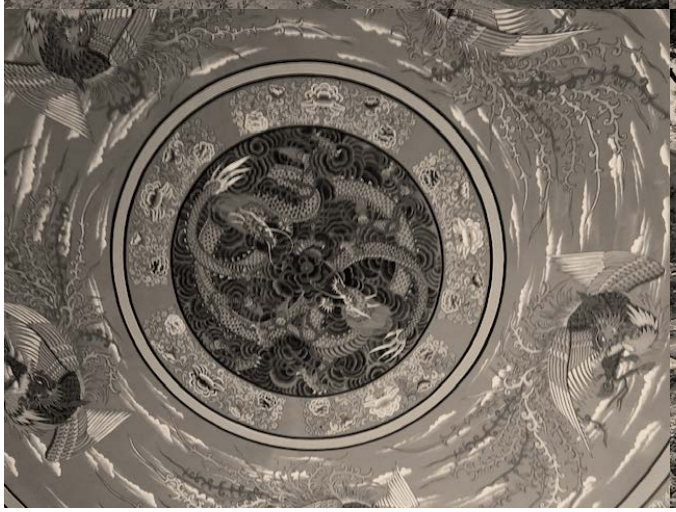
Inheritance of Rural Traditional Culture and Sustainable Community Development

Japan-Korea Rural Planning International Conference 2025






JAPAN-KOREA RURAL PLANNING INTERNATIONAL CONFERENCE 2025

Inheritance of Rural Traditional Culture and Sustainable Community Development

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The Association of Rural Planning

한국농촌계획학회
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Edited by
Committee of International Affairs, Association of Rural Planning, Japan
Head: Kako Inoue, University of Miyazaki, Japan
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The Association of Rural Planning, Japan
UP Office Suidobashi 402, , 2-11-7 Kanda-Surugadai, Chiyoda-ku, Tokyo, 101-0062, Japan
Committee of International Affairs, The Association of Rural Planning, Japan

Inheritance of Rural Traditional Culture and Sustainable Community Development

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Preface

Inheritance of Rural Traditional Culture and Sustainable Community Development

Kako INOUE*

*Head of Committee of International Affairs, Association of Rural Planning, Japan, Associate Professor of University of Miyazaki.

The Japan-Korea international exchange initiative traces its origins to the Korea-Japan Rural Planning Joint Symposium, held in Suwon, South Korea, in November 2000. Since 2005, Japan and Korea have alternately hosted annual exchange seminars, culminating in a total of 19 events as of last year's seminar in *Pyeongchang*, South Korea. This year marks the 20th milestone, commemorated by the rebranding of the seminar as the Japan-Korea Rural Planning International Conference. The conference was convened in Miyazaki City, Miyazaki Prefecture, on November 6, 2025, followed by an excursion on November 7, 2025 to *Nango*, *Misato* town, renowned as the "Village of *Baekje*."

The theme of this year's international conference was "Inheritance of Rural Traditional Culture and Sustainable Community Development." Both Japan and Korea face pressing demographic challenges, including population decline and aging societies. In response, numerous rural regeneration efforts have been undertaken. Recently, renewed attention has been directed toward the value of "traditional wisdom / knowledge" a systems of insight and practice inherited from one generation to the next in local communities. This conference sought to re-examine traditional cultural assets and reaffirm approaches to sustainable community development that are grounded in the unique contexts of each locality.

Through thematic presentations and field visits, the conference provided a meaningful platform for Japan and Korea to jointly reflect on the future of rural community development. It is our hope that the insights and exchanges fostered through this event will contribute to the continued evolution of resilient and culturally rich rural societies in both nations. Through the conference, we were able to deepen the exchange between the Association of Rural Planning Association (ARP), Japan and the Korean Society of Rural Planning (KSRP), further strengthening our mutual ties and creating a truly memorable opportunity for interaction.

This e-book includes a revised compilation of the proceedings from this international conference as well as an original article on the theme, incorporating insights and outcomes derived from the excursion.

Financial supports from Miyazaki Prefecture (convention grant), the JSPS KAKENHI Grant Number 25K22404, and 22H00391 are gratefully acknowledged

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Traditional Culture, Sustainability, and Endogenous Development

Bridging Japan and Korea in *Nango*

Kako INOUE*

1. Introduction

Traditional cultures in sustainable and endogenous development

Considering the role of rural traditional culture in sustainable rural community development challenges prevailing paradigms of development approaches. The notion that locally specific traditional culture is vital for sustainability does not rely on large-scale forces such as modernization or neoliberalism to drive economic growth and social change, nor does it depend on directives from the state or administrative elites. Instead, it recognizes a form of social transformation that draws upon the inherent power of traditional, vernacular or territorial cultures nurtured and accumulated within the locality in its history.

In Japan, since the *Meiji* Restoration, the model for modernization has been "the West," and the Westernization of culture and lifestyle has been promoted, often leading to the neglect of local identity and vernacular culture. The economic success experienced during the postwar period especially in the 1960s in Japan blindly propelled the development of the modern capitalist world, while simultaneously eroding harmony with the natural environment, the inheritance of traditional culture, and a society characterized by solidarity. Such trends may likely be observed globally, as modeled in Rostow's (1960) "Stages of Economic Growth." Within this global current, however, a counter-trend emerged since the 1970s, both domestically and internationally, rejecting the universalizing tendencies of modernization, and re-evaluating social change that values traditional cultural heritage, self-transformation within local communities, and their autonomy.

The challenge to the modernization paradigm within the international community emerged with the publication of the Rome Club's "The Limits to Growth" (Meadows 1972), which served as a warning against uncritical modernization. This subsequently shifted attention toward global environmental concerns, catalyzing an international movement aimed at achieving sustainability. Furthermore, when the Dag Hammarskjöld Foundation of Sweden introduced the concept of "Alternative Development" in its report "What Now", prepared for the Special Session of the United Nations General Assembly in 1975, it employed the term "endogenous" alongside "self-reliance," emphasizing development that arises from within the community itself. Coinciding with these international movements, Japanese sociologist Kazuko Tsurumi independently advanced the notion of "endogenous development" in Japan during the mid-1970s (Tsurumi 1991). It was a movement that sought to uncover the potential for social change, intrinsically generated through the creativity of "common man (ordinary people)" who had made their living (Yanagita 2016; Tsurumi 1975), with a deep study of Minamata —a place sacrificed to the ecological destruction accompanying Japan's high economic growth (Tsurumi, et.al. 2014). In her endogenous development model, a form of development with reconstruction of society upon its own traditions is demonstrated. Further research on "regionalism," pioneered by Yoshiro Tamanoi seeking to reconstruct economics from the perspective of humans as integral members of natural ecosystems, also emerged in Japan (Yagi et al. 2020). The concept of "endogenous development" and sustainability was articulated simultaneously in both Eastern and Western contexts.

Such initiatives, however, have yet to become mainstream. Within the field of rural studies, although the role of culture is occasionally discussed in the context of European rural sociology or community development (Ray 1998; Jenkins 2000; Ray 2001; Brennan et al. 2008, Osti 2023), there have been diversions—such as emphasizing alternative approaches to culture, waning the role of culture (Panelli et al. 2003; Williams 2004). It should also be noted that differences exist in how traditional culture is positioned and discussed in Western and Eastern rural studies. In Europe and North America, traditional culture has

*University of Miyazaki, Japan

undergone a fundamental repositioning from being regarded as a static barrier to modernization to being viewed as a dynamic resource that can be mobilized for sustainable development. In particular, traditional cultures are often considered to have a positive relationship with sustainable development since traditional knowledge/wisdom transmitted intergenerationally, especially with the existence of what Milton (1996) calls "primitive ecological wisdom," is widely assumed. Traditional practices can be even understood as systems designed to pass land on to the next generation. A "system of values, beliefs, artifacts, and art forms which sustain social organization and rationalize action" (Norgaard 1994, p. 90) is considered to lead to sustainable development. When culture is viewed as a system, its systemic characteristics—transcending time for self-preservation and fostering dynamic inter-system relationships—carry significant implications, such as circular resource use and rural communities with strong traditional cultures, bonds, relationships, responsibilities and roles are prioritized over individualism (Jenkins 2000). It has further come to be seen as institutional representations in response to contemporary challenges in postmodernity, as well as for biodiversity conservation and the formation of community identity (Rotherham et al. 2015; Csurgo et al. 2022; Falco Knaps et al. 2018).

In East Asia, while traditional culture has been predominantly framed as a dynamic asset for rural development and revitalization, scholarly discussions have repeatedly oscillated between its preservation and its transformation. It has also been recognized that tourism and commodification of traditional culture creates opportunities for economic benefit while simultaneously risks undermining cultural authenticity and, consequently, casting a shadow over the very raison d'être of the community (Fukuda 2005; Ma et al. 2020). The unique traditional cultures rooted in the land were originally evidence of people living creatively in harmony with nature. However, this way of life was disrupted in the course of modernization. In other words, as contemporary lifestyles and livelihoods became increasingly disconnected from the land, the local vernacular cultures that remain today have come to be regarded as traditional, valued, and commodified for tourism. The modern challenge embedded within such "traditional cultures" is that the agency and creativity of local (ordinary) people have become obscured. In this era, where modern lifestyles have drastically altered the relationship between land and people that once nurtured traditional culture, what meaning does traditional culture hold for us today?

A Case of *Nango*, Misato Town – Traditional Culture to bridge Japan and Korea, driving endogenous development

This paper then would like to seek to learn from the reality of rural communities that continue to cherish and inherit traditional culture, despite the prevalence of modern lifestyles. The case presented here is *Nango* in *Misato* Town, *Miyazaki* Prefecture, Japan which has preserved traditional culture associated with both Japan and Korea for more than thirteen centuries. In considering sustainable and endogenous rural community development, the significance of traditional culture, with particular attention to the agency and creativity of local people is re-examined with the case of *Nango*.

Nango is renowned as a site associated with the cultural legacy of Baekje. In 660 CE, the ancient kingdom of Baekje on the Korean Peninsula fell, and members of its royal family sought refuge in Japan. Although they initially settled in *Yamato, Kinai* region, subsequent political upheavals forced them to flee once again. It is said that the King's final destination was what is now *Nango*.[1]

More than thirteen centuries later, the Association of Rural Planning, Japan (ARP) invited scholars from Korean Society of Rural Planning (KSRP) to the area on November 7, 2025, and had an opportunity to visit the field to learn the local traditional culture in relation with community development and exchange with local people. The visit coincided with the convening of an international conference under the theme "Inheritance of Rural Traditional Culture and Sustainable Community Development" which provided the occasion for renewed scholarly engagement with this historically significant site. Upon arrival, the first site visited was the "Western *Shosoin*," a product of *Nango*'s traditional culture and community-development efforts. Following the visit, we enjoyed a lunch box prepared by the local women's group, "Dogawa Manma" after which we joined local children at "Lovers' Hill" to participate in the "Let's Increase the Forests" project.

This paper is based on insights gained from these visits as well as from a review of literature concerning the traditional culture and community development of *Nango*.

Picture 1. *Nango*
Source: Misato Town (URL: https://www.visit-misato.jp/about, accessed on December 18, 2025)

2. Traditional Culture: Inherited from the Past

The Legend of the Baekje King

Nango, a small mountain community with about 1500 residents as of 2020, lies approximately 40 kilometers west of *Hyuga* City in the *Kyushu* mountain range. The villagers have preserved and transmitted the memory of these exiled royals as the "Legend of the Baekje King."

Baekje was conquered by the combined forces of Tang China and Silla in 660 CE. The royal family fled to Japan and initially settled in the *Kinai* region. However, due to turmoil, they were forced to set sail for *Tsukushi* (present-day *Fukuoka*) in two boats. One carried King Teika (*Teikaoh* in Japanese), while the other carried Prince Fukuchi (*Fukuchioh* in Japanese). During the voyage, they encountered severe weather and were washed ashore at *Kanegahama* in *Usuki* District, *Hyuga* Province (present-day *Hyuga* City). King Teika and his followers established a palace deep in the western mountains at Mikado (present-day *Nango* area, *Misato* Town). Meanwhile, Prince Fukuchi's boat drifted ashore at *Kaguchiura* in *Koyu* District (present-day *Takanabe* Town), where he established a palace at *Hiki* (present-day *Hiki* area, *Kijo* Town, *Koyu* District).

