

Translated English Edition

# A Preliminary Study on Environmental

## IRIAI

Rumi SATO and  
Masuo ORIHARA

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NPO Birth (Specified Nonprofit Corporation)

# Terminology

## Understanding Satoyama

Satoyama refers to the traditional Japanese landscapes where human settlements and nature coexist in balance, typically located at the edges of villages near mountains, forests, and rice fields. These areas were historically managed through practices such as coppicing and farming, which not only sustained local communities but also created rich habitats for diverse species. Today, satoyama is relevant as a model of sustainable living, showing how human activity can support rather than deplete biodiversity. In a world facing climate change, urbanization, and ecological decline, the satoyama approach offers practical lessons in resource use, community resilience, and harmony between people and the environment.

## Understanding Iriai

Iriai refers to the traditional system of shared resource use in Japan, where communities managed forests, grasslands, and waterways together under agreed rules. These resources did not belong to any one person but were cared for collectively to ensure that everyone could benefit and that the land remained productive for future generations. The system provided essential materials like fuel, fertilizer, and food while also strengthening bonds of trust and cooperation within villages. Although modern life has reduced the need for such arrangements, iriai endures as a cultural memory of how people once lived in close partnership with both their neighbors and the surrounding environment.

# Preface

Satoyama landscapes have been nurtured over generations through a reciprocal relationship between people and nature. In these areas, communities viewed the environment as a commons; not something to be owned, but something to be protected, shared, and passed on through cultural knowledge and everyday practice. This wasn't enforced through formal systems or technologies, rather, it was a network of relationships, and a way of being that naturally wove humans and ecosystems together.

The concept of Environmental Iriai (*kankyō iriai*) was born out of seemingly casual conversations with two of my mentors.

Professor Jo Shinada, recognized as both an environmentalist and a pioneer of Japanese environmental education and nature conservation, once asked me, "What do you think we should do to protect the satoyama?" Without hesitation, the word that surfaced in my mind was Iriai. As I reflected on why that word had emerged so instinctively, I realized it may have been rooted in a conversation I had long ago with Professor Tadashi Inui, a geographer renowned for his research on satoyama landscapes. He had once told me about Tokyo's traditional Iriai forests and how they had been managed collectively for generations. These conversations remained quietly embedded in my memory, subtly shaping the way I came to understand the relationship between people and nature.

*So, how can we rebuild this human-nature relationship in modern society?*

My theory of "Environmental Iriai" emerged as one response to that question.

In this booklet, I explore how we might reweave the bond between people and the environment through three interconnected lenses: ecological, social, and economic. If we treat the environment as a shared commons, what kinds of rules should we create? What roles must we play? And what values should we protect to move toward a sustainable future?

This is not a complex theory. Rather, it is a call to reexamine the once-natural ways we had engaged with the world around us.



# Chapter 1

## Introduction

Today's economic and social systems, defined by mass production, mass consumption, and mass disposal, have undoubtedly brought material abundance and convenience to society. At the same time, it has led to serious and often irreversible environmental degradation. Issues such as resource depletion, global warming, and air pollution leave us uncertain about the path toward a sustainable future.

At the local level, we are witnessing the gradual breakdown of communities. Regional industries and small businesses are disappearing, and a shared sense of connection is weakening. Japan's traditional satoyama landscapes have been no exception to these trends; economic globalization, mounting financial pressure on local governments, population decline, and rapid aging have often driven these shifts.

Acknowledging these challenges, Japan as a nation has been making efforts to build a sustainable society, emphasizing the creation of systems that work in harmony with nature rather than against it. However, the impact of these efforts has yet to fully reach the local level. While various nature-based initiatives are underway in communities across the country, many of them remain fragmented and disconnected from the broader vision of sustainability. We believe it is essential to establish clear goals and strategies for community development that foster genuine coexistence between people and nature, and that can link these scattered efforts into a cohesive, larger movement.

In 1999, as part of our response to these growing concerns, our organization, NPO birth, established the Satoyama Task Group (STG), a partnership-based think tank. Since then, we have conducted research and field studies across Japan to develop a vision and strategy for a sustainable social system centered on natural restoration.

