



# FROM WORLD HERITAGE TO THE WELL-BEING OF THE ISLANDERS

Leveraging World Natural Heritage Registration:  
An Environmental Culture Approach to Enhance the  
Well-Being of the Amami Archipelago's Islanders

---

Kagoshima Environmental Studies Program  
KAGOSHIMA UNIVERSITY



Akina Arasetzu Ritual

## Summary

The program has been implemented by Kagoshima University since 2009 on an archipelago of islands in southwestern Japan that is rich in natural biodiversity but faces challenges related to declining population, industry, and communities, as well as the transmission of local culture.

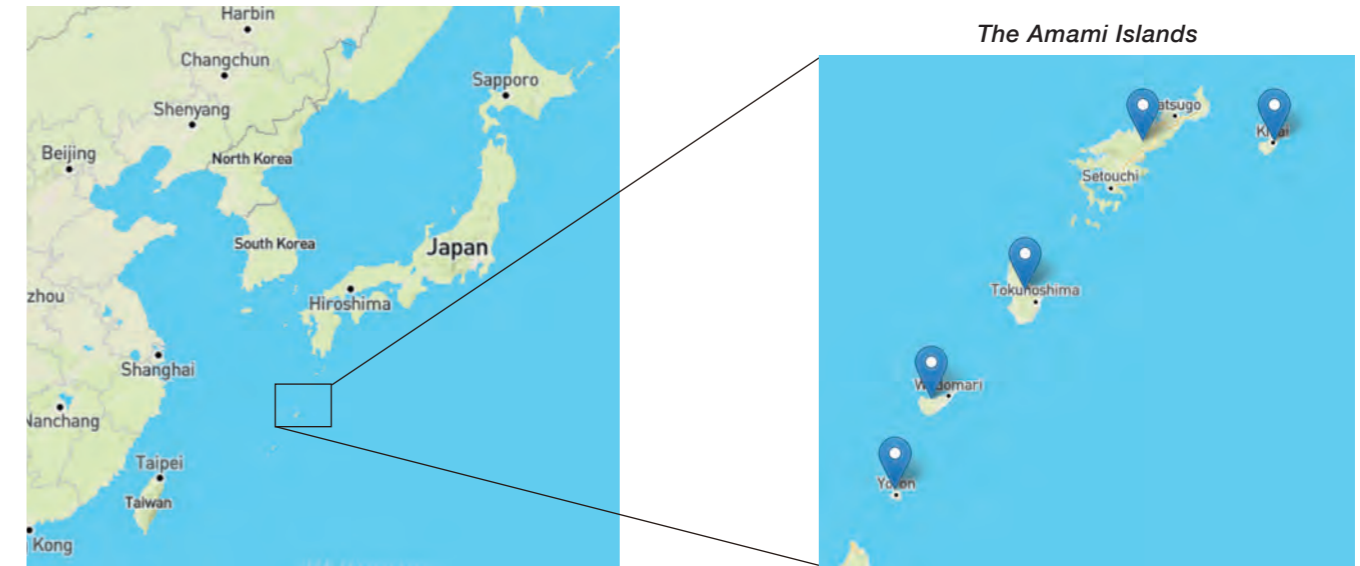
The university saw the designation as a national park and registration as a World Natural Heritage site, together with biodiversity conservation measures, as opportunities to increase the value of the region, slow the decline in the local population, reaffirm the environmental culture of the islanders, and enhance their well-being through two means: improved livelihoods and spiritual fulfillment.

This study highlights a successful capacity-building initiative in the areas of industry, welfare, education, and the environment.

## Challenges Addressed

The Amami Archipelago, with a population of less than 100,000, is an archipelago of eight islands with an area of approximately 1,200 km<sup>2</sup> located in southwestern Japan. In this region, as in many other regions in Japan, the population is declining due to the aging of the population and the outflow of people. The challenges are to secure a permanent and exchange population to stop this decline, create jobs to promote the region, develop human resources to support the region, improve local medical care, and pass on local culture.

In addition, alien species such as mongooses, feral cats, and many invasive plants are a threat to the ecosystem of the island, which aims to be registered as a World Natural Heritage site, and the extermination of these species and the establishment of a monitoring system have become issues.



## Summary of the Process

When the government sought to designate the Amami Archipelago as a national park for registration as a World Heritage site, it proposed two management concepts: “Ecosystem Management” and “Environmental Culture.”

The Kagoshima Environmental Studies Program of Kagoshima University collaborated with the government’s research on “environmental culture” and engaged in CEPA (Communication, Education, Participation, and Awareness) efforts with the islanders. These efforts enabled the islanders to reaffirm the uniqueness and value of their environmental culture, forming a foundation for the conservation of their natural environment and capacity-building initiatives to improve their well-being.