Although father and son enjoyed a period of peace, an army sent by Baekje soon arrived in pursuit. King Teika's forces intercepted them near *Mikado*, and Prince Fukuchi also led his troops into battle. A fierce fight ensued, and father was killed in the conflict. The villagers mourned the royal family's death. They enshrined King Teika's spirit as the local tutelary deity (*ubusuna-gami*) at *Mikado* Shrine, and Prince Fukuchi's spirit as the *Daimyojin* (god) at *Hiki* Shrine. To this day, both *Mikado* Shrine and *Hiki* Shrine continue to hold the *Shiwasu* (December) Festival—a ritual reenacting the annual meeting of King Teika and Prince Fukuchi.

Picture 2. Welcome fire, 1st day of *Siwasu* Festival

Picture 3. "*Osaraba* (Goodbye)[2]", 3rd day of *Siwasu* Festival

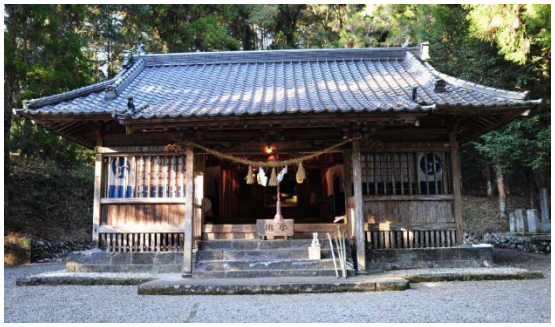
Source: Misato town (URL: https://www.visit-misato.jp/infopage/siwasumatsur/, accessed on December 18, 2025)

Treasures

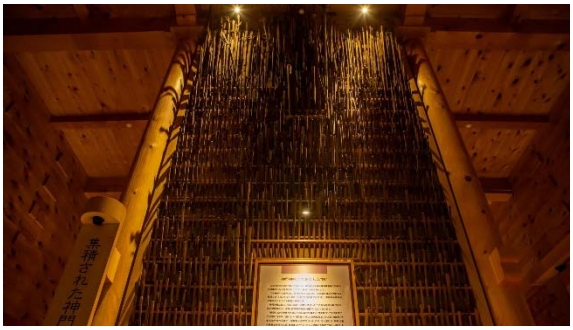
Mikado Shrine held not only legends but also many treasures. At *Mikado* Shrine founded in 718CE, the divine image of the Baekje King, Teika, is enshrined, and relics such as 24 bronze mirrors and horse bells are preserved. The "*Shiwasu* Festival" has been sustained by villagers for over a thousand years, reinforcing the legend. In 1985, *Nango* Village undertook a project to trace the royal lineage back to *Buyeo*, the last capital of Baekje, in an effort to unravel the legends associated with the land. During this investigation, it was discovered that some of the bronze mirrors at *Mikado* Shrine were identical to those housed in the *Shosoin* Repository[3] and to mirrors found beneath the pedestal of the Great Buddha at the temple *Todaiji*. It is exceptionally rare for such a large number of bronze mirrors to have been preserved together in a single location.

The treasures housed in Nara's *Shosoin* Repository were excavated from the Great Buddha Hall of Tōdai-ji Temple, whereas those preserved at *Mikado* Shrine are cherished heirlooms carefully handed down through generations. While such heirlooms suggest that the Baekje King legend may not be entirely fictional, no historical records mention a Baekje king named Teika. Moreover, although Baekje fell in 660, the king's supposed exile to *Mikado* is dated to 756, in the mid-8th century—creating a gap of nearly a century. The *Mikado* Shrine Origin Record states that the Baekje royal family came from Baekje. The mid-8th century was also the era in which the law-based state of the *Nara* period was established, a time marked by frequent power struggles. It is possible that the Baekje royal family members, caught up in these struggles, either lost a political contest or fled to *Hyuga* to escape the turmoil. Many aspects remain shrouded in mystery, leaving the historical romance of the tale undiminished.

Among the treasures discovered in the attic of *Mikado* Shrine are 1,006 sacred spears (*hoko*). These spears were dedicated during the annual *Shiwasu* Festival, when Hiki Shrine (associated with Prince Fukuchi) visited *Mikado* Shrine, where King Teika is enshrined. Inscriptions on the *hoko*, such as "December 19, Choroku 3 (1457)," indicate that the *Shiwasu* Festival was already being held at that time. The *hoko* are said to have been dedicated during the festival from the *Muromachi* period through the early *Edo* period. Here, we can observe the remarkable continuity that has endured across the centuries to the present day.



Picture 4. *Mikado* shrine
Source: Misato Town (URL: https://www.visit-misato.jp/infopage/mikadojinja/, accessed on December 18, 2025)



Picture 5. 1006 spears discovered in the shrine's attic
Source: "Visit Miyazaki" (URL: https://www.kanko-miyazaki.jp/spot/1109, accessed on December 18, 2025)

3. Community Development Initiatives Rooted in the Baekje King Legend[4]

Grassroots exchanges with Korea

In *Nango* Village, community development efforts, named "Baekje's Community Development" centered on the legend of the Baekje king, have been carried out for the past forty years. Since the 1960s, Japan has experienced rapid economic growth; however, behind this prosperity, depopulation advanced in rural mountain villages. As a mountain village, *Nango* likewise struggled with depopulation and aging. Against this social backdrop, in 1986 the villagers rose to reexamine their legend. The fundamental concept of the "Baekje's Community Development" initiative was the "creation of *Nango* Village that descendants can take pride in." Comprehensive academic investigations were conducted not only within Japan but also through research delegations dispatched to Korea. As a result of these efforts, it was discovered that the village's "treasures" included items identical to those preserved in the *Shosoin*, ranking among the most significant in Japan, and that the "*Shiwasu* Festival" was a rare event retaining extremely ancient forms. In 1991, the "*Shiwasu* Festival" was designated by the Agency for Cultural Affairs as an Intangible Folk Cultural Property. These findings astonished the villagers and instilled in them a profound confidence in their cultural heritage. This, in turn, became a powerful driving force for advancing the "Baekje's Community Development". Since the inception of this initiative, *Nango* Village has undergone remarkable transformation.

Meanwhile, in Korea, interest in *Nango* Village grew as it repeatedly dispatched research delegations, culminating in an unexpected request for 180 people to undertake homestays in the village. Although initially bewildered by this sudden proposal, the villagers managed to host them in two separate groups, an experience that greatly contributed to the grassroots establishment of the initiative. In *Nango*, children greeted visitors with "*Annyeonghaseyo*" ("Hello" in Korean), while young people performed *Samulnori*, a traditional Korean musical art. Furthermore, in 1993, *Nango* was the only Japanese municipality to exhibit at the Taejon Expo held in Korea. Most noteworthy was the event in October of that year, described as the "Return to the Homeland after 1,300 Years," when the sacred object, *goshintai*[5], of the King Teika was carried to *Buyeo* in Korea. Accompanied by a delegation of 152 members, the sacred object departed from Miyazaki Airport and arrived at Gimpo Airport in Korea. Rituals were conducted at the royal tomb, and parades and welcoming ceremonies were held in *Buyeo*. The events were widely reported in Korea for several consecutive days. Although there were initial concerns about conducting Japanese-style rituals in Korea, the villagers—who had continued to venerate the spirits of the Baekje royal lineage—were warmly and enthusiastically received by the Korean people.

Community Development Projects – "Western *Shosoin*" and "Baekje House"

Within the framework of the "Baekje's Community Development" initiative, fifteen projects were planned and implemented. At its core were two facilities: the "Western *Shosoin*," serving as a venue for the display of Baekje legends and treasures, and the "Baekje House," symbolizing exchange with Korea. The

design of the Baekje House was modeled on a Joseon-period guesthouse (a building used by officials of the central government) located within the grounds of the former National Museum of Buyeo. Its construction was carried out with the field research in Buyeo, advice from Korean experts, and the participation of seven dancheong artisans invited from Korea. The hall was completed in November 1990. *Nango* Village signed a sister city agreement with Buyeo-eup, Chungcheongnam-do, Korea), the ancient capital of Baekje in 1991. Since then, *Nango* Village had attracted about 320,000 visitors.

Picture 6. Baekje House

On the other hand, the construction of the "Western *Shosoin*" initially faced numerous obstacles that seemed almost insurmountable, and at the time had not yet commenced. At the time the project was conceived, its realization was deemed unfeasible owing to three major obstacles: (1) the difficulty of obtaining the architectural design blueprints under the jurisdiction of the Imperial Household Agency, (2) the challenge of securing the necessary construction materials, and (3) issues of non-compliance with the Building Standards Act. In response, academic support was first obtained from the Nara National Research Institute for Cultural Properties, which had conducted investigations of the bronze mirrors at *Mikado* Shrine. With their support, it became possible to acquire the Shosoin's blueprints held by the Imperial Household Agency, previously considered inaccessible. Furthermore, after an extensive nationwide search, the massive hinoki timber was secured from the national forests of *Kiso* in *Nagano* Prefecture. In 1992, a special permit was granted by the Minister of Construction, enabling the project to overcome the legal barriers posed by the Building Standards Act. Thus, construction of the "Western *Shosoin*" finally began, and in May 1996—nearly ten years after the initial conception—the building was completed.

Picture 7. Group photo taken at the Western *Shosoin*

Picture 8. Explanation by Sumio Harada, the project member at the time, interpreted by Paik Minha, CIR (Coordinator for International Relations) - Korean officer stationed in Misato Town

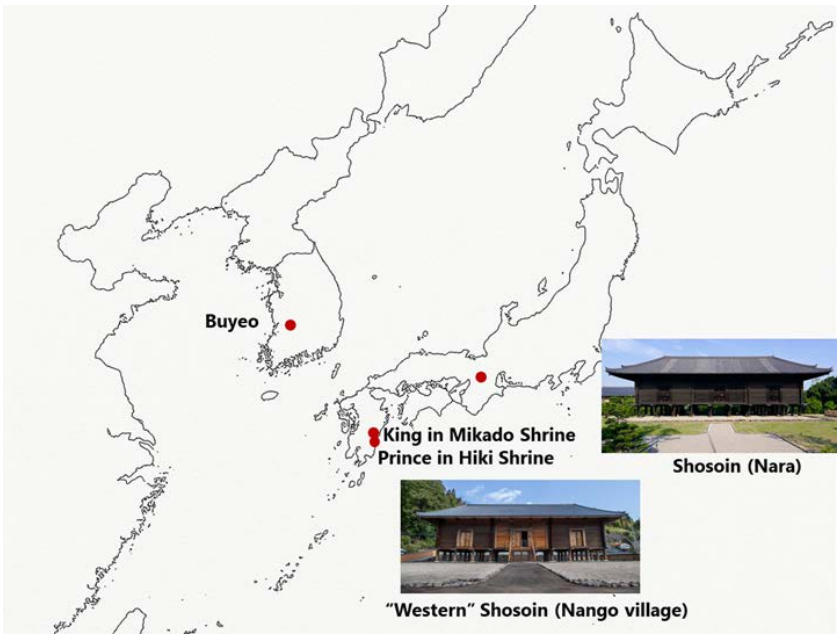


Figure 1. Locations Associated with the Baekje Legend

Source: Pictures are adopted from the website by the Imperial Household Agency and "Visit Miyazaki" (URL: https://shosoin.kunaicho.go.jp/about/history, and https://www.kanko-miyazaki.jp/spot/1109, accessed on December 18, 2025)

4. Entrusting to the Future

"Let's increase the forests"

The waves of declining birthrates and aging populations across Japan as a whole, and the aging of mountain villages, showed no signs of stopping. In 2006 *Nango* Village merged with the neighboring *Saigo* and *Kitago* villages to embark on a new chapter as *Misato* Town[6]. The "Baekje's Community Development" initiative, which unfolded in *Nango* from the mid-1980s through the 1990s, has now borne fruit: those who were children at the time have grown into the present generation of local leaders. Even as Misato town, exchanges with Korea have not ceased; people from *Buyeo* and *Nango* still visit each other, and the twelfth Korean international exchange officer remains stationed at the town office. Within the *Nango* area—formerly *Nango* Village—the sense of community solidarity remains strong, and of course the *Shiwasu* Festival is held every year. The traditions established by earlier generations are firmly inherited by today's generations. Equally, the vision cherished by the community—"creating *Nango* Village that descendants can take pride in"—is faithfully carried forward by the current generation.