## Chapter 2

# The Satoyama Society Model

**A sustainable and integrated society where people and nature coexist**

The STG proposes the “Satoyama Model” as a vision of sustainability for the future. We conceptualize the environment as comprising three interconnected dimensions: natural, social, and economic. The Satoyama Model envisions a society in which these dimensions are maintained in harmonious balance, where livelihoods are supported, family and community ties are nurtured, and biodiversity is preserved through their interdependent coexistence. As a strategic framework for guiding the development of a society as such, we developed the theory of Environmental Iriai.

### **1. Fundamental Principles of Environmental Iriai**

At the core of Environmental Iriai is the belief that the environment belongs to everyone, and that maintaining it for the benefit of all requires a robust system. It is assumed in this context that “environment” refers broadly to the shared living space occupied by nature and all living organisms, and Environmental Iriai serves as a guiding concept for protecting this environment. In other words, Environmental Iriai is a concept and framework for conserving and managing regionally shared resources, including the unique nature and culture specific to each location.

Recent efforts to reconnect people with nature have emerged in response to the gradual separation between the two. With the lack of accessible nature in urban areas, residents typically resort to two options. Some individuals work to create new green spaces, while others leave the city altogether and choose to settle in rural regions. Professor Shinada refers to the latter as “environmental refugees,” and explains that:

“Ecological spaces, together with the people who inhabit them, may be displaced and resettled elsewhere. When such ‘environmental refugees’ begin to co-manage these spaces with local residents, the collaboration acquires new significance, as both people and place adapt and grow together.” (Shinada, 2001)

This “new significance” lies at the heart of Environmental Iriai, a concept that Professor Shinada defines through this very relationship between people, place, and shared ecological stewardship. Shinada explains that humans possess an instinctive desire to engage with nature, cultivated over the course of evolution, and he defines the spaces that fulfill this need as “ecological spaces.” When such spaces disappear from cities, people move in search of them, often spending their leisure time in greener regions. More importantly, when these “environmental refugees” arrive and begin sharing ecological spaces with local residents, the spaces themselves acquire new significance. They are no longer defined only by their physical resources but become sites of collective meaning, shaped by both the traditions of long-time residents and the adaptive participation of newcomers.

With the sudden influx of environmental refugees, newly formed towns become sites of both ecological and human diversity. However, when people from different backgrounds and cultures come together in these unfamiliar settings, conflict and miscommunication can arise, a phenomenon known as the “Tragedy of the Shared” (Yamagishi, 1990). The Iriai system was developed to prevent this kind of self-destruction, offering a framework for protecting and managing shared spaces through cooperation, and local governance.

The term “Iriai rights” refers to the collective rights of community members to manage and access shared natural resources such as forests, fields, fishing grounds, and irrigation water (Shinada, 2001). The concept of “Environmental Iriai” expands on this traditional notion, reinterpreting it with modern significance. Today, the application of this concept has expanded from specific areas like thatch fields and grazing lands to satoyama landscapes, public parks, and other urban green spaces that serve as sites for environmental education and meaningful interaction with nature. Importantly, the participants are no longer confined to rural communities. They now include all individuals who are connected to these spaces, such as urban residents who appreciate nature and are actively engaged in its protection and restoration.