Thanks to the efforts of many stakeholders, the Amami Archipelago was designated as a National Park in 2017, and parts of it were inscribed as a World Natural Heritage site in 2021. Around this time, measures for resident participation, feral cat control, and monitoring invasive alien plants were advanced. In addition, the mongoose population on Amami Oshima was successfully eradicated in 2024 under the government’s initiative.

In addition, the university has been successful in promoting capacity-building initiatives, viewing the reaffirmation of the islanders’ environmental culture as an opportunity to improve their well-being.

奄美群島は、人口10万人を切る、日本の南西部に位置する、面積約1200km<sup>2</sup>の8島からなる群島です。この地域では、日本の多くの地域と同様に高齢化や人口流出による人口減少が進んでおり、これを食い止めるための定住・交流人口の確保や、地域の振興を図るための雇用の創出、地域を支える人材の育成、地域医療の充実、地域の文化の継承などが課題となっています。また、世界自然遺産の登録を目指す島の生態系には、マングースやノネコ、多くの侵入植物のような外来種が脅威となっており、それらの駆除やモニタリング体制の構築が課題になっていました。

政府は世界遺産への登録のため、奄美群島の国立公園指定を目指す際に、「生態系管理型」と「環境文化型」という2つの管理コンセプトを提案しました。

鹿児島大学鹿児島環境学プロジェクトは、政府の行う「環境文化」に関する調査や島民とのCEPAの取組に協力してきました。これらの取り組みは、島民に環境文化の独自性や価値を再認識する契機となり、その基盤となる自然環境の保全や、well-being向上のための能力開発を行う基盤となりました。

多くのステークホルダーの努力により、奄美は、2017年にNPIに指定され、その一部は2021年に世界自然遺産に登録されました。これと前後して、住民参加型やノネコ対策や外来植物モニタリングの対策が進みました。また、2024年に奄美大島のマングースが、政府主導で完全に駆除されました。

また、大学は、島の人達の環境文化を再認識を幸福度を向上する機会と捉え、能力開発の取り組みを進め、成果を収めています。



Community survey on environmental culture with residents



Snapshot after community survey



Nishinakama Harvest Festival



Field research on Amami's environmental culture

このプログラムは、日本の南西部に位置する、生物多様性豊かな自然はあるが、人口減少、産業やコミュニティの衰退、地域文化の継承が課題の奄美群島で、2009年から鹿児島大学によって実施されました。

大学が、国立公園の指定や世界自然遺産の登録を、生物多様性保全の手段とあわせて、地域の価値を高めて地域の人口減少を緩やかにするための、島の人達の環境文化の再認識し、生計の改善と精神の充足の2つによって、幸福度(Well being)を向上する機会と捉え、地域の産業、福祉、教育、環境に関する能力開発の取り組みを進め、成果を収めた事例です。

## 1. Inclusive and Participatory Research on environmental culture and CEPA's efforts

When the Ministry of the Environment was seeking the designation of the Amami Archipelago as a national park for the purpose of registration as the World Heritage site, it proposed two management concepts, “Ecosystem Management Type” and “Environmental Culture Type,” with the support of Kagoshima University, which had launched the Kagoshima Environmental Studies Project, a public-private collaboration aimed at solving environmental problems in the region.

The “Ecosystem Management Type” concept aims to preserve the area as a registered World Natural Heritage site, while the “Environmental Culture Type” concept supports cultural value by providing visitors with a chance to experience the history and culture of people who have lived in harmony with nature in the area, and have skillfully used and passed it on to future generations.

The purpose of Japan’s national parks is to protect natural scenic areas, promote their use, and contribute to conservation of biodiversity. “Amamigunto National Park” was the first national park to propose the concept of an “Environmental Culture Type” national park that focuses on the nature and culture of the region. The term “Amamigunto” means “the Amami Archipelago.”

The Ministry of the Environment and Kagoshima University conducted an interview survey, as an attempt, in collaboration with local residents in the Satoyama area of Amami, a candidate area for a national park, to visualize the language and spirit that represent the culture of the islanders and how they live using nature, and to understand the local environmental culture that has coexisted with nature.

Through many workshops and symposiums, including web-based workshops, the results of the survey were shared with local residents and people from Amami living in the city, and through understanding the uniqueness and value of the local environmental culture, the awareness that environmental culture has the potential to strengthen community identity and seed independent economic development in the region spread. This awareness has continued to spread.