We had the opportunity to participate in the "Let's Increase the Forests" project, which began in 2022. This initiative was launched as part of *Misato* Town's forest conservation activities carried out together with children. More than ninety percent of *Misato*'s land is covered by forest. Since many residents are closely connected to the mountains, the town felt compelled to engage in forest preservation. The project is an effort to create future woodlands together with children.

Underlying this activity is the hope that, by learning the traditional culture handed down in this area alongside the younger generation, these traditions can be transmitted into the future. During our visit, researchers from Korea and local children jointly planted *mugunghwa* (the rose of Sharon), Korea's national flower. A total of 167 trees were planted on "Lovers' Hill" in *Nango*. The hexagonal pavilion overlooking the villagescape of *Nango* from "Lovers' Hill" is a reproduction of the Baekhwajeong pavilion built upon Nakwa Rock in *Buyeo*. Here stands a pair of bells known as the "Bonds of Friendship," presented as a symbol of goodwill with Korea. Inscribed in Hangul is the message: "The sound sent from Buyeo, the ancient capital of Baekje, to Nango, the village of Baekje." Indeed, it was at this site that Korean and Japanese researchers, together with local residents—children and adults alike—planted *mugunghwa* trees, engaging in activities to create future woodlands while deepening bonds of friendship through shared exchange.

In response to questions from Korean researchers, the people of *Misato* Town conveyed their intention behind involving children in the tree-planting activities. The mountains, long covered with cedar and cypress, had become monotonous in color; the project sought to create landscapes not only of green but of diverse hues, thereby enhancing biodiversity and fostering healthier forests. It was recognized that trees play a vital role in absorbing carbon dioxide. Moreover, in the context of accelerating global warming, the prevailing conviction was that forests must be sustained for the benefit of future generations. The most important goal was to spark children's interest in mountains and the environment through the act of planting trees. There was also the hope of increasing opportunities for children to participate in forest-expansion activities in various ways—whether through planting or cuttings.

Children also posed questions such as, "What does the *mugunghwa* mean to Korea?" and "There is no river in the mountains. Where does the water come from?" Korean researchers explained that the *mugunghwa* is a resilient flower with strong vitality, while Japanese researchers offered clear explanations about the forest's water-retention capacity.

Etch in children's hearts

With the cooperation of the local elementary school and the *Misato* Town Office, a follow-up inquiry was conducted with the twenty children aged 9 to 10 who had participated in the activity. The purpose was to elicit their reflections on the tree-planting experience undertaken jointly with the Korean researchers, in order to clarify which aspects of the activity left a lasting impression and what forms of learning the children derived from their participation. **Table 1** presents the children's feedback, in which their candid and unfiltered impressions can be clearly observed. In the process of planting the seedlings, the children physically engaged in digging holes in the ground and directly experienced the difficulty of the task, as the soil was filled with roots and stones that made the work far from straightforward. Yet this challenge was not perceived solely as hardship; by undertaking the activity together with adults and participants from Korea, the children also found it enjoyable.

Through this embodied experience, they came to recognize that beneath the surface of the mountain soil lie numerous roots and stones, and that the mountain stores a substantial amount of water. They also learned that while cherry blossoms are the most familiar flowers in Japan, the *mugunghwa*—the tree they planted—is widely cherished in Korea. The children expressed a genuine sense of anticipation that the trees they planted collaboratively with the Korean participants in their own village would grow tall in the future and eventually produce beautiful blossoms.

In this process, one may discern a form of intergenerational transmission: those who have inherited the baton of past exchanges are now passing it on to the children, embedding within them the warm relational capital of friendship (i.e., both of social and psychological capital) that the community has long valued.

Picture 9. Welcome Korean researchers at the tree-planting site

Picture 10. Tree-planting with children

Picture 11. Children waving and saying "*Annyeonghaseyo*"

Picture 12. Commemorative Monument with Researchers and Children

Table 1. Feedback from the Children (after the "Let's Increase Forest" event)

Q1 Please share what left the deepest impression on you.
• The hard work of digging holes for seedlings (7) • Finding lots of roots and stones in the ground (5) • Planting *mugunghwa* (my first time ever, and I did it well) (4) • The joy of working together with everyone, covering the soil with Korean people (3) • The fun unveiling ceremony (3) • Very happy to meet Korean people
Q2 What did you learn through this activity?
• The *mugunghwa* is Korea's national flower. Many *mugunghwa* plants are planted in Korea (11) • Why water flows from mountains without rivers; forests can store water (2) • The great view from Lovers' Hill. • How difficult tree planting is. • The logo for the 60th anniversary of Japan-South Korea diplomatic normalization featured cherry blossoms and *mugunghwa* flowers, symbolizing each country. • Tree planting methods. • The *mugunghwa* trees produce beautiful flowers.
Other comments
• Looking forward to watching it grow • Hoping many flowers to bloom • Wishing to see them when they bloom • Hoping to plant another *mugunghwa* tree.

Note: The number in parentheses indicates the number of children who gave similar answers.

5. Discussion and conclusion

This paper has presented, based on our on-site observations, experiences, and exchanges, how a small mountain village of some 1,500 residents has preserved local traditions originating in Korea's Baekje kingdom and Japan's *Nara* period, and how the community seeks to entrust those traditions to the future. Although history has been marked by wars and disputes, at the grassroots level nameless local residents maintain an affectionate relationship with the legendary Baekje king, sustain exchanges with Korea, plant trees that symbolically link Japan and Korea, and pass on the community's indispensable treasures to their children—so that a warm bridge of friendship remains in place.

The desire for people to remain rooted in their locality and to continue living there rests on the recognition that present lives are built upon the lives of those who lived there before, and that inheriting the present entails a responsibility to hand the community's treasures to future children in good condition. In the present moment, the value placed on the long-term flourishing of the locality outweighs the pursuit of immediate (or personal) economic gain. For this reason, local people take on active roles as custodians of

their traditions, model practices for the next generation, and prioritize strengthening the community's sustainability through endogenous efforts. The more acutely they feel the weight of the past, the more consciously they accept the role of passing the baton forward. To ensure that the community's intrinsic, sustainable way of life is transmitted to the next generation, traditional festivals continue and forest-building efforts write new chapters. Children who delight in the blossoming of Korean flowers imprint the adults' example on their memories and, when they become future stewards of the community, may strive to find ways to overcome the challenges of their era and to initiate new endeavors. Such actions, too, become part of the accumulated tradition that nourishes future progress. Traditional culture is the accumulation of the hopes and efforts of countless unnamed people across generations, and it becomes the community's identity. The aspirations inherited from those people, combined with the efforts of their successors to meet contemporary challenges, transform into a source of pride that inspires the community and polishes its treasures. It is precisely because such treasures exist that people value the continuity of their locality, and that this aspiration is passed down across generations. The bonds of friendship with neighboring Korea across the sea continue to live in this place, and they are expected to be entrusted to the children who will live in the future.

Acknowledgement

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[1] The historical description of *Nango* Village in this article is based on the following Japanese documents prepared by Misato Town: "*Nishino Shosoin Mouhitotsuno Shosoin (西の正倉院　もう一つの正倉院)*[(The Western *Shosoin*: Another *Shosoin*)], and "*Shiwasu Matsuri (師走祭り)*[December Festival]" as well as documents and books listed in the following note 4. In addition, the historical facts are checked by the Misato Town Office.

[2] "*Osaraba*"means goodbye in Japanese, but also carries the meaning of "Let's meet again in life: *Saraboja*" in Hangul.

[3] The *Shosoin* Repository is located within the grounds of the temple *Todaiji* in *Nara* city, and was built in the *Nara* period, eighth century CE. (Source: Shosoin HP (URL: https://shosoin.kunaicho.go.jp/en-US, accessed on December 18, 2025.)) Many refugees came to Japan from Baekje, and Baekje-descended people played a major role in shaping Japanese history, influencing culture and politics, including assisting in the construction of the temple Todaij.

[4] Description in this section is based on "*Mikado Monogatari: Kudara Densetsu (神門物語: 百済伝説)* [The Story of Mikado: The Legend of Baekje" by Nango village office (1989), "*Chiisanamura no Ookina Chosen Document・Kudarano Satodukuri (小さな村の大きな挑戦　ドキュメント・百済の里づくり)*[A Small Village's Big Challenge: Documenting the Creation of Baekje Village]" by Nango village and Komyakusha (ed.)(1994), and "*Nango-son Monogatari (南郷村物語)*[The Story of Nango Village]" by Mutsumi Shiba in Architectural Journal (monthly magazine), serialized from July 1999 (9 articles). (URL: https://mutumi48.exblog.jp/32657800/, accessed on December 18, 2025.)

[5] The "*goshintai* (御神体)" is the object of worship housed in a *Shinto* shrine and believed to contain the spirit of a deity.

[6] *Nango* (南郷) means Southern(南)-village(郷), while *Saigo* and *Kitago* means Western (西)-village(郷) and Northern(北)-village(郷), respectively, with merging of those three making *Misato*(美郷), meaning beautiful (美)-village(郷). The character for "beauty (美)" is pronounced the same as the character for "three (三)".

Japan-Korea Rural Planning International Conference 2025

Program

(Day 1: November 6, 2025)

1. Opening

Naoko Saio, Institute of Science Tokyo, President of the Association of Rural Planning, Japan

Jihoon Shin, Dankook University, President of the Korean Society of Rural Planning

2. Keynote Presentation

"The Role of Traditional Knowledge and Geographical Indications"
Ryo Kohsaka, Graduate School of Agricultural and Life Sciences, The University of Tokyo

"The current status and future potential of thatched-roof houses in rural area and Small Towns in Japan"
Ryutaro Goto, Saga University

"Sustainable Agricultural Heritage Tourism Using the Geumgang Pinetree Forest in Uljin County"
Jin Hyuk Gu, Regional Planning Institute NURI

"The Role of Local Festivals in the Succession of Traditional Culture and Rural Sustainability"
Yoonsuk Lee, Kangwon National University

Discussion

3. Poster Presentation

"Regional Spillover Effects of the Agri-Food Policy Funds -Revitalizing Rural Area and Overcoming Market Failure"
Yongsik Moon, Seoul National University

"Development of Sustainable Performance Evaluation Indicators for an Efficient Operation of the Local Extinction Response Fund"
Solhee Kim, Jeonbuk National University
(Co-author: Taegon Kim)

"A Shift in the Discourse on Rural Values in Korea"
Jimin Lee, Seoul National University

"A Study on Population Heterogeneity in Rural Counties from a Multi-Dimensional Spatial

Analysis Perspective"

Rui Qu, Chungbuk National University
(Co-authors; Sang-Hyun Lee, Zaewoong Rhee, Seung-Jong Bae, Soo-Jin Kim)

"Purpose and Significance of Marche Participation by Vendors -Focusing on Organic Marches in Nara Prefecture"

Arisa Iwamoto, Doshisha Women's College of Liberal Arts
(Co-author: Akemi Saito)

"Multifunctional Functions of Rice Paddy Fields in the Kotsuki River Basin and Their Contribution to Watershed Flood Control -Evaluation of Terraced Rice Paddies and Downstream Rice Paddies from Eco-DRR Perspective-"

Akiko Matsuda, Kagoshima University
(Co-author: Mizuki Hira)

4. Group photo (16:40 to 16:50)

5. Closing (16:50 to 17:00)

Toshihiro Hattori, Meiji University, Japan, Vice President of the Association of Rural Planning, Japan

Excursion

(Day 2, November 7, 2025)

***Misato*-Town, *Miyazaki* Prefecture**

Misato Town was established on January 1, 2006, through the merger of three villages (the former *Nango* Village, the former *Saigo* Village, and the former *Kitago* Village) in the southern part of *Higashiusuki* District of *Miyazaki* Prefecture, Japan. The former villages had built a long history spanning 116 years.
The total area of Misato Town is 44,884 hectares, with approximately 92% being forested mountains. Elevations are 121.7 meters at the main town office in *Saigo*, 268.5 meters at the *Nango* branch office, and 142.8 meters at the *Kitago* branch office.

Population (combined total of the former three villages) was 19,410 in 1960, 10,709 in 1980, 6,248 in 2010, and 4,098 in September 2025. This represents a decrease of approximately 13,000 people over roughly 50 years, a reduction rate of 67.9%. Furthermore, the aging rate based on the actual resident population in 2010 was 43.6%.