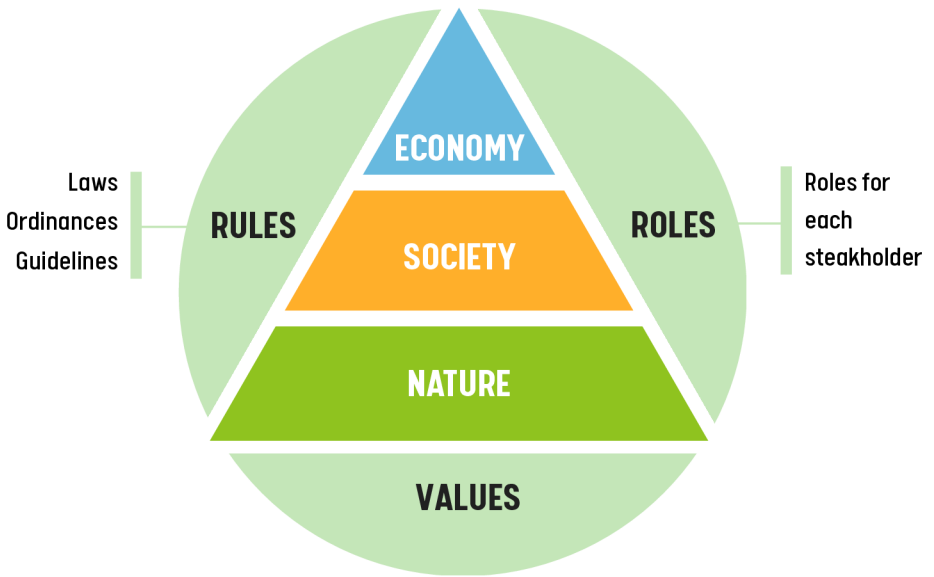
## **2. Criteria for Building an Environmental Iriai Community**

The unspoken yet essential functions of an Iriai community were to maintain order within shared areas and to ensure the long-term sustainability of both the land and the system itself. Iriai lands were traditionally managed by local communities, where order was upheld through customary regulations that safeguarded their sustainability and yielded steady resource dividends that supported everyday life. These regulations were deeply rooted in values and cultural norms that had been formed and shared through decades of collective agreement within the community.

In modern terms, Environmental Iriai is grounded in three interconnected elements that sustain harmony within shared environments: rules, roles and values. Rules provide the regulatory framework for creating and managing these spaces, drawing on laws, policies and agreements. Roles define how labor, funding and resources are allocated, clarifying the responsibilities of diverse participants, including citizens, NPOs, government agencies, farmers, foresters, businesses, foundations and scholars. Values embody the collective awareness of the importance of these spaces and the shared commitment to their preservation. Together, these values inform and reinforce the rules and roles that underpin Environmental Iriai.

## **3. The Role and Significance of Environmental Iriai**

As previously explained, Environmental Iriai serves as a guiding benchmark for building self-sustaining communities. When undertaking new conservation initiatives, the first priority is to assess whether the area has the potential to be self-sustaining. From there, a conservation plan is developed based on the region's strengths and challenges, and then carried out in practice. At each stage of this process, incorporating the Environmental Iriai framework helps ensure the long-term sustainability of the project.



**Environmental Irai Concept Diagram**

## Chapter 3

# Case Studies of Environmental Iriai

### 1. Niiharu Citizen's Forest (Yokohama City, Kanagawa Prefecture)

Yokohama City, Kanagawa Prefecture, is a government-designated city with a population of 3.4 million (as of 2002) and lies within commuting distance of central Tokyo, making it a region that has undergone rapid urbanization. However, pockets of greenery remain scattered like isolated islands, and activities for satoyama conservation are also thriving.

Niiharu Citizen's Forest, located within Yokohama City's greenbelt, is a satoyama landscape composed of coppice woodlands and valley wetlands (yato). Societal changes, accompanied by shifts in lifestyle, have led to the loss of the economic value once associated with these woodlands and wetlands. As production activities rooted in family and community-based mutual support declined, local communities collapsed, and biodiversity diminished in unmanaged woodlands and filled-in valley wetlands. In other words, the interconnected sustainability of the economic, social, and natural environments was disrupted.

In response to this situation, the forest was designated under the 'Niiharu Citizen's Forest Project' in 1997. Yokohama City has had a 'Citizen's Forest System' since 1971, in which the city leases privately owned land and outsources its management to a local association called Aigokai, led primarily by landowners, thereby maintaining the natural environment of the woodlands. However, in the Niiharu area, the extensive size of the site and the aging of landowners made it difficult for them to manage the forest on their own.

Meanwhile, new residents who had moved into surrounding high-rise apartments expressed a desire to participate in green space conservation. Landowners themselves also wished to preserve the forest that their families had protected for generations. To address this, the city launched a 'Forest Stewardship Course' in July 1999, which led to the establishment of the 'Niiharu Citizen's Forest Aigokai' in February 2002—a joint management body composed of both landowners and new residents. The restoration of Niiharu's neglected and degraded woodlands has been

supported by the Citizen's Forest System, which provides a regulatory framework for community-based conservation. Within this framework, clear role-sharing among landowners, citizens, and the municipal government has been established. This, along with a shared commitment to protecting nearby greenery, has allowed activities to proceed smoothly. Although the decline of traditional neighborhood associations has weakened local ties in many places, Niiharu has instead fostered new forms of social connection through collaborative ecological restoration.