### What is Environmental Culture?

The concept of environmental culture is closely related to the nature-culture linkage.

In Kagoshima, this concept has been in use since around 1990, and more recently, it has been defined as: “The general consciousness, lifestyle, and production style that local people have formed and acquired while interacting with nature and influencing each other.”

Example 1: The topography and geology of the Amami Archipelago, characterized by “high island” and “low island,” have significantly influenced the availability of natural resources such as water and firewood, shaping the daily lives and cultural practices of the islanders. On the “high island,” abundant river water allowed waterwheel-powered sugar manufacturing to flourish. In contrast, the “low island” faced challenges in securing fire wood due to a lack of well-developed forests. This scarcity led to trade with neighboring islands to obtain firewood, fostering cultural exchange. The distinctions between these “high” and “low” islands have deeply shaped the islanders’ culture, particularly their awareness of the importance of resource management. In turn, this awareness has influenced their relationship with nature and played a role in defining the natural environment of the islands.

Example 2: The awareness of the forbidden by the yōkai Kenmun in the island’s folklore has become a means of appropriate control of natural resources and coexistence with nature. The “yōkai” is closely related to the English word “ghost” or “supernatural creature”.



環境省は世界遺産への登録のため、奄美群島の国立公園指定を目指す際に、地域の環境問題の解決を目指し、官民協働の鹿児島環境学プロジェクトを立ち上げていた鹿児島大学のサポートにより、「生態系管理型」と「環境文化型」という2つの管理コンセプトを提案しました。「生態系管理型」は、世界自然遺産の登録地域として保全を目指すためのコンセプト、「環境文化型」は、地域の自然と共生し、上手に利用し継承してきた人々の営みの歴史・文化を体験の一つとして提供し、文化の継承を支援するというコンセプトです。日本の国立公園は、自然の風景地の保護と利用、生物多様性の確保に寄与することを目的としていますが、地域の自然と文化に着目した「環境文化型」国立公園のコンセプトが提案されたのは、奄美群島国立公園が初めてでした。「奄美群島」とは「奄美の島々」という意味です。

環境省と鹿児島大学は、住民との協働で、一つの試みとして、聞き取り調査により、国立公園の候補地域の奄美の里山エリアを中心に、島の人の文化の表象である言葉や精神、自然の利用した暮らしのなりたちを見える化し、自然と共存してきた地域の環境文化を把握しました。また、WEBベースも含む多くのWSやシンポジウムを通じて、地域住民や都会に住む奄美出身者ともその調査の成果を共有し、地域の環境文化の独自性や価値の理解することで、環境文化がコミュニティのアイデンティティの強化や地域の自立的な経済発展の種になる可能性があるとの意識が広がりました。

## 2. Biodiversity Conservation Activities with the Participation of Islanders

Through the efforts of the government, local government, and local residents, the Amami Islands were designated as a National Park in 2017.

Subsequently, the extermination of non-native species such as mongoose, feral cat, etc., became a challenge in maintaining the island's biodiversity in preparation for the registration as a World Natural Heritage site, and preserving the unique natural environment that forms the basis of the island's environmental culture. The mongoose, the biggest challenge of all, has been exterminated under the government's initiative and will be completely eliminated by 2024. Meanwhile, measures against feral cats and monitoring of non-native plants were carried out with the cooperation of Kagoshima University, the Ministry of the Environment, local governments, and local residents. In the case of feral cat countermeasures, precedents from overseas were introduced and considerations for owners in their daily lives were shared. In terms of invasive plant monitoring, continuous training sessions for local residents have been held to improve their capabilities and share the results.

政府、地方自治体、地域の住民の努力により、奄美群島は、2017年にNPIに指定されました。

その後、世界自然遺産の登録に向けた島の生物多様性の維持や、島の環境文化の基礎となる固有の自然環境を保全するうえで、マングースやノネコなどの外来種の駆除が課題になりました。中でも最大の課題であるマングースの駆除は政府主導で行われ、2024年に完全に駆除されました。一方、ノネコ対策や、外来植物のモニタリングは、鹿児島大学、環境省、地方自治体、地域住民の協力のもとで実施された。ノネコ対策では、海外の先行事例の紹介や飼い主の日常生活の中での配慮事項が共有されている。外来植物モニタリングは、地域住民に対する継続的な講習会の開催により、能力の向上と成果を共有がされている。



Educational book on feral cats



Setting traps for feral cats



Feral cat with endemic rabbit in its mouth



Presentation at a local festival



Training in identification of exotic plants



Lecture before field training



Snapshot after the training



Spring water of Kikai Island

### 3. Capacity Building through an Environmental Culture Approach

As the concept of environmental culture has spread throughout the island through research for national park designation and CEPA efforts, Kagoshima University has developed a human resource development program based on a reaffirmation of Amami's environmental culture in order to halt the decline of the local culture and community due to the decline in the local population and the spread of modern lifestyles. The program is designed to help local people to develop their own business skills.