1. Community Development Rooted in the Tradition of the Baekje King Legend (Morning)

More than 1,300 years ago, after the fall of the Baekje Kingdom on the Korean Peninsula, royal family members fled to Japan and arrived in Miyazaki. Legend holds that King Teika (禎嘉王 Teikaoh) settled in *Nango*, *Misato* Town, while his eldest son, Prince Fukuichi (福智王 Fukuchioh), moved to *Hiki*, *Kijo* Town. Local people have passed down this story as the "Baekje King Legend." Based on this legend, Misato Town has undertaken the "Baekje Village Project," establishing sites like the "Western *Shosoin*" and the "Baekje Museum." Every year in late January, corresponding to the 12th month of the lunar calendar, the "*Shiwasu* House" takes place. This nationally rare festival recreates the annual reunion of father and son through a pilgrimage procession from *Hiki* Shrine, dedicated to Prince Fukuchi, to *Mikado* Shrine, dedicated to King Teika.

2. Dogawa Manma (Lunch)

In the *Dogawa* of *Misato* Town, a community development initiative centered on neighborhood watch activities through a "Meal Delivery Service for Seniors" is being carried out by five volunteer women (average age 73). They prepare homemade boxed lunches and side dishes, which members then deliver to seniors' homes twice a week. They also engage in welfare activities like checking in on them and providing companionship.

To prevent seniors from becoming overly reliant on the service, they tailor menus to each individual. For example, they ask those who can cook rice to do so themselves, adjust portion sizes to prevent leftovers, and include seasonal side dishes to help seniors feel the changing seasons. Even amid population decline, the initiative embodies the desire to protect their own community and respond to the crisis of "community extinction" through the "Meals-on-Wheels for Seniors" service. They view community building not as the exclusive domain of highly skilled migrants or special individuals, but as a shared responsibility. By treating local issues as their own, they steadily advance their efforts, starting with what they can do.

3. "Let's increase the forests" (Afternoon)

Misato Town is undertaking this initiative as part of its forest conservation activities. Together with children, the town is promoting the inheritance of forest-based culture rooted in the local area, aiming to pass it on to future generations.

Keynote Presentations

Japan-Korea Rural Planning International Conference 2025

The Role of Traditional Knowledge and Geographical Indications

Ryo Kohsaka*

The inheritance of rural traditional culture constitutes a central pillar for sustainable community development because it embeds locally adapted knowledge, collective governance practices, and resource-management norms that underwrite socio-ecological resilience. Traditional ecological knowledge (TEK)—expressed in agricultural routines, craft techniques, and apicultural practices—functions simultaneously as a reservoir of adaptive practices and as a constitutive element of place-based identity; its intergenerational transmission therefore has direct implications for livelihoods, biodiversity, and the capacity of communities to negotiate market and environmental change (Kohsaka & Rogel 2019; Uchiyama et al. 2017). Comparative analysis of Japan and South Korea reveals both shared trajectories and divergent institutional responses: while both countries have experienced modernization, demographic aging, and landscape consolidation that erode family-based knowledge transmission, Korea's more recent mobilization of community extension and cooperative models contrasts with Japan's emergent use of intellectual-property instruments such as geographical indications (GIs) to formalize provenance and valorize tradition (Kohsaka et al. 2017; Uchiyama et al. 2017).

Geographical indications represent a policy instrument that can simultaneously protect local resources and incentivize the conservation of traditional production methods by linking product quality to territory and collective codes of practice. Empirical evidence from Japan indicates that GIs can stabilize niche markets, encourage cooperative governance, and help preserve TEK when internal processes are inclusive and when codes of practice incorporate environmental stewardship (Tashiro, Uchiyama & Kohsaka 2018; Tashiro et al. 2019). Nevertheless, the literature also underscores heterogeneity in outcomes: GIs often confer stronger value capture at retail and reputational levels than for primary producers, and their contributions to rural development are conditioned by actor strategies, public policy support, and local institutional capacity (Cei et al. 2018; Belletti et al. 2017; Menapace et al. 2024).

In the apicultural domain, the juxtaposition of family-owned transmission of beekeeping knowledge and formalized resource protection illustrates how TEK and legal instruments can be mutually reinforcing. Studies of beekeeping in Japan and South Korea document the cultural embedding of apicultural practices, the ecological role of pollinators for local crops, and the vulnerability of knowledge transfer under demographic and market pressures (Kohsaka, Park & Uchiyama 2017; Uchiyama, Matsuoka & Kohsaka 2017). When GI frameworks and cooperative governance recognize such intangible practices—by codifying allowable methods and protecting origin names—there is potential to bolster both biodiversity and local economies. However, achieving these aims requires careful design: codes must avoid rigidifying living traditions, ensure equitable benefit sharing, and integrate conservation objectives that respond to climate and land-use change (De Filippis et al. 2022; Belletti et al. 2017).

In sum, the inheritance of rural traditional culture is not merely a heritage concern but a pragmatic pathway to sustainable community development. Japan–Korea comparisons show that complementary strategies—supporting TEK transmission through education and cooperative institutions while employing GIs to protect provenance and local resources—offer a balanced approach to sustaining cultural continuity, ecological function, and rural livelihoods in an era of rapid socio-environmental transformation.

* Graduate School of Agricultural and Life Sciences, The University of Tokyo

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Japan-Korea Rural Planning International Conference 2025

The current status and future potential of thatched-roof houses in rural area and Small Towns in Japan

Ryutaro Goto*

Architectural roofs formed through the use of local materials and traditional construction methods reflect the vernacular knowledge unique to each area or region. In the past, thatched roofs were widespread throughout Japan as a standard form of residential architecture. However, today, while such roofs may still be repaired or restored for cultural or heritage purposes, the construction of new thatched houses is exceedingly rare. Conversely, thatching is increasingly recognized in various parts, particularly in Europe, as a sustainable architectural practice. In these regions, not only private houses but also commercial and public facilities are being newly constructed with thatching.

This report first outlines the fundamental characteristics of Japanese thatched-roof houses and then focuses on Taku City in Saga Prefecture, located in northern Kyushu, as a case study to examine the current status of thatched-roof houses and the problems for their preservation and utilization.

The area is home to several houses designated as Important Cultural Properties, and a number of thatched houses from the Edo period through the pre-war era remain extant. However, beyond the scope of cultural heritage designations, there are no systematic preservation efforts, and the number of thatched houses continues to decline each year. By selecting such a typical region—one without any special government initiatives—this report aims to be clear on the realities and concrete issues facing thatched houses. This is achieved through interviews and fieldwork involving various experts, and includes analysis of property owners' intentions, local cultural conservation, and the preservation and use of historical landscapes.

Furthermore, by introducing contemporary and practical examples of thatched architecture from across Japan and Europe—particularly the Netherlands—this report explores new perspectives for the maintenance and adaptive reuse of thatched houses. It also considers re-evaluating the cultural significance of thatched structures, as well as strategies for preserving natural materials and artisanal skills, thereby offering a framework for envisioning the future potential of thatched architecture.

The main sections of this report are as follows:

1. Fundamental Characteristics of Traditional Japanese Thatched-Roof Houses
2. Current Conditions and Issues Surrounding Thatched Houses: A Case Study of Taku City, Saga Prefecture
3. Contemporary Practices in Europe and Japan
4. Future Perspectives on Thatching

* Saga University

Japan-Korea Rural Planning International Conference 2025

Sustainable Agricultural Heritage Tourism Using the Geumgang Pinetree Forest in Uljin County

Jin Hyuk GU*

The Uljin Pinetree Agroforestry System is a forest agricultural heritage system that contains the knowledge and traditional technology that Geumgang pine trees and agriculture have shared with local communities for centuries.

By protecting the ecological circulation system of vast forests and engaging in sustainable forestry and agriculture, Uljin's agricultural heritage also contributes to the achievement of the SDGs. Residents are enhancing yields by managing habitats for wild pine mushrooms that are not farmed artificially and boosting local income through ecotourism and forest-based events. This serves as a good example of recognizing the importance of agricultural heritage through the use of sustainable resources.

In 2016, the system was designated as a Nationally Important Agricultural Heritage System in recognition of these diverse features. Additionally, it was designated as a Globally Important Agricultural Heritage System in 2025. Accordingly, Uljin-gun exerts significant effort to conserve and manage the pine agroforestry system.

1. Outline of Uljin Pinetree Agroforestry System

Uljin's agricultural heritage system is a mixed agroforestry system that has existed for almost 500 years through symbiotic relationships between pine trees and humans. Residents manage the forest in accordance with the pine forest's life cycle, and they have created an autonomous association named Songgye[1] to manage pine trees.

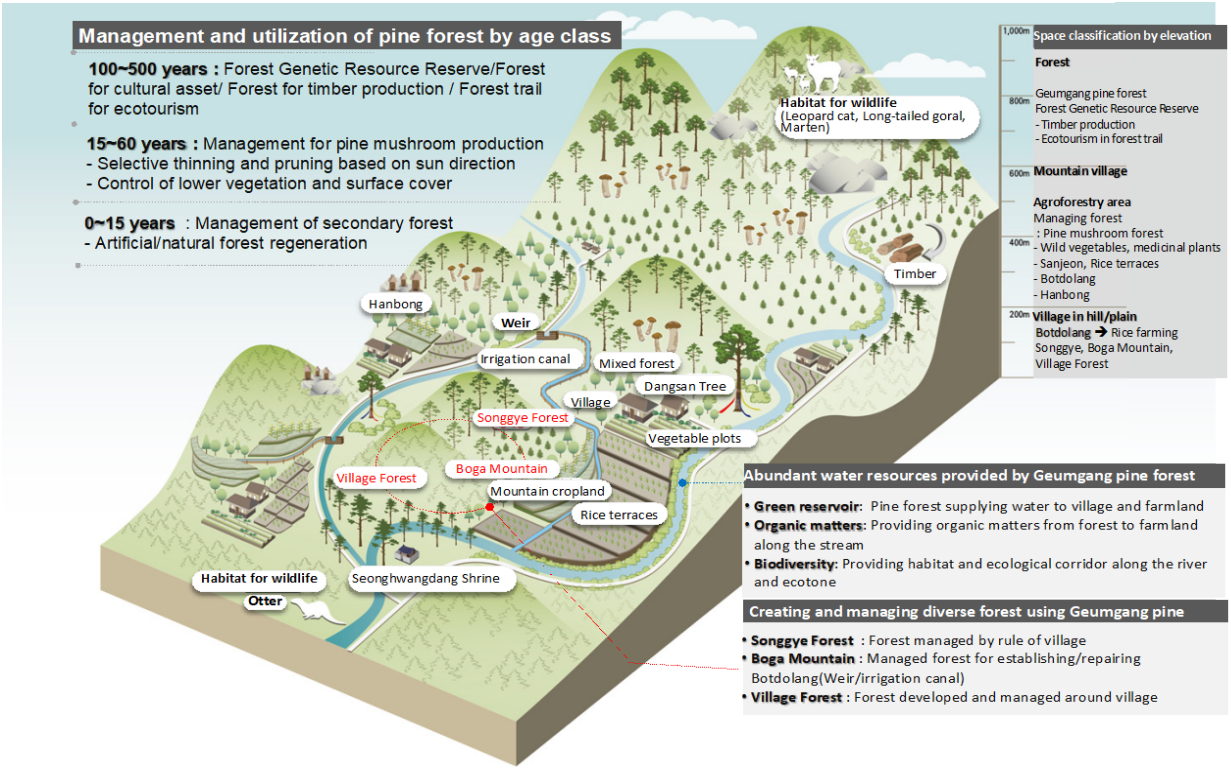

Figure 1. Agroforestry system functioning in harmony with Geumgang pine forest

*Regional Planning Institute NURI, Director

This agricultural heritage system has five types of land use: **Geumgang pine tree protection area** (forest genetic resource reserve, timber production forest for cultural property restoration), **pine mushroom mountain area** (forest for pine mushroom cultivation and use), **ecotone** (natural vegetation, shrub), **village area** (sloping farmland, residential area, rice terrace), and **river area** (valley, Botdolang[2]).

2. Sustainable Agricultural Heritage Tourism

As lifestyle and building structures changed, the colony of Geumgang pine has been utilized as a center for experiential learning, forest bathing, and recreation in a natural scenery. In other words, Geumgang pine forest is in the spotlight as a recreational area and tourism resource in accordance with the increasing leisure time of many people today.

