

## **INTEGRATED CONSERVATION APPROACH: A CASE OF SHIRAKAWA-MURA IN JAPAN**

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### **Abstract**

Integrated conservation approach has been widely discussed and adapted in development of various sites of cultural heritage in the world. Shirakawa-mura, known as a historical region with traditional Japanese residence architecture, was listed as World Heritage Site in 1995. In 2000, over 1.2 million tourists visited the site and contributed to local economy. At the same time, however, the problem related to excessive traffic and tourists was identified as a serious factor to deteriorate the quality of daily life of the residents. Local government in cooperation with local community planned and experimented various methods to control traffic along with promoting sustainable tourism. This study focuses on: 1) identifying the problem Shirakawa-mura faces as a world heritage site; 2) highlighting some specific measures and experiment used to cope with growing problem in the preservation district, and 3) identifying characteristics of development of Shirakawa-mura in the context of integrated conservation approach.

### **Introduction**

In the context of conservation and management of cultural heritage of the world, sustainable development and management of the heritage sites has become an important part of the total plan of development. Being registered as a World Heritage Site can give positive effects by attracting people and boosting the development of local economy through an expansion of tourism. At the same time, it is also true that excessive volume of tourists and its sudden development affect local community negatively.

Integrated conservation approach has been widely discussed and put into practice for the development and management of historical sites by professionals and researchers in the field of conservation of cultural property. This approach highlights the importance of holistic planning and management of the sites including government officials, local experts, local community, professionals of various fields such as industrial development, tourism, local investment, law, architecture, civil engineer, transportation, and social development.

This study looks at the case of the World Heritage Site in Japan, Shirakawa-mura. When a small village in rural Japan, Shirakawa-mura, was registered as the World Heritage Site in 1995, the community welcomed it as cultural prosperity of the region. Several years later, however, local residents started to suffer from rapid increase of tourists and consequently, experiencing negative effect on daily living. Local government and community people worked together to develop policies and methods to cope with the problems that community was facing. This study particularly focuses on the management method and development plans introduced in preservation district. It identifies efforts of local government and

community to introduce regional development plan in the context of integrated conservation approach.

## Background

Shirakawa-mura, or a village of Shirakawa-go, is located in mountainous area in Gifu prefecture. Its location, however, is closer to Ishikawa and Toyama prefectures, the Northwest of Japan. With annual average temperature of 11C and heavy snow of 2-3m during the winter, it is identified as hazardous snow area of Japan. It has a total population of 2,200 with 912 household<sup>1</sup>. One third of the population is concentrated in the village center, Ogi-machi. In the past, major industry of the village shifted from agriculture to hydroelectric energy, and then to tourism. Currently, 57% of working population is engaged in the third industry, represented by tourism<sup>2</sup>.

Shirakawa-mura is known for its traditional Japanese architecture called “Gassho-zukuri” or Gassho-style. Traditionally, local community was active in preserving their traditional architecture, and established “Conservation Committee” in 1971. Further, with the cooperative labor system called “yui” – unite, each household shared its labor power to repair and rebuilt the roof of this traditional architecture, which is made of natural material of locally grown products (Figure 2)<sup>3</sup>. With constant community effort and commitment to preserve its cultural property, it was first identified as Japanese Important Traditional Architecture Preservation Zone in 1976, and then registered as a World Cultural Heritage Site in 1995. As a residential district, it is the first and only World Cultural Heritage Site in Japan.



Figure 1. Shirakawa-mura Overview



Figure 2. Restoration of Gassho-zukuri  
Rethatching of roof

## Problem

Prior to 1995, the average number of visitors was estimated between 500,000 to 700,000 annually. As shown in Figure 3, after the registration of the World Heritage Site, the number of visitors increased constantly. It increased to one million in 1996, and then it was estimated over 1.5 million in 2002<sup>4</sup>. During the past eight years, the reaction of the local people had become mixed and more complicated<sup>5</sup>. Complaints of the local residents varied from bad mannerism of visitors invading into their daily life to traffic congestion and illegal parking seen everywhere in the preservation district<sup>6</sup>. Since these traditional architectures themselves serve as local people’s residents, massive number of tourists directly affects daily living of people in the

village. This section identifies the problems through analysis of quantitative and qualitative data gathered through interviews and surveys<sup>7</sup>.