More than 100 people participated in the program, including local entrepreneurs and local government officials. Participants in the program, who learned to integrate environmental culture with modern knowledge and skills, have developed networks among themselves and are now independently developing product development and experiential tour businesses, school education, and welfare programs.

Municipalities are incorporating environmental and cultural ideas in rebuilding aging meeting halls. In addition, the number of outside collaborators and immigrants is increasing, and local communities that had been on the decline are becoming more active. In addition, as an extension of the environmental culture that has been used in the past, efforts are underway to consider how to interact with the natural environment in the future. The environmental culture approach has improved livelihoods and enhanced the spirit of the local community by strengthening ties between them, resulting in increased attachment to the island and improved community well-being.



Web exchange meeting



Snapshot after a training session



Paddy field in Amami-oshima



Group work

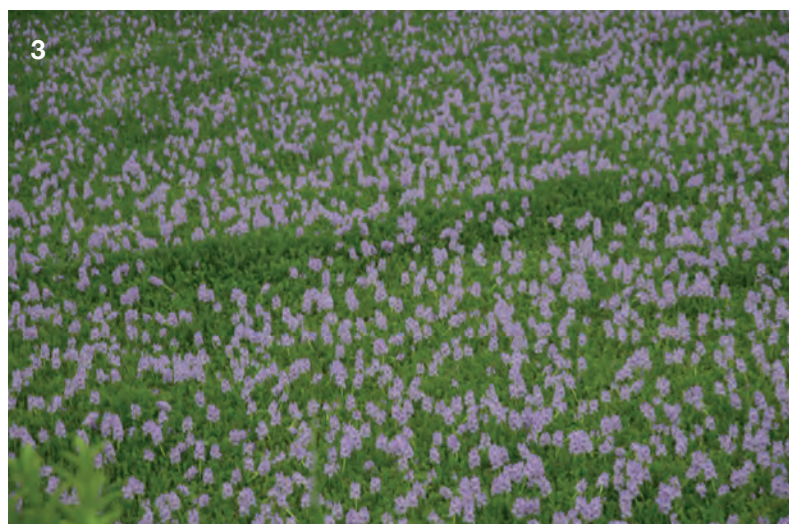
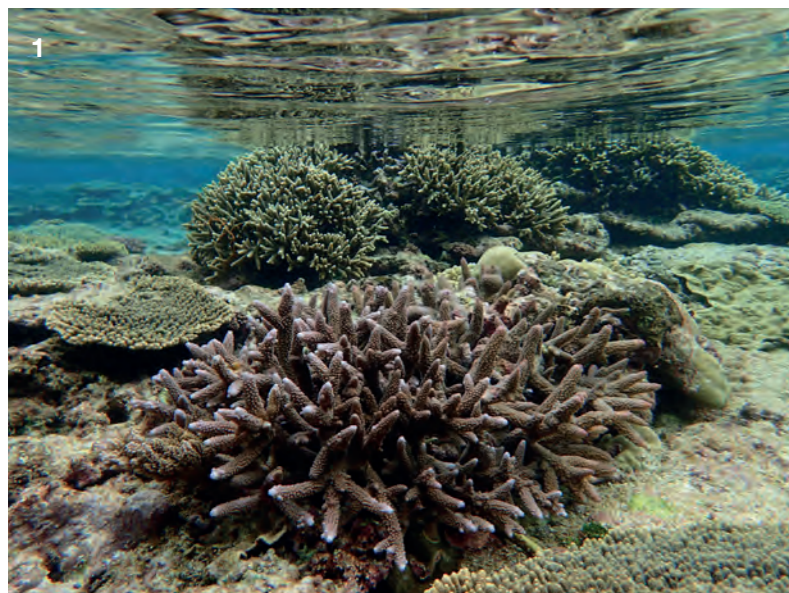
国立公園の指定に向けた調査やCEPAの取組を通じて、環境文化の考え方が島の中で広がったことから、鹿児島大学は、地域の人口減少や、現代的な生活の普及による、地域文化とコミュニティの衰退を止めるため、奄美の環境文化の再認識を基礎とした、人材開発プログラムを開発した。地域の起業家や地方自治体の職員を含め、100人以上がこのプログラムに参加した。環境文化と現代的な知識や技術を統合して学んだプログラムの参加者は、参加者間のネットワークを構築し、現在、自立的に商品開発や体験型ツアーのビジネスや、学校教育、福祉のプログラムを開発している。自治体は、老朽化した集会所を立て直すにあたり、環境文化の考えを取り入れている。また、外部からの協力者や移住者も増加し、衰退傾向だった地域コミュニティが活発化してきている。更に、これまでの環境文化の延長としての、今後の自然環境とのかかわり方を考える取り組みが進んでいる。環境文化アプローチによる、生計の改善と、地域コミュニティのつながりの強化による精神の充足により、島への愛着が高まり、地域の幸福度が向上した。