The locals restored the old path of Sibiryeong Pass[3] in 2010, opening a trail and operating an ecotourism program that allows visitors to walk through the Geumgang pine forest and experience the culture of the Sibiryeong Pass. Residents provide forest explanations and tour guides, limit daily visitation to eighty, and currently manage six tour routes. They participate in forest commentary, guesthouses, Jumak Street, and food truck businesses based on the principle of responsible tourism, making agricultural heritage tourism more representative. As of 2018, eight forest commentators, four forest experience instructors, and forty agricultural history commentators from the local area assist visitors along the Geumgang pine forest trail and agricultural heritage site.

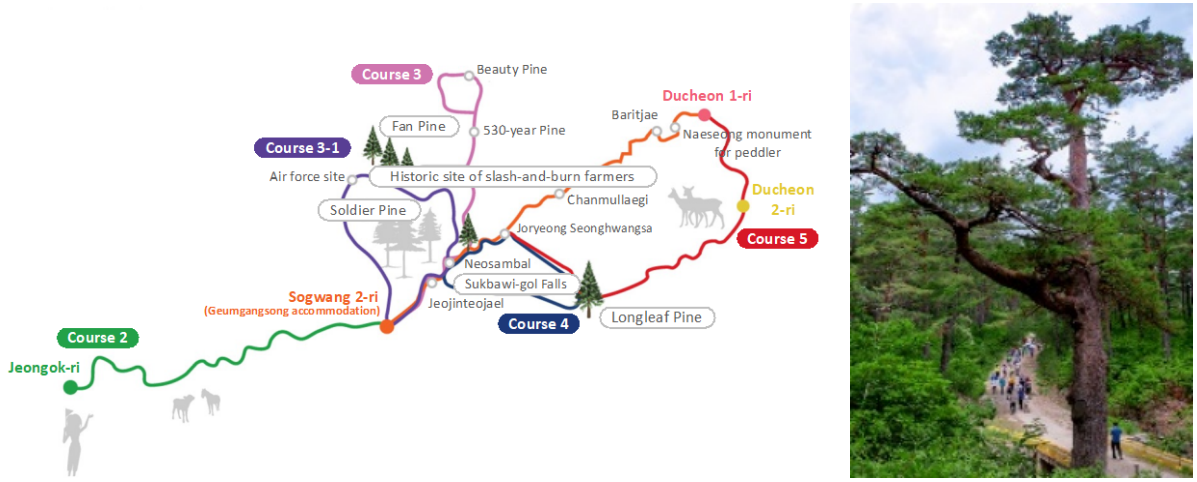

Figure2. Geumgang pine forest trail and forest tour program

Uljin Geumgang pine forest trail is operated around three villages in the Uljin agricultural heritage area. Residents earn additional income by providing forest commentary, running guest houses, and food trucks. Each course of Geumgang pine forest trail limits the number of visitors to 80 per day, and 11 residents act as forest commentators.

Residents of Uljin chose symbiosis with nature and recreated it as a sustainable tourism product by utilizing the cultural heritage left by their ancestors. It was created as a gourmet tour, such as pine mushrooms and temple food inherited from the Bobusang[4] culture, and pine forests, temples, hot springs, and Geumgangsong Eco-tourism provide healing tourism content.

Uljin's agricultural heritage is being reborn as a sustainable tourism resource through fair travel focused on local government and residents by utilizing local ecotourism resources.

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[1] Songgye : It is a self-governing forest management organization for managing pine forest.

[2] Botdolang : It is a traditional irrigation canal system using a natural fall of water, and it is made of water-resistant Geumgang pine trees.

[3] Sibiryeong Pass : It refers to a 53km long twelve passes leading form Uljin-gun to Bonghwa-gun in Gyeongsangbuk-do and functioning as Bobusang's trading route.

[4] Bobusang: It refers to a professional merchant who carried a pack with products and acted as an intermediary between producers and consumers in the past in Korea.

Japan-Korea Rural Planning International Conference 2025

The Role of Local Festivals in the Succession of Traditional Culture and Rural Sustainability

Yoonsuk Lee*

This study investigates how traditional culture is inherited and reconstructed through local festivals in rural Korea and analyzes how these cultural processes strengthen community cohesion and contribute to rural sustainability. Addressing demographic decline and the erosion of local identity, the study moves beyond tourism-centered interpretations of festivals and conceptualizes cultural succession as a community-based mechanism of resilience. Using a qualitative comparative case study design, four rural festivals—Gangneung Danoje, Eunsan Byeolsinje, Byeokgolje Ssangnyongnori, and the Seorak Cultural Festival—were analyzed through a structured framework examining traditional elements, transmission agents, resident participation, and modernization strategies. Rather than emphasizing the specifics of each case, the analysis identifies broader patterns in how festivals facilitate cultural succession. The comparative findings reveal that festivals supported by strong resident participation and autonomous cultural practices generate deeper forms of cultural resilience. Community-led succession structures, intergenerational role-sharing, and collective ritual practices were found to reinforce local identity and strengthen social capital, which in turn support settlement intention and community stability. In contrast, festivals primarily oriented toward tourism or symbolic branding contributed to external visibility but had weaker effects on internal cohesion. The results emphasize that cultural succession operates not as passive preservation but as an active social process shaped by community agency, producing meaningful impacts on rural sustainability when residents are embedded in planning and transmission. Ultimately, the study demonstrates that the strength of cultural succession depends less on the historical depth of a festival and more on the quality of communal practice it generates. By highlighting these mechanisms, the findings underscore the value of festivals as culturally grounded strategies through which rural communities maintain identity, adapt to structural challenges, and rebuild the foundations of resilience.

The following table summarizes the key features of each case.

Table 1. Comparative Summary of Traditional Cultural Festivals

Dimension	Gangneung Danoje	Eunsan Byeolsinje	Byeokgolje Ssangnyongnori	Seorak Cultural Festival
Cultural Content	Hybrid rites, mask play, folk games	Ritual-centered, sacred traditions	Myth-based symbolic performances	Fusion of coastal, mountain, refugee cultures
Transmission Structure	Institutional with civic participation	Community-led, autonomous	Planner-driven, annually redesigned	Community-based, decentralized
Community Participation	Educational and volunteer engagement	High immersion, full community participation	Performative participation, low immersion	Broad participation, inclusive platform
Tourism Strategy	Balance between heritage and tourism	Minimal tourism, focus on ritual purity	Tourism-oriented branding	Cultural integration with tourism season
Succession Model	Balanced preservation and innovation	Immersive communal ritual model	Symbolic branding model	Hybrid cultural integration model

*Associate professor, Department of Agricultural and Resources Economics, Kangwon National University.

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Poster Presentation

Japan-Korea Rural Planning International Conference 2025

Regional Spillover Effects of the Agri-Food Policy Funds

Revitalizing Rural area and overcoming Market Failure

Yongsik MOON*, Donghwi KIM*

1. Research Background

Market failure refers to a situation where the allocation of goods and services by a free market becomes inefficient, leading to decline in social welfare. The agri-food sector is known as the market failure sector due to its high price volatility, long payback periods and large costs associated with R&D. Since market failures in Agri-Food sector may undermine food security, it is a crucial role for the government to intervene in the market to prevent market failure and enhance rural income.

Agri-Food Policy Fund is an effort to fix market failure by intervening directly in the investment market. The Fund operates through two distinct channels: GP (General Purpose) funds which target fundamental agri-food industries, and SP (Special Purpose) funds, which focus on policy-relevant areas such as innovative and marginalized sectors. Considering that innovative and marginalized sectors are particularly susceptible to market failure, SP funds serve a role as a countermeasure for market failure. By managing the SP and GP funds in a complementary manner, the Agri-Food Policy Fund seeks to enhance social welfare by preventing market failure and revitalizing rural economies.

2. Research Objectives

To further enhance the effects of Agri-Food Policy Fund in terms of increasing social welfare, the effects of funds should be diagnosed thoroughly in terms of its core objectives, market failure and rural revitalization. However, there have been limited studies regarding the assessment of Agri-Food Policy Fund. Therefore, this study aims to assess the effects of Agri-Food Policy Fund in terms of preventing market failure and revitalizing rural economies.

3. Research Methods & Data

To achieve these objectives, the study integrates IRIO (Inter Regional Input–Output) analysis with FE (Fixed-Effects) panel regression as shown in Figure 1.

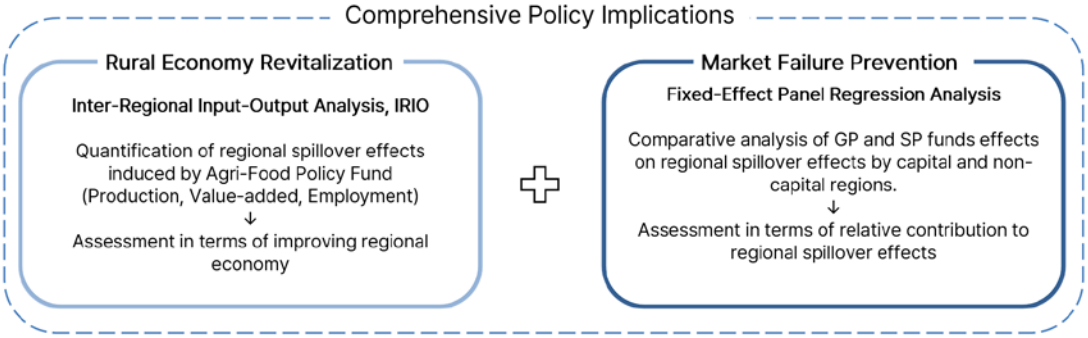

Figure 1. Research Structure of the study

*Seoul National University College of Agriculture and Life Science.

IRIO analysis assesses the effects of Agri-Food Policy Fund by quantifying regional spillover effects in terms of production, value-added and employment from 2011 to 2024. IRIO is conducted using the year 2010, 2015, and 2020 IRIO tables published by the Bank of Korea.

The panel regression analysis focuses on assessing the effects of Agri-Food Policy Funds as a countermeasure for market failure. For this purpose, spillover effects derived in IRIO analysis were used as dependent variables in the regression analysis. For explanatory variables, GP and SP fund investment amounts were used with interaction terms distinguishing capital regions. Also, other control variables such as GRDP, population, and retail sales index, and IRIO table dummies were employed. In addition, to address potential error term correlation across equations, Seemingly Unrelated Regression (SUR) was applied.

4. Results and implications

The IRIO analysis results are as shown in Table 1. In absolute terms, spillover effects were heavily concentrated in capital areas (Seoul, Gyeonggi province), which accounted for nearly 60% of total investments. Such results can be explained by agglomeration economies in capital areas where many industries and capitals are concentrated. Also, the results imply high positive correlation between the scale of region economy and the amount of investment. However, absolute terms may obscure the underlying effects of Agri-Food Policy Fund beyond absolute amount correlated with agglomeration economies and regional economic scale. Therefore, the study adopted efficiency terms, which are calculated by dividing total spillover effects by total investment amounts. Efficiency term controls the scale effect related to investment amount, thereby enabling additional assessment in relative perspectives. Surprisingly, efficiency terms showed contradictory results with absolute term results. Investment effects were significantly higher in rural areas such as Jeolla and Chungcheong provinces, underscoring their stronger marginal returns in non-capital or agriculture-based regions.

However, some regions such as Incheon and Gangwon province exhibited results deviating from typical patterns. Incheon, which is also a part of capital areas, induced limited spillover effects in absolute terms, whereas Gangwon province induced low spillover effects in both the absolute and efficiency terms. Such results may imply heterogenous effects caused by regional characteristics. Incheon is more specialized in the manufacturing and port industries than in the agri-food industry. Consequently, only a relatively small amount of fund investment was made, resulting in low spillover effects. On the other hand, Gangwon is known as one of the most rural provinces in Korea. Consequently, the absolute amount of fund investments was low, and the industrial base was not strong enough to induce significant amount of spillover effects.

Taken together, the IRIO results show that the Agri-Food Policy Fund contributes to revitalizing rural economies by allocating resources. Also, results suggest that a region-specific management strategy should be devised by considering the heterogeneity between the absolute scale and the efficiency of fund investments.