Looking ahead, the forest presents opportunities for the revitalization of local economic activities. Charcoal and craft production could be reestablished, while nearby farmland could contribute through the distribution and sale of agricultural products. Collectively, these initiatives would foster a community-based circulation system and reinforce regional sustainability. Through collaboration among residents, municipal authorities, and NPOs, Niiharu Citizen's Forest is advancing a new form of Environmental Iriai.

## 2. Oizumi Kaze no Gakkou (Nerima Ward, Tokyo)

Nerima Ward in Tokyo is known for its fertile farmland, long associated with the region's distinctive daikon radish. In the mid-1990s, the area was still a vast stretch of rice and vegetable fields, home to a vibrant satoyama community. Today, the landscape tells a different story, filled with dense rows of suburban housing on the city's outskirts. Hidden in a corner of this crowded suburban sprawl is the experiential community farm called

Ōizumi Kaze no Gakkō, or "School of the Wind in Ōizumi." This school is run by Mr. Yoshitaka Shiraishi, a farmer aiming to stir winds in urban agriculture. What sets this farm apart from typical urban garden is that it offers direct instruction from Mr. Shiraishi himself, a professional agricultural technician who teaches local



residents how to grow vegetables. Participants pay a fee of ¥29,000 per 30-square-meter plot, which includes not only instruction, but also seeds, tools, and fertilizer. Additionally, the ward provides subsidies to cover facility maintenance and operational costs, making this model of hands-on urban farming more accessible to the community.

Mr. Shiraishi explains that he first launched this project based on the belief that “In order to sustain agriculture within urban areas adjacent to residential neighborhoods, the understanding of local residents is essential. Through direct engagement with the community, we aim to deepen that understanding of farming” (1998 White Paper on Agriculture).

What began as an outreach effort has since led to unexpected progress in building connections among participants. The farm now serves as a community hub, hosting concerts and seasonal harvest festivals (shūkakusai), and playing an increasingly important role in strengthening ties between agriculture and the local community.

Shiraishi also emphasizes the role of urban agriculture in providing safe and fresh locally grown produce. To fulfill this need, vegetables are sold both within the farm and at nearby supermarkets and farmers markets. His efforts have also expanded into education, supplying ingredients for school lunches and offering hands-on agricultural experiences as part of food and farming education.

In the area of social welfare, the farm collaborates with public health centers by serving as a partner facility that welcomes individuals with mental health challenges for day care programs. Farm work has proven beneficial for recovery and often becomes a stepping stone toward reintegration into society.

Before its transformation into a community farm in 1997, the area consisted almost entirely of cabbage fields and attracted little interest from local residents. However, following its conversion into an experiential farm, a new form of community engagement began to take shape. Individuals across various demographics, including adults, children, and people with disabilities, started participating in agricultural activities, fostering a renewed sense of social connection through shared work in the fields.

Under the direct instruction of Mr. Shiraishi, participants are able to cultivate vegetables with a high degree of success. Compared to free municipal garden plots, the harvest from this farm is notably superior in

both quantity and quality. The usage fees paid by participants also provide Mr. Shiraishi with a stable and sustainable income.

Moreover, the farm cultivates a wide variety of vegetables using low- or no-pesticide methods, resulting in increased biodiversity. The rise in insect populations has, in turn, attracted a greater number of wild birds to the area.

Taken together, these developments demonstrate how Ōizumi Kaze no Gakkō embodies Environmental Iriai within the context of urban agriculture.

