Table 3. *Environmental Concerns & Activities of Yakushima Employees (Multiple Answers)*

What environmental concerns do you have?	Garbage/recycling	8
	Water pollution/supply	3
	Soil/ground problems	3
	Rebuilding after a disaster	3
	Air pollution	2
What conservation practices do you participate in?	Recycling	10
	Using env friendly items	6
	Saving electricity	4
	Saving water	3
	Other (Growing food)	1
What does ecotourism mean to you?	Eating local food	8
	Touring in nature	8
	Camping	4
	Learning about nature	4
	Hiking	2
	Other	1
What outdoor activities do you participate in?	Spending time outdoors	6
	Hiking	5
	Mountain climbing	3
	Camping	3
	Studying nature	3
	Birdwatching	1
	Other	2
What outdoor activities are useful for learning about the environment?	Nature walks	9
	Hiking	8
	Mountain climbing	7
	Camping	6
	Birdwatching	3
	River fishing	2
	Mountain biking	1
	Other	1
What is best way to teach environmental aspects?	Share an experience course	7
	Take them on treks	5
	Share a lecture course	4
Where is the best place to take people to learn about the environment?	Shiratani Usuikyo Valley	6
	Yakusugi land	5
	Nagata Inakahama	3
	Toroki falls	3
	Jomon sugi	2
	Seibu trail	1
	Kigensugi	1

Source: *Compiled from Survey Data, 2025.*

Table 4 displays environmental awareness items of ecotourism employees in Yakushima, which is of great importance in their roles as guides and knowledgeable staff members of the ecotourism industry. Table 4 are based on five-point Likert style statements/questions shown following: environmental awareness in important; I am prepared to study and learn more about the environment of Yakushima; I get enough information about Yakushima; and how important is environmental sustainability?

As the table shows, six respondents (54%) strongly agreed that the environment of Yakushima is important, while three (27%) agreed. Six agreed and four strongly agreed that they are prepared to study and learn more about the environment. Of the total, seven respondents agree that they get enough

information about Yakushima, while two strongly agree. Two also neither agree nor disagree that they get enough information. Eight feel environmental sustainability is extremely important, while two feel it is somewhat important, and one responded that it was neither important nor unimportant.

Table 4. *Environmental Awareness*

Environment of Yakushima is important.	Strongly agree	6
	Agree	3
	Neither agree nor disagree	1
	Disagree	0
	Strongly disagree	1
I am prepared to learn and study about the environment.	Agree	6
	Strongly agree	4
	Neither agree nor disagree	1
	Disagree	0
	Strongly disagree	0
I get enough information about Yakushima.	Agree	7
	Strongly agree	2
	Neither agree nor disagree	2
	Disagree	0
	Strongly disagree	0
How important is environmental sustainability?	Extremely important	8
	Somewhat important	2
	Neither imp. nor unimp.	1
	Somewhat unimportant	0
	Very unimportant	0

Source: *Compiled from Survey Data, 2025.*

The author also investigated English ability among employees. As can be seen in Table 5, five respondents (45%) indicated that international travelers visit their establishments every day, while three stated they visit once in six months; one stated respectively that they visit once per week, three days per week, or every two weeks. Of the total, five respondents stated that English is very necessary and five stated that English is somewhat necessary. In addition, four respondents (36%) stated that they use English daily, and four stated once per week, while two stated three days per week.

English level in this study was self-reported, which is not the most accurate method to discern English ability as the respondents can either over or underestimate their own levels. However, due to time constraints, it was deemed the best way to proceed. English ability in this study, which showed that four respondents considered themselves at a middle school, or junior high school level of English. Roughly, the level for junior high school English on the Common European Framework of References for Language learning is A1, which is basic understanding of English, and the ability to use simple phrases and sentences, where three respondents feel they are a high school level (A2) and three at a more advanced daily conversation level (B1). One respondent felt they were at a business level of English, which, for purposes of this paper, translates to a B2 (high intermediate) level of English.

Table 5. *English Ability Information*

How often would int travelers	Every day	5
	Once in six months	3
	Once per week	1
	Three days per week	1
	Every two weeks	1
What role English?	Very necessary	5
	Somewhat necessary	5
	Neither	1
How often do you use English?	Daily	4
	One day per week	4
	Three days per week	2
	Once in six months	1
What is your English level?	Middle school level	4
	High school level	3
	Daily conversation	3
	Business level	1

Source: *Compiled from Survey Data, 2025.*

4. DISCUSSION

This study shows that the majority of respondents (63%) were not from Yakushima originally (though one was from Yakushima's mother prefecture of Kagoshima) and are therefore mostly "in-migrants." This fact corresponds nicely with the data from the Usui, et. al. study as found in the introduction, that clarifies "in-migrants" as those who have moved into Yakushima from elsewhere. It can be inferred from answers to other questions from Table 2 (environmental concerns), and Table 4 (environmental awareness) that the majority of respondents are concerned about the environment, participate in conservation and recycling activities, and also participate in outdoor activities such as hiking, mountain climbing, camping and studying about nature. In addition, six respondents strongly agree that the environment of Yakushima is important. From these data it is obvious that most people moved to Yakushima on purpose, to engage in outdoor activities that are akin to ecotourism. Although there was no definition of ecotourism given in this paper, most people felt that the meaning of ecotourism in an individual sense naturally was eating local food, touring in nature (nature walks, hiking, etc.), camping, and learning about nature, so it can be seen that ecology and regaining one's connection with nature was a huge draw to move the area, and are mostly here for the reason (2) from Usui that categorizes nature as the main reason people moved. In addition, the author interviewed several respondents who work in restaurants, guesthouses, or other shops in which they stated they were there for reason (5) that categorizes change as the biggest reason for relocation. Results show that six respondents agreed that they are prepared to study and learn about the environment and four strongly agreed showing they are interested in environmental issues and do want to learn more. Eight respondents strongly agreed that environmental sustainability is extremely important and two felt somewhat important, and because of this, it can be inferred that respondents have a strong desire to live and work around nature and that the environment is on their minds when working and guiding on the island.

Although this study did not focus on more detailed questions such as length of time in Yakushima, jobs, or English usage before relocating to the island, the study was still able to discern that many employees had at least some interest in the environment and participated in conservation activities before migrating. Many also had a knowledge of English, at least at a junior high school level before moving and many had contact with international travelers on a weekly basis. Four respondents use English daily, and four also use it at least once per week. This illustrates that the in-migrants of this study were engaged in environmental and eco-related activities and wanted to move to Yakushima to share their interest and passion with travelers, both international and Japanese, in whatever language they could.

5. CONCLUSION

This study of Yakushima which was conducted in-situ on the island during March of 2024 gathered some data that had not been collected before, and because of this, the study can be considered unique. Although English and communication ability is often taken for granted, not many studies have taken the time to collect such data. In addition, while many take environmental and conservation efforts for granted also, this study showed that most "in-migrant" respondents take part in environmental activities on a daily basis and are concerned about environmental issues such as recycling; most also feel that ecotourism means learning about nature, spending time in nature and eating local food.

Although the sample size was small, the study was able to collect unique and important data for the importance of environmental issues. It is hoped that further studies can be conducted on Yakushima (and other similar areas) in the future to exemplify the importance of environmental education, awareness, and knowledge along with English communication ability to share the ideals of a pristine cared for, and unspoiled habitat such as Yakushima. Such research can help this location and others like it exist for years into the future.

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