Table 1. IRIO Analysis Results (2011-2024)

Region	Induced Production		Induced Value-added		Induced Employment	
	Absolute Term (10 million ₩)	Efficiency Term (%)	Absolute Term (10 million ₩)	Efficiency Term (%)	Absolute Term (Person)	Efficiency Term (%)
Capital	**14,812**	2.53	**5,962**	0.89	**13,790**	1.86
Non-Capital	11,176	**2.60**	4,290	**0.94**	10,667	**2.40**

Subsequent panel regression assesses the role of Agri-Food Policy Fund in terms of preventing market failure as shown in Table 2. Model (1) to (3) represent estimation without non-capital dummy variable, and model (4) to (6) represents estimation with non-capital dummy variable. The consistently positive and statistically significant coefficients of the GP and SP funds demonstrate the robustness of estimations. Also, it implies that the fund investments are working as a countermeasure for market failure. Other findings also provide insights into Agri-Food Policy Funds. Overall, the effects were shown to be stronger for GP funds than SP funds. This may be explained by the difference in industrial foundation of target industries between two funds. To elaborate, GP funds were shown to be more effective because these target fundamental industries related to agri-food sector, whereas SP funds focus on industries with less industrial foundation. Comparison between capital and non-capital regions shows regional heterogeneity of fund investments. For both GP and SP funds, investments were shown to be more effective in non-capital regions. This implies that fund investments produce higher marginal spillover effects in non-capital regions. It is also consistent with efficiency term results from IRIO analysis. Insignificant additional effect of SP funds on employment in non-capital regions may also be explained by target industries. Innovative industries tend to invest heavily in the R&D sector, including workforce. Consequently, they end up ensuring their labor supplies in capital regions where highly skilled workers are available, thereby showing no significant contribution to employment in non-capital regions.

To sum up, regression results prove that Agri-Food Policy Fund contributes to preventing market failure. Also, the results provide implication that sophisticated management strategies based on the difference between SP and GP funds should be devised.

Table 2. FE Panel Regression Results (2011-2023)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	ln(production)	ln(value-added)	ln(employment)	ln(production)	ln(value-added)	ln(employment)
SP fund	0.0020***	0.0022***	0.0032***	0.0024**	0.0027***	0.0034***
SP fund*Non-Capital	-	-	-	0.0124***	0.0124***	0.0023
GP fund	0.0046***	0.0037**	0.0050**	0.0045***	0.0037***	0.0042***
GP fund*Non-Capital	-	-	-	0.0341***	0.0283***	0.0186***
RSI (Retail Sales Index)	-	-0.0071**	-	-	-0.0076***	-
GRDP	0	-	-	0	-	-
Population	-	-	-0.0000***	-	-	-0.0000***
IO Table Dummy (2011-2014)	1.2502***	1.0693***	1.2841***	0.7633***	0.6396***	1.0666***
IO Table Dummy (2015-2019)	0.8188***	0.8201***	0.7702***	0.5103***	0.5534***	0.6365***
Trend	0.2119***	0.2207***	0.1841***	0.1378***	0.1539***	0.1554***

Note: ***, **, and * implies statistical significance at 1%, 5% and 10% each.

5. Conclusion

Taking together, these findings highlight the complementary nature of Agri-Food Policy Funds. First, in terms of absolute scale and efficiency terms, results suggest that absolute amount of spillover effects is dominant in regions with agglomeration economies in capital regions, whereas investments were more

efficient in non-capital regions including rural areas. Second, in terms of GP and SP funds, GP funds were shown to reinforce already established agri-food industries and employment, providing immediate rural economic benefits, while SP funds foster innovation capacity and long-term growth potential. These findings suggest policy implications emphasizing three priorities: (1) balancing absolute scale with efficiency of investments, thereby leveraging metropolitan agglomeration while extending high-efficiency rural investment, (2) coordinating the complementary functions of GP and SP funds, and (3) devising tailored investment strategies based on regional industrial capabilities including infrastructure and population.

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Development of Sustainable Performance Evaluation Indicators for an Efficient Operation of the Local Extinction Response Fund

Solhee KIM* and Taegon Kim**

This study develops a sustainable performance evaluation framework for South Korea's Local Extinction Response Fund, which has been established to address severe population decline in local regions. Through comparative analysis of policies in Japan, France, Germany, and the United States, this research identifies critical limitations in the current fund operation and proposes a comprehensive reform strategy.

The current evaluation system focuses primarily on administrative adequacy and short-term outputs, such as plan feasibility and execution rates, while lacking the capacity to assess long-term impacts or structural outcomes including population retention, regional economic sustainability, and improvement in quality of life. Moreover, South Korea's fund remains highly centralized, with limited local discretion, constrained private sector engagement, and a short-term evaluation model that contrasts sharply with international best practices.

International cases reveal distinct approaches to regional decline: Japan prioritizes decentralization and youth settlement through performance-based funding and hometown tax donation schemes; France employs tailored programs based on urban scale and regional context through contractual partnerships; Germany operates under a decentralized federal system with coordinated responsibilities and co-financed programs; and the United States focuses on economic stimulation using tax incentives, block grants, and public-private partnerships.

Table 1. National Policies Addressing Regional Depopulation in Japan, Germany, France, and United States

Category	Japan	Germany	France	United States
Policy Goal	Reverse Tokyo-centric growth, stimulate local revitalization, and support long-term demographic recovery.	Ensure equal living conditions nationwide and reduce post-reunification regional disparities.	Address "territorial ruptures" by revitalizing mid-sized towns and rural centers.	Alleviate economic distress in low-income and rural areas through infrastructure and private investment.
Administrative Structure	Centralized direction (Cabinet Office), with local governments drafting "Comprehensive Strategies" for funding.	Federalstate co-governance (e.g., GRW, GAK); strong regional autonomy in implementation.	Central coordination (ANCT), contractual partnerships with municipalities, multi-actor governance.	Fragmented by agency (HUD, USDA, EDA); decentralized federalism with local implementation responsibility.
Funding Mechanism	Performance-based subsidies (approx. ¥100 billion/year); supplemented by hometown tax donations.	Co-financed federal and state budgets (e.g., €1.15 billion for GRW); EU funds integrated.	€5 billion (ACV) and EU co-funding (PVD); fiscal incentives for ZRR areas.	Congressional appropriations (e.g., $3.5B CDBG, $2.2B USDA RD); tax incentives (Opportunity Zones).
Target Regions	All municipalities eligible; priority to "at-risk" areas based on youth population decline.	Structurally weak areas in East Germany and rural West; over 90% of territory eligible via GAK.	Mid-sized cities (ACV), towns <20k (PVD), 17,000+ rural communes (ZRR).	Low-income neighborhoods (LMI), rural towns <50k; flexible designations per agency.

* Associate Research Professor, Department of Smart Farm, College of Agriculture & Life Sciences, Jeonbuk National University

** Associate Professor, Department of Smart Farm, College of Agriculture & Life Sciences, Jeonbuk National University / Researcher, Institute of Agricultural Science & Technology, Jeonbuk National University

Key Instruments	Comprehensive Strategy KPIs, tax relocation incentives, innovation hubs, data platform (RESAS).	GRW for industrial base; GAK for rural services; constitutional parity clause enshrined.	Urban-rural regeneration grants, centralized technical assistance, ZRR tax breaks.	Block grants, rural loans, targeted tax credits, public-private partnerships.
Evaluation System	Annual KPI monitoring, differentiated grants, best practice diffusion model.	Independent evaluation (e.g., IWH), federal equal-living commission, ex-ante/post assessments.	ACV/PVD indicators tracked nationally (e.g., vacancy, renovation); multi-year evaluations.	Decentralized performance reporting (e.g., HUD PERF, USDA RD reports), GAO oversight, tax program audits.

This study reconstructs the performance evaluation system around four core domains: population settlement and inflow, regional economic revitalization, residential environment improvement, and policy implementation and management. A total of 15 evaluation indicators were selected and validated through Analytic Hierarchy Process (AHP) involving 18 policy experts. The AHP analysis reveals that indicators reflecting long-term outcomes—such as youth long-term settlement rate, job retention, and project sustainability—carry the highest weights, surpassing those measuring short-term administrative performance.

Based on these findings, this study proposes four strategic directions for reform: (1) institutionalizing multi-level governance to strengthen local autonomy; (2) expanding financial diversity through private investment mechanisms; (3) shifting toward long-term, outcome-based performance assessment; and (4) applying differentiated strategies that reflect regional socio-economic contexts. The proposed framework provides a foundation for more differentiated fund allocation and performance-based incentives, marking a structural shift from short-term, input-output-based evaluation to a long-term, impact-oriented approach. These recommendations aim to enhance the fund's sustainability and effectiveness in mitigating local decline and supporting regional regeneration.

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A shift in the discourse on rural values in Korea

Jimin Lee*

1. Introduction

The advent of the Fourth Industrial Revolution and AI is further accelerating the pace of social change. Meanwhile, rural spaces face various social issues such as depopulation-induced hollowing out and declining regional economic vitality. The recently emerging term 'rural extinction' represents the sense of crisis in rural areas (Lee, 2020; Li et al., 2019; Kim, 2024). To adapt to social changes, reflect evolving societal demands, and overcome the rural crisis, a new rural vision is required. To form this vision, discourse analysis on rural values is essential.

Rural discourse refers to diverse social, cultural, and policy discussions and interpretations concerning the space, culture, identity, and functions of the countryside (Lee, 2019). Social perceptions of how to view and conceptualize rural areas play a crucial role in setting rural visions, rural policies, and structuring rural spatial plans (Yi and Son, 2021). In other words, shifts in rural discourse reconfigure resource flows, rural identity, and regional planning agendas (Choi et al., 2016). Therefore, this study aims to examine changes in rural discourse using "Public Awareness Survey on Agriculture and Rural Areas" data to propose a new rural vision for a changing society.

2. Definitions of rurality, ruralism, and rural discourse

First, we will examine the definitions of the terms rurality, ruralism, and rural discourse. These terms risk being used interchangeably, necessitating clear definitions. Rurality is a concept denoting the inherent characteristics of the countryside, referring to the structural and material features of a place and the resulting attributes of rural areas. It is primarily studied as characteristics distinct from the city and possesses measurable properties (Halfacree, 2009). In contrast, rural discourse can be understood as the socially constructed and circulated discourse about the countryside, encompassing diverse opinions (Jones, 1995). The countryside is treated not as a fixed category but as a socially produced set of meanings and practices. It signifies the perceptions and values regarding the countryside that emerge in policy documents, media, and the language of residents and policymakers. Ruralism is a specific discourse that defines values and political objectives. It can be considered a type of rural discourse with clear values, such as an ideology emphasizing rural traditions, landscapes, and communities, or a value system that idealizes the countryside.

3. Methodology

The Korea Rural Economic Institute has conducted an annual "Public Awareness Survey on Agriculture and Rural Areas" since 2000. From 2000 until 2005, the survey targeted only farmers, but since 2006, it has been conducted as a public opinion survey targeting both urban residents and farmers. This study analyzes the survey questions regarding "Perceptions of the Role and Value of Agriculture and Rural Areas" to examine shifts in rural discourse. Differences existed between the questionnaires for farmers and urban residents, and changes in survey questions occurred annually, resulting in missing data for certain years in the analysis. Additionally, variations in the response options provided for the same questions made

* Research Institute of Agriculture and Life Sciences, Seoul National University

comparisons difficult in some cases.

4. Analysis Results

The first question examined was posed identically to both urban residents and farmers: “Select the most important role of agriculture and rural areas today” from the following options: 1)Stable food supply, 2) Balanced national development, 3) Preservation of the natural environment, 4) Inheritance of traditional culture, 5) Tourism and recreation destination, 6) Space for country living. Survey results showed both urban residents and farmers selected “stable food supply” as the most important role. The proportion considering “balanced national development” and “preservation of traditional culture” as important roles was higher among urban residents than farmers. Conversely, the proportion considering “conservation of the natural environment” as an important role was higher among farmers than among urban residents.

Looking at changes over time, no significant shifts were observed. Examining changes in the percentage selecting each role as important, the importance of stable food supply increased, while the role of balanced national development showed a declining trend. Conversely, the importance of the roles of natural environment conservation and providing country living spaces has increased. These changes are thought to be the result of increased interest in nature and rural life.

The second item examined was a survey question asking, “What images come to mind when you think of the countryside?”. Respondents selected both positive and negative images. Among positive images, the largest proportion cited places where nature and pastoral landscapes are preserved and conducive to relaxation. Responses indicating it is a place where one can live a rural lifestyle in a country house ranked next most frequently. Responses describing it as a place suitable for retirement life and a place rich in recognition and preserving traditional customs were similar, averaging around 16-17%. For negative images, the opinion that it is a place lacking welfare facilities such as cultural, healthcare, and educational facilities, was the highest at an average of 46%, while responses describing it as a place with poor housing conditions averaged 27%.