### **3. Atori Farm (Iida City, Nagano Prefecture)**

Many mid-mountain and highland communities in Japan are facing severe depopulation and an increasingly aging population. To revitalize their farming-based economies, many of these communities promote green tourism, encouraging visitors to experience their natural environment and rural lifestyle. Among them, Iida City in Nagano Prefecture has adopted a farmer-led green tourism strategy, offering hands-on stay programs that are both realistic and sustainable for hosts and guests alike. As part of this initiative, the city launched a program to welcome new farmers. Masahiro and Chie Yamauchi of Atori Farm were the first participants, relocating to Iida in 1997. Formerly office workers in Tokyo, the couple left their corporate careers to purchase and reclaim an 8,800 m<sup>2</sup> mulberry field overlooking the Central Alps. Today, they cultivate around 80 varieties of vegetables and raise 800 free-range chickens. Their vegetables are grown organically, and the chickens roam freely in spacious enclosures.

This high-quality produce is in demand from parents concerned about children’s allergies as well as from restaurants seeking premium ingredients, with most sales conducted through home delivery. From an environmental perspective, converting abandoned mulberry fields into organic farmland has brought



clear benefits to local biodiversity. The variety of wild birds visiting the area has noticeably increased, providing a visible sign of the positive impact of this change. In the adjacent mixed woodlands, traditional satoyama management continues, further supporting biodiversity. While many satoyama areas in Iida City have been abandoned and left to deteriorate, the Yamauchi couple's relocation and cultivation have helped restore the natural environment in this part of the community.

From a social perspective, the couple has played a significant role in revitalizing the local community. In an aging area, the presence of residents in their thirties is invaluable. They are frequently called upon for physically demanding tasks, creating flyers on the computer, and taking on roles within local cooperatives. Many visitors from urban areas, including customers and friends, also come to see them. These visitors enjoy leisure activities that incorporate farming experiences, and through the Yamauchis, they have opportunities to interact with local residents.

From an economic perspective, the farm has strengthened the local economy in multiple ways. It has restored abandoned mulberry fields that had lost their value, resumed agricultural production, and restarted the distribution and sale of goods. The farm also supports nearby businesses by purchasing chicken feed and equipment locally. In addition, visitors to the farm often spend time sightseeing in Iida City, generating economic benefits for the surrounding region.

Collectively, these impacts demonstrate Atori Farm's role as a living example of iriai, strengthened by the arrival of new residents from urban areas.

## Chapter 4

# Challenges and Solutions for Environmental Iriai

The cases discussed thus far illustrate the creation of sustainable shared spaces where people and nature coexist. However, these initiatives do not rest on an unshakable foundation. For example, if inheritance issues arise among landowners who have provided land for the project, securing the land that underpins the initiative could become difficult, potentially placing it in a critical situation. Likewise, a sharp reduction in municipal funding could threaten the viability of the project. Many civic organizations also lack the capacity to employ full-time staff, creating additional challenges for maintaining and managing the group itself.

Given this, what conditions must be in place to ensure that Environmental Iriai lands are sustainably secured and developed? The following discussion examines these challenges through the three frameworks that define the order of Environmental Iriai lands: rules, roles, and values.

### 1. Conservation system theory

One representative method for protecting green spaces is the “public land acquisition policy,” in which the government purchases land and designates it as public property. However, because this policy is carried out solely by the government, projects often stall due to financial constraints. To resolve this deadlock, it is necessary to review both how costs for public services are collected (such as through taxes) and how those funds are allocated (such as subsidies and tax incentives).

Creating the social framework for “Environmental Iriai” means establishing systems that use tax policies and other measures to make it easier for the private sector to provide public services. Focusing specifically on land, it is important to strengthen or introduce tax incentive systems that take into account the public functions of farmland and green spaces. For example, one approach would be to reduce the assessed value for inheritance tax when the owner of a green space inherits the land, on the condition that the land is preserved. Another example, applicable in hilly and mountainous areas (satoyama and satochi), would be to provide tax

incentives or subsidies to farmers and foresters in exchange for conserving their farmland and forestland, an approach known as “decoupling.”