# Kagoshima University's Support for Research Activities in the Amami Islands

Kagoshima University has established the International Center for Island Studies as one of its initiatives to support not only the Kagoshima Environmental Studies Program but also the research and activities of local residents, with the Amami Islands as a focal point.

## Activities of the International Center for Island Studies

The Amami Islands have a subtropical climate. Much of the subtropical region in the world is characterized by low precipitation, but the Amami Islands experience a subtropical marine climate with over 2,000 mm of rainfall per year. As a result, subtropical rainforests thrive on the islands. Approximately 1,800 species of vascular plants can be found there, about 60 of which are endemic to the islands. Some plants, such as *Quercus miyagii*, grow into huge trees with buttress roots. Among the flora, around 300 species are exotic plants. Some of these exotic plants, such as *Eichhornia crassipes*, invade the habitats of native plants. Coral reefs flourish in the surrounding seas, supporting a wide variety of marine animals and algae.



1. Coral reef, Yoron Island  
2. *Quercus miyagii* buttress roots  
3. *Eichhornia crassipes*

The International Center for Island Studies at Kagoshima University was established in 1980 and has been conducting research on the islands in southern Japan and the South Pacific. In 2015, the center established the Amami Branch in Naze, Amami City, to accelerate research and education in the Amami Islands in cooperation with local governments. Some staff members from Kagoshima University are stationed at the branch, which consists of a laboratory, a seminar room, and a staff room.

Based at the Amami Branch, about 40 university faculty members from the Faculties of Science, Agriculture, Law, Economics, Humanities, and Education, as well as from university museums, conduct research and education on a variety of topics. Research results are disseminated to the local community through symposiums and workshops, and educational activities are also conducted for local residents in various fields, such as frequent field observations of terrestrial plants and coastal organisms.



4. Plant observation program 5. Laboratory in Amami Branch 6. Marine life observation program 7. A research team heading for Suwanosejima in the Tokara Islands on a ship belonging to the Department of Fisheries. 8. Pamphlet to introduce plants that inhabit the coast

### 鹿児島大学の奄美群島での研究活動の支援

鹿児島大学では、奄美群島をフィールドにした研究や地域住民の活動を支援するための取組の一つとして、国際島嶼研究センターを設置しています。

鹿児島大学国際島嶼教育研究センターは1980年に設立され、南日本や南太平洋の島々の研究をしてきました。2015年には奄美市名瀬に、研究室、セミナー室などからなる奄美分室を開設。この分室を拠点に、複数の常駐スタッフと、理学部、農学部、法学部、経済学部、人文学部、教育学部、博物館学部の約40名の大学の教員が、地方自治体と連携して奄美群島の様々なテーマについて研究・教育を行っています。研究成果は、シンポジウムやワークショップなどを通じて、地域の人々に発信されているほか、地元住民を対象とした陸上植物や沿岸生物のの野外観察会を頻りに開催するなど、様々な分野で地域の人々に対する教育活動も行っています。

Editor: Nakashima Keiji

Published by: Kagoshima Environmental Studies Program, Kagoshima University

Photo Credits: Yuko Oguri, Takahiro Okano, Amami Wildlife Center, Shin Ugawa, Nakashima Keiji, Tokunoshima Nijinokai, Kazufumi Niimoto, Yoshichika Eto, Nelson Mizushima, Sayaka Tougou, Eiji Suzuki, Ryuta Terada, Masaki Okuyama, Seiya Kitanobo, Takahiro Maki

Kagoshima Environmental Studies Program HP

<https://kagoshima-kankyogaku.com/english/>

PANORAMA HP

<https://panorama.solutions/en/solution/using-world-natural-heritage-registration-environmental-culture-approach-improve-well>

Layout by: 3PINES DESIGN, Kagoshima, Japan

Mar/2025 version1.1

© 2025 Kagoshima Environmental Studies Program, All Rights Reserved.