Looking at changes by year, responses regarding positive images of rural areas—such as preserving nature and pastoral landscapes and being conducive to recreation—showed a consistently increasing trend, while responses regarding suitability for retirement life showed a decreasing trend. Negative images showed no major fluctuations, but the percentage of responses regarding poor housing environments and inadequate welfare facilities decreased slightly, while the image of rural areas being prone to recurring natural disasters and pest infestations showed an increasing trend.

5. Conclusion

In this study, analysis of responses to two questions regarding the value of agriculture and rural areas in the “Public Awareness Survey on Agriculture and Rural Areas” examined shifts in rural discourse through answers about the role and image of agriculture and rural areas. Regarding the role of agriculture and rural areas, a stable food supply emerged as the most important factor, and its importance was found to be increasing, indicating that the production function of agriculture and rural areas should not be overlooked. Regarding urban residents' image of rural areas, the most prominent perceptions were the positive image of “a place where nature and pastoral landscapes are preserved and conducive to recreation” and the negative image of “a place lacking adequate welfare facilities.” The decrease in responses identifying rural areas as suitable for retirement living is judged to be related to this perception of inadequate welfare facilities. Additionally, a recent trend of increasing negative perceptions regarding natural disasters and pest infestations was observed. This study briefly examined shifts in discourse on rural values through two survey questions. Future research aims to comprehensively evaluate all survey questions concerning the value of agriculture

and rural areas.

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A Study on Population Heterogeneity in Rural Counties from a Multi-Dimensional Spatial Analysis Perspective

Rui Qu*, Sang-Hyun Lee*, Zaewoong Rhee*, Seung-Jong Bae, Soo-Jin Kim****

1. Introduction

With the accelerated advancement of globalization, industrialization, and urbanization, rural areas face a range of population challenges, including population outflow, aging, and intensifying low birth rates (McGranahan and Beale, 2002; Johnson and Lichter, 2019; Son and Lee, 2021). These issues pose significant threats to the sustainable development of rural regions. However, such demographic phenomena do not unfold uniformly across all rural regions. For instance, some rural regions near developed metropolitan areas have experienced population growth or a trend toward younger demographics, while geographically remote rural areas commonly face ongoing population decline and structural aging (Li et al., 2019).

A systematic review of existing literature reveals that current research tends to focus on analyzing population issues from a single dimension, such as aging population, population loss, or population extinction risk levels (Lloyd-Sherlock, 2000; Hong and Yu, 2012), while lacking multidimensional comprehensive research from a systemic perspective. Furthermore, in terms of spatial analysis, most studies use higher-level administrative units, such as cities or counties, as the basic units of analysis, overlooking the local heterogeneity and micro-level spatial mechanisms of rural population issues at lower levels, such as Eups (towns) or Myeons (townships) (Choi and Yoon, 2012; Liu et al., 2017; Lee and Kim, 2019).

Therefore, it is necessary to construct a multidimensional analytical framework that integrates age structure, population mobility, and spatial distribution to comprehensively characterize the operational dynamics of rural population systems. To this end, this study proposes the Point–Flow–Area Model (PFA model), which aims to provide a theoretical tool combining a systems perspective with spatial analysis methods to understand rural population issues.

2. Theoretical Framework and Construction of the PFA Model

Aging is one of the primary challenges facing many rural areas today, exhibiting a trend of continuous intensification and structural deepening. As the level of rural aging increases, the ongoing out-migration of younger populations further exacerbates the issue, leading to reduced population density and spatial hollowing. These phenomena significantly impact the vitality and sustainability of regional development. From the perspective of general systems theory (Von Bertalanffy, 1968), population age structure, migration, and spatial distribution can be regarded as interrelated and dynamically coupled subsystems. These subsystems interact through complex mechanisms and feedback loops, collectively driving the evolution of regional population systems. Therefore, to understand the underlying mechanisms of rural population dynamics, an integrated analysis of these three subsystems is essential.

In response, this study introduces the PFA model, which systematically deconstructs population heterogeneity in rural regions across three key dimensions: population structure (Point), mobility (Flow), and spatial distribution (Area). The model consists of three interconnected submodels: (1) the Point-based Submodel(P submodel), which identifies demographic structure of individual spatial units and classifies them

* Department of Agricultural and Rural Engineering, Chungbuk National University

** Institutes of Green Bio Science and Technology, Seoul National University

into corresponding regional types; (2) the Flow-based Submodel(F submodel), which maps the pathways, directions, and intensity of population migration between regions; and (3) the Area-based Submodel(A submodel), which analyzes the evolutionary trends and clustering characteristics of population spatial distribution. The PFA model establishes an integrated analytical framework that synthesizes demographic structure, dynamic mobility, and spatial distribution patterns. This framework provides both theoretical grounding and methodological tools for examining the mechanisms behind rural population imbalance in a multidimensional and systematic manner.

3. Empirical Analysis of Rural Population Imbalance Based on the PFA Model

Take Okcheon-gun and Yeongdong-gun in Chungcheongbuk-do as examples. On the surface, the two counties appear demographically similar in terms of population structure: the proportion of children aged 0–14 stands at 8.9% and 8.1%, respectively, while the elderly population accounts for 29.8% in Okcheon-gun and 31.8% in Yeongdong-gun—both indicating severe low fertility and advanced aging.

Nevertheless, when examined through the framework of the PFA model, substantial differences between the two regions begin to emerge. From the migration perspective, Okcheon-gun shows a minor net outmigration of 75 people, primarily to rural areas outside the province, while simultaneously attracting a small number of migrants from urban areas beyond the province. In contrast, Yeongdong-gun exhibits a significant net outflow of 808 people, with most migrants leaving for out-of-province urban centers. A closer look at the eup and myeon level reveals that Yeongdong-eup is the main node of outmigration (–596), while several other myeon areas have attracted modest in-migration from external urban areas. This suggests that the central area of the county is losing its attraction and that its functional capacity is weakening.

From the spatial distribution perspective, the PFA model further reveals that the Theil Index for Okcheon-gun is significantly higher than that of Yeongdong-gun, indicating a greater degree of internal spatial inequality in population distribution. Specifically, Okcheon-eup is identified as a region with coexisting HL outlier for the 0–14 age group and LH outlier for the 65 and above age group. This pattern reflects a strong concentration of young populations in the eup center, while elderly populations are clustered in surrounding myeon areas, revealing clear intra-regional demographic disparities. In contrast, the eup and myeon units within Yeongdong-gun display a relatively random spatial distribution, with no evident clustering or dispersion patterns.

4. Conclusion

The PFA model proves capable not only of identifying macro-level population characteristics across counties but also of revealing nuanced differences in migration mechanisms and spatial structures within eup and myeon units. For Okcheon-gun, policy should focus on reducing internal spatial imbalance, strengthening functional linkages between eup and myeon areas, and promoting more balanced regional development. For Yeongdong-gun, priority should be placed on revitalizing the core functions of Yeongdong-eup, enhancing its ability to attract and retain population through improved employment, education, and housing conditions. The differentiated diagnostic capacity of the PFA model offers a robust theoretical and empirical foundation for designing more targeted and adaptive regional population governance strategies.

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How Local Government Officials View the Competition to Attract Urban-to-Rural Migrants

Insights from National Survey Findings in Japan

MASATO ITO*

1. Research Background and Objectives

Since the early twenty-first century, Japanese and South Korean municipalities have implemented policies to promote urban-to-rural migration. In Japan, these initiatives expanded markedly after the 2014 launch of the Regional Revitalization (Chiho Sosei) policy. Migration-promotion measures have helped mitigate rural labor shortages and address the vacant housing issue.

However, these policies have also intensified competition among municipalities to attract migrants. This competition raises two concerns: First, with Japan's overall population declining, municipalities must compete over a shrinking population. Second, unequal geographic and structural conditions preclude a level playing field, making the competition uneven.

Some investigations have attributed the escalation to stronger top-down steering by the central government. A nationwide NHK survey of mayors found that 79.0% of municipalities perceive inter-municipal competition as intensifying (NHK, 2023). A separate Nikkei Glocal questionnaire administered in 2023 to all prefectural governors and 815 city mayors reported that over 60% expressed concern about the race to attract migrants (Nikkei Glocal, 2024). Ten years into Regional Revitalization, the national government itself characterized the current dynamics as a "scramble for population among regions" (Cabinet Secretariat & Cabinet Office, 2024).

Some academic literature problematizes the inter-municipal competition for migrants (e.g., Tada, 2016; Hiraoka & Enari, 2017). Other studies (e.g., Nakamura, 2021; Araki, 2024, pp. 102–103) typologize prefectural comprehensive strategies and argue that the central government is not simply pursuing "competition promotion" or "responsibility shifting." Nevertheless, prior studies have not sufficiently illuminated the dynamics of migration policy as a distinct field. Moreover, although municipalities frequently report pressure and fatigue arising from the intensifying competition, there is a lack of systematic evidence on how the staff of responsible line departments—rather than chief executives—perceive these dynamics.

Against this backdrop and given that migration policy is expected to continue expanding, concerns about widening inter-municipal disparities warrant closer attention. The municipal scale likely constitutes one of the key driver of these disparities. This study investigated how local government officials perceive the realities of the competition to attract migrants, focusing specifically on differences in perceptions across respondent municipalities by population size.

2. Data and Methods

We conducted a nationwide mail survey of municipal governments. First, we identified the division responsible for migration policy in each municipality via web searches (municipality name + Iju). If there was no dedicated migration division, we contacted a closely related unit—typically the office in charge of the Comprehensive Strategy (sōgō senryaku). We mailed a questionnaire along with a stamped return envelope. Respondents either returned the questionnaire by post or downloaded a Word version from the URL provided

* International University of Japan, Center for Global Communications

in the letter and submitted it by email.

We administered the survey from October 4 to November 1, 2024. Of the 1,741 municipalities contacted, we received 424 valid responses (24.3% response rate). Beyond basic municipal characteristics, the instrument comprised four sections: (i) overall approaches to migration promotion, (ii) budgets related to migration promotion, (iii) links to Regional Revitalization, and (iv) perceived influence of national policies and measures related to migration promotion. There were 38 items in total. We obtained data on municipal population size and in-movers from e-Stat (the Basic Resident Registration Population Migration Report).
For the analysis, we classified municipalities into three groups by population size: small (<10,000; n = 106), medium (≥10,000 to <50,000; n = 155), and large (≥50,000; n = 163).

3. Results

3.1 Perceived Intensification of Competition to Attract Migrants

We asked officials whether inter-municipal competition to attract migrants has intensified (n = 416). In total, 48.1% (200) answered "competition has intensified" and 40.9% (170) answered "competition has rather intensified." Thus, 89.0% of respondents perceive an escalation in the race to attract migrants. Cross-tabulations by municipal population size showed no salient differences, indicating broadly shared perceptions across scales.

3.2 Perceived Advantages/Disadvantages in the Competition

Assuming that competition exists, we asked respondents where they believe their municipality stands (n = 408). In total, 45.8% (187) selected "somewhat disadvantaged" and 19.1% (78) selected "disadvantaged." Thus, 64.9% perceive their municipality as disadvantaged. By population size, the share perceiving a competitive advantage increased with municipal scale, whereas the share reporting a disadvantage was higher among small municipalities. These findings suggest a positive association between population size and perceived competitive advantage.

3.3 Perceived Government Influence on the Competition

Among respondents who perceived inter-municipal competition, we asked whether national migration-promotion policies and measures have influenced the recent intensification (n = 345). In total, 22.6% (78) answered "yes" and 52.5% (181) answered "rather yes." Thus, 75.1% attributed at least part of the escalation to central government actions. By population size, the "yes" share rose (15.0% → 23.0% → 26.6%) and the "no" share declined (11.3% → 7.1% → 3.6%), while "rather yes" remained high and stable across sizes (about 50–55%). This suggests that perceived government influence is widespread and particularly salient among larger municipalities.

4. Summary and Discussion

The findings indicated that municipal officials widely perceived intensified inter-municipal competition to attract migrants, and many attributed this escalation in part to national policies and guidelines. We also observed a structural asymmetry: small municipalities tended to see themselves as disadvantaged, likely because opportunities to leverage national programs are more limited and because staffing and budget limits constrain competitive capacity. These asymmetries may shape self-assessments of competitive position.

This study had some limitations. Our analysis relied on cross-sectional descriptive evidence and could not complete inferential tests. Future work should deploy multivariate models that incorporate population size alongside fiscal capacity, geography, industrial structure, and migration-related assets.

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Purpose and Significance of Marche Participation by Vendors

Focusing on Organic Marches in Nara Prefecture

Arisa IWAMOTO*, Akemi SAITO*

1. Research Background and Objectives

"Marche" is a French word meaning "market." In Japan, it is also referred to as a farmers' market or morning market, where producers sell directly to consumers. Marches are not merely places for buying and selling goods; they also serve as spaces for connecting food and agriculture, deepening bonds among participants, and exchanging information to form communities[1)]. However, in order to sustain and develop marches, challenges such as sales power and customer attraction[2)] must be addressed. Moreover, it is essential that marches continue to be meaningful places for both vendors and vendors[3)]. To achieve this, it is essential to identify the attractions of marches for vendors and visitors, as well as the unique forms of community that can only be created within marches, thereby clarifying their significance from both perspectives. Therefore, this study's purpose is clarify whether marches are meaningful venues for vendors.

2. Research Method

From May to July 2025, the survey was conducted targeting vendors at three organic marches held in Nara Prefecture. For marches to be meaningful places for vendors, their purposes for participation, perceived benefits, and factors that motivate continued participation must be fulfilled. Therefore, this survey tried to clearly three points : (1) the purpose of participating in the market, (2) the market's function as a place for community building and (3) the current status of sales ability and customer attraction as factors influencing continued participation.

A total of 41 responses were collected. The vendors who responded to the questionnaire were mainly in their 40s (14 vendors, 34%) and 50s (12 vendors, 29%), with a gender balance of 21 females (51%) and 20 males (49%). Regarding their residence, the majority (26 vendors, 63%) came from outside the marche's host cities within Nara Prefecture, showing that participants were drawn from both inside and outside the local areas. The main products offered by the vendors were agricultural products such as vegetables (12 vendors, 29%) and prepared foods (9 vendors, 22%), indicating that many stalls were related to food. Regarding the frequency of vendors participation in the marche, the majority of vendors (25 vendors, 61%) participated more than once a month. Regarding their years of participation, 19 vendors (46%) had been involved for more than four years, indicating a strong long-term commitment. As for their business history, 14 vendors (34%) had been running their businesses for over 11 years.

3. Survey Results

(1) **Purpose of Marche Participation (Figure 1)**

Regarding the purpose of vendors participation, 78% of vendors responded that "the marche's concept aligns with their products and values." And, this study focused on organic marches, vendors were asked whether the specialization in organic, pesticide-free, and natural foods had any influence. The result, 68% (28 respondents) answered that "interactions with people interested in organic and natural foods increased," 63% (26 respondents) said they could "offer safe and secure products," and 46% (19 respondents) said they could "promote organic and natural foods." These results suggest that the unique concept of the marche influences vendors' motivations for participation.

(2) **Function as a Space for Community Formation**

All vendors felt that face-to-face sales, a characteristic of marches, were beneficial in terms of consumer interaction. Specifically, they noted advantages such as "being able to easily convey the uniqueness of their

*Graduate School of Human Life Science, Doshisha Women's College of Liberal Arts

products to consumers" and "receiving direct feedback from consumers" highlighting the value of mutual communication in building trust. Regarding interaction among vendors, 93% of vendor responded that they "shared information with other vendors." Some vendors have even built relationships where they meet privately and spend time together outside of the marche. Thus, marches were not merely spaces for selling products but also places where horizontal connections among vendors were formed. It clarified that for vendors, participating in marches serves as a space for community formation with both consumers and fellow vendors.

Figure 1. The Vendors Purpose of Marche Participation

(3) **Sales Power and Customer Attraction**

To assess the potential for continued marche participation, vendors were asked whether they had customers who purchased their products outside of the surveyed marches. 73% of vendor responded "yes," and among those, 90% said they had "customers who placed individual orders." Furthermore, participating in marche led to new business connections, which in turn created opportunities to join other events and marches. Therefore, it clarified that marches also function as business hubs for vendors.

4. Discussion and Conclusion

In conclusion, for vendors of marches are not merely places for sales. Their decision to participate is influenced by whether the marche's concept aligns with their own values. For vendors, the communication with consumers through face-to-face sales—a defining feature of the marches—was found to be an appealing factor. Furthermore, connections with other vendors and consumers led to customer acquisition.

As the result, the surveyed marches were meaningful venues for vendors. If the purposes and motivating factors for continued participation can be maintained, vendors' willingness to participate will increase, leading to sustained marche involvement.

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Multiple Functions of Rice Paddy Fields in the Kotsuki River Watershed and Their Role in Flood Risk Reduction

Evaluation of Terraced Paddy Fields and Paddy Fields from Eco-DRR Perspective

Akiko MATSUDA*　Mizuki HIRA**

1. Introduction

In the Kotsuki River watershed, which flows through Kagoshima City, the "8.6 Flood" of 1993 caused extensive inundation of urban areas and resulted in severe damages[1)]. Following this disaster, river improvement measures have been implemented. However, due to the increasing frequency and intensity of heavy rainfall events under climate change, disaster risk remains uncertain. Recently, Ecosystem-based Disaster Risk Reduction (Eco-DRR)[2)], an approach that contributes to establishing resilience of the community to natural disasters and the conservation of biodiversity, has drawn increasing attention. Within the Kotsuki River watershed, upstream terraced paddies and extensive midstream paddy fields constitute potential resources for Eco-DRR. However, their specific roles in reducing flood and landslide risks remain poorly understood, and few studies have provided quantitative evidence. Moreover, the conservation of terraced paddies is endangered by farmland abandonment and a shortage of successors. Therefore, we hypothesize that paddy fields contribute more to Eco-DRR than other land uses, and to examine this, we analyzed TWI and the paddy field distribution as indicators, quantified the water retention capacity of terraced paddies, and discussed their role in disaster risk reduction within the watershed.

2. Methods

The Topographic Wetness Index (TWI) within the Kotsuki River watershed was calculated in QGIS (v. 3.40.5) using a digital elevation model (Geospatial Information Authority of Japan, 2016)[3)]. Watershed boundary data were obtained from watershed mesh data (Ministry of Land, Infrastructure, Transport and Tourism, 2009)[4)], and river data were acquired from OpenStreetMap via QuickOSM in QGIS. TWI was derived from the upslope contributing area (a) and slope angle (β), as $TWI = \ln(a / \tan\beta)$, based on the DEM. TWI identifies areas with potential water accumulation and TWI is used to evaluate Eco-DRR potential in paddy fields [5)]. Accordingly, the TWI values of paddy fields in the watershed were calculated as well.

To examine whether paddy fields have significantly higher TWI values than other land-use types (Ministry of Land, Infrastructure, Transport and Tourism, 2016)[6)], the watershed (108 km²) was divided into 100 m × 100 m grid cells, and land-use type and TWI were extracted for each cell (Table 1). Statistical analyses were performed in R (v. 4.5.1). A Kruskal–Wallis test was conducted to detect overall differences among land-use types, followed by Dunn's test with Bonferroni correction to identify significant pairwise differences. In addition, a randomization test was attempted to verify that paddy field cells are distributed in locations with relatively high TWI within the watershed. From all valid TWI cells within the basin (n = 10,121), the same number of cells as the paddy field subset (n = 734) was randomly selected, and their mean TWI was calculated. This procedure was repeated 9,999 times. The number of iterations in which the random mean exceeded or equaled the observed mean for paddy fields was recorded, and the corresponding probability was defined as the p-value.

Next, paddy field polygon data (Ministry of Agriculture, Forestry and Fisheries, 2024)[7)] were used to calculate the paddy field distribution. For each 50m grid cell, a 500m radius buffer was generated in QGIS, and the proportion of paddy fields within the buffer was calculated. Finally, water depth measurements were conducted in six terraced paddy fields, three managed under an ownership program and three managed by the

**Graduate School of Agriculture, Forestry and Fisheries, Kagoshima University, ** Department of Environmental Sciences and Technology, Faculty of Agriculture, Kagoshima University

Table 1. Land Use Categories and Mean TWI within the Watershed

Land use	TWI	Number of cells
Paddy fields	0.24 ± 0.06	734
Other agricultural land	0.18 ± 0.04	406
Forest	0.14 ± 0.04	6223
Wasteland	0.16 ± 0.05	111
Build up area	0.24 ± 0.10	2243
Roads	0.32 ± 0.11	83
Railways	0.35 ± 0.13	16
Other land use	0.24 ± 0.10	286
Rivers and lakes	0.35 ± 0.07	102
Golf courses	0.18 ± 0.04	6
Total	0.18 ± 0.08	10211

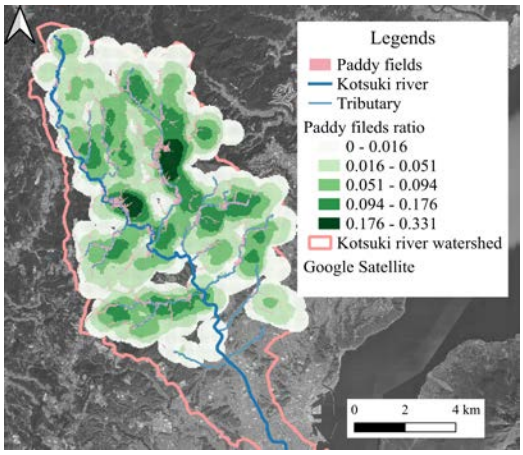

Figure 1. Paddy Fields Distribution in the Watershed

head of the local terraced field committee. A 30-cm survey rod was installed at two locations in each field (near the inlet and outlet), and water depth was measured once a week from June 13 for a total of five surveys. Water storage capacity was then estimated from depth and surface area. Soil moisture and infiltration were not considered.

3. Results and Discussion

The mean TWI of paddy fields within the watershed was 0.29 ± 0.11. The mean TWI of terraced paddy fields was 0.25 ± 0.06, whereas that of non-terraced paddy fields was 0.29 ± 0.11. A comparison between the two showed that non-terraced paddy fields had significantly higher TWI values ($p < 0.01$). A comparison of TWI distributions among land-use types using the Kruskal–Wallis test revealed significant differences ($p < 0.001$). Furthermore, Dunn's test with Bonferroni correction confirmed that paddy fields exhibited significantly higher TWI values compared with forests, built-up areas, and other agricultural lands ($p < 0.001$). In addition, The randomization test (9,999 resamples) found no cases exceeding the mean TWI of paddy fields ($p < 0.001$), indicating that paddy fields are clearly located in wetter areas.

Within the watershed, the paddy field distribution ranged from 0% to 33% (Fig. 1), being lower around terraced paddies (5–10%) and higher in mid-to-upper stream areas (25–30%). A higher distribution reflects paddy field continuity, supporting biodiversity and indicating greater potential for rainwater retention and flood mitigation.

Field measurements of terraced paddies revealed an average storage capacity of 23.5 m³ per field. With approximately 240 plots, the total capacity is estimated to exceed 5,600 m³, considering that terraced paddies in the headwaters of the Kotsuki River function as temporary reservoirs. In addition, Previous studies have reported that the terraced structure reduces the impact of debris flows[8], and have further suggested that continued agricultural management of terraced paddies may help suppress rapid subsurface infiltration during heavy rainfall[9]. Therefore, while midstream paddy fields contribute broadly to biodiversity and flood regulation, upstream terraced paddies, though smaller in scale, provide temporary storage and infiltration regulation functions, thereby playing an important role in supporting basin-wide Eco-DRR.

4. Conclusion

This study analyzed paddy field distribution and TWI in the watershed and further quantified the storage capacity of upstream terraced paddies. The results showed that mid-to-upper stream paddy fields exhibited higher TWI values than terraced paddies, indicating a tendency to be in wetter areas. In contrast, field measurements confirmed that terraced paddies also provide a certain degree of water storage, and owing to their upstream location, are considered to disperse initial flood runoff and mitigate peak discharge. In addition, further verification is required to ensure the validity of the statistical analyses conducted in this study.

Overall, these findings suggest that future rural planning should promote conservation activities and

watershed management measures that maximize the functions of paddy fields. For terraced paddies facing a pronounced shortage of successors, re-evaluating their cultural and landscape values alongside their flood mitigation functions as social value is expected to contribute to sustainable conservation and the enhancement of river Basin Disaster Resilience and Sustainability by all.

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한국농촌계획학회
KOREAN SOCIETY OF RURAL PLANNING