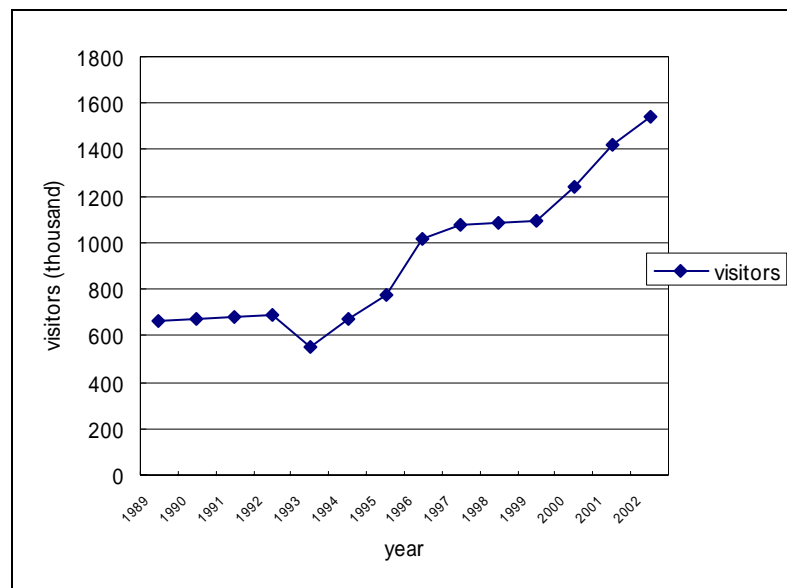


Figure 3. Number of visitors to Shirakawa-mura

Source: Number of tourists in Shirakawa-mura, Shirakawa-mura administration, 2003

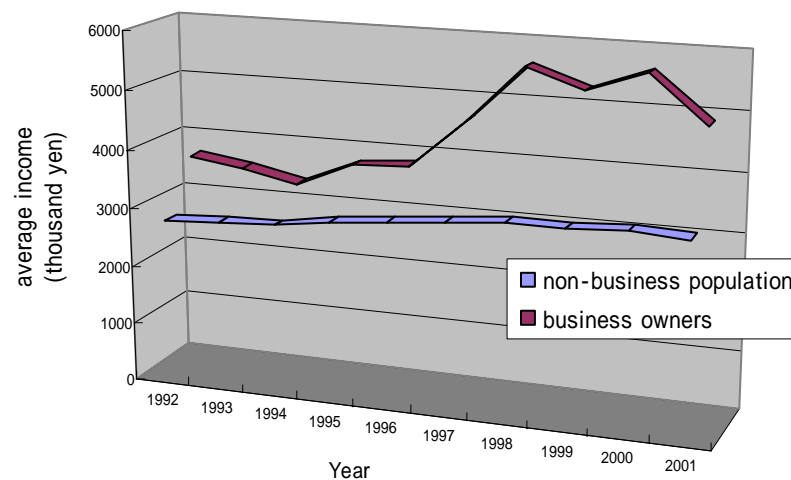
The analysis reveals the following four major points: 1) sudden increase of tourists and excessive traffic had negative impact on local community; 2) expansion of tourism business created income gap between tourism business owners and others; 3) expansion of tourism industry increased the abandoned agricultural land; 4) increased number of renovation of houses is gradually changing the landscape of preservation district.

1) Sudden increase in tourists and excessive traffic had negative impact on local community: According to the survey, 49% of the local residents responded the increased number of tourists affected negatively. Negative impact included bad manner of tourists, high density of population during the daytime, traffic pollution, and deterioration of natural environment. Among major problems the local community faced, the excessive traffic was listed as one of the most serious problems. The survey reveals that 68% of local residents suffered from tourist vehicles and sightseeing buses. Traffic jam hampered daily life of the residents. It also increases level of anxiety of traffic accidents, illegal parking, along with excessive noise of the vehicles. In this condition, 87% of the respondents believe that traffic regulation in the preservation district would be necessary to keep their daily living safe and sound.

2) Expansion of tourism business created income gap between tourism business owners and others: As shown in Figure 4, after 1996, the average income for business owners increased drastically, and thus the income gap between the business owners, namely tourism related business, and others became evident. Further, the survey result indicated the residents who are not engaged in tourism business felt more negative impact from increased tourists, and also felt that they only suffer without any gain. This situation created tension between two groups. They even

felt losing good old community mind in the village. In a small community like Shirakawa-mura, such sudden increase in income gap may have negative impact on mind of people.

Interviews with local administration revealed the following. Recognizing above mentioned problem, the administration tried to introduce re-distribution system of public income such as profit from public parking located in the preservation district. They planned to allocate the profit among those who do not own tourist business. However, this plan was not implemented due