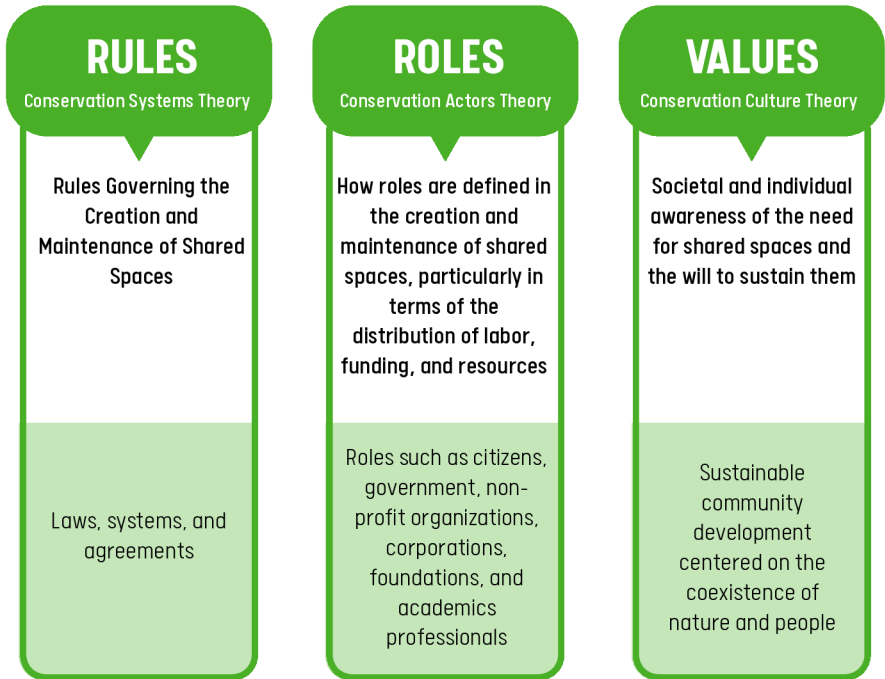
## **2. Conservation Actors Theory**

Environmental Iriai lands are areas protected through the cooperation of people connected to the region. However, if each party acts independently, effective conservation cannot be achieved. This is why it is necessary to create an “environmental community,” which serves as a platform for everyone to participate. There are various ways to participate and different roles within such a community. For example, the government might provide the land, while citizens contribute labor and funding for its management and operation. Alternatively, an individual might provide the land, the government supplies funding, and citizens or businesses contribute labor. By bringing together each party’s strengths, green spaces can be preserved.

To establish such environmental communities, it is necessary to develop corporate systems and revise tax policies so that funds can more easily flow to these communities. In the United States, where nonprofit corporations receive many benefits such as tax deductions for donations, there are many examples of the government providing land, and citizens, businesses, and foundations providing funds and labor through an NPO.

## **3. Conservation Culture Theory**

The values that should be shared in order to create Environmental Iriai lands are those centered on the coexistence of people and nature, with the aim of building a sustainable regional society. Sharing these values forms the foundation for determining the nature of the “rules” and “roles” mentioned earlier. To spread these values and deepen understanding of them, opportunities for environmental education and consensus building are necessary. The base for making these possible is the environmental community.



**Three Conditions that Structure Environmental Iriai**

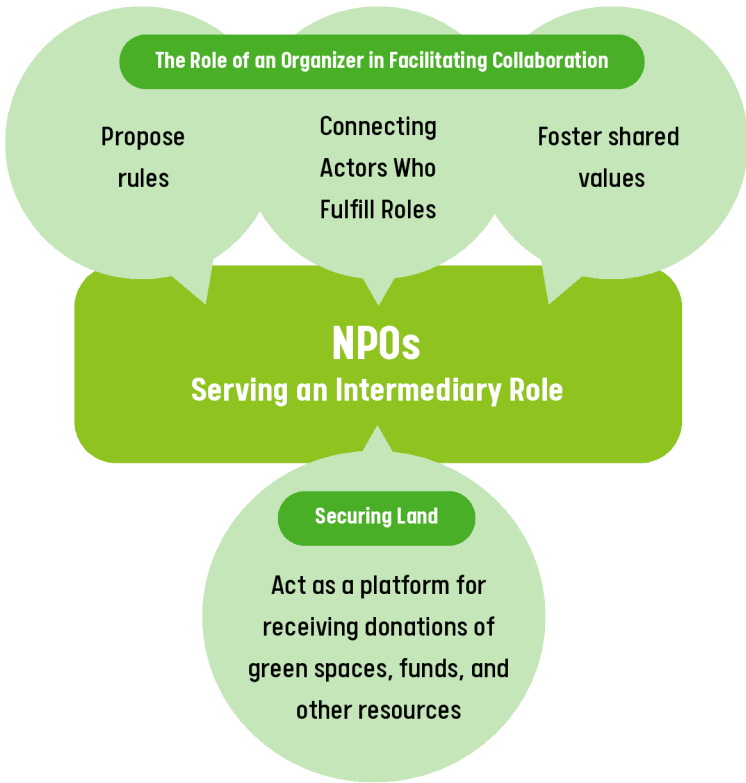
## Chapter 5

# Environmental Communities : The Role of NPOs

Up to this point, we have discussed the three elements that make Environmental Iriai function. Environmental Iriai is a framework in which people work together to restore nature, and the entity that brings this cooperation into reality is the “environmental community.” An environmental community proposes rules (systems), serves as a place that connects individuals and organizations with specific roles, and plays a part in spreading shared values. At present, these roles are carried out by government bodies and civic groups, but it can be difficult for government agencies or volunteer organizations to maintain a neutral position. This is why expectations are growing for NPOs, which can serve in this intermediary role.

Another challenge is securing the land necessary for Environmental Iriai lands. The key to solving this lies with incorporated NPOs. Japan’s “Certified NPO” system offers tax incentives, and when green spaces or similar lands are donated to a certified NPO, the donor receives tax benefits. For example, if a green space is donated to a certified NPO during inheritance, the inheritance tax can be reduced. By making effective use of such systems, it is possible to resolve inheritance tax issues, which have often been cited as a cause of environmental destruction. While there are still shortcomings in the tax system and other issues, improvements are being made to tax policies and the Urban Green Space Conservation Act.

NPO birth, as an environmental community working to realize Environmental Iriai, engages in activities such as policy proposals, research, and surveys.



**Key Components of an Environmental Community**

## **Closing Remarks**

### **— Recommendations for the Future —**

I first introduced the concept of Environmental Iriai in 2002, at a time when nature-positive movements and perspectives that view the environment through the three layers of nature, society, and economy were not common. As a result, this idea remained in obscurity for a long time. Today, society is finally beginning to show greater interest in environmental issues, and the question “How can we protect nature while living in harmony with it?” is being asked more than ever before.

Now is the time to regard nature as a “commons” and to support it by sharing rules, roles, and values. This way of thinking can serve as a meaningful guide when considering the sustainability of communities and society. It is my hope that the concept of “Environmental Iriai,” even if small and quiet, will become a steady source of support in future practice and dialogue, walking alongside each of you in your efforts.



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English Translation & Adoption: Miya O'Mara, Kisaki Saishu

Publisher: Specified Nonprofit Corporation NPO Birth (Bāsu)

3-10-9 Tanashi-cho, Nishitokyo-shi, Tokyo 188-0011, Japan

Tel: +81-42-467-6306

Fax: +81-42-451-0288

E-mail: [info@npo-birth.org](mailto:info@npo-birth.org)

URL: <https://www.npo-birth.org>

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## Overview

Environmental Iriai is a modern reinterpretation of Japan's long-standing traditions of living with nature.

For centuries, Japan nurtured a “culture of coexistence,” where communities secured daily resources through farming and forestry in ways that respected nature's regenerative power. These practices became embedded as culture and laid the foundation for regional life.

The result of this relationship is the distinctive landscape we now call satoyama. Sustained through agriculture, woodland management, and the shared use of forests and waterways, satoyama has provided essential resources for people while also fostering rich habitats for countless species.

Today, as we face urgent challenges such as climate change, urbanization, and ecological decline, Environmental Iriai offers a framework for rethinking the relationship between people and the environment. By regarding nature as a commons, something to be protected, shared, and passed on to future generations, it points toward a model of sustainable living that integrates ecological restoration, social connection, and local economic vitality. Case studies from across Japan show how collaborative stewardship can revive cultural values, strengthen community resilience, and inspire new ways of living in harmony with the natural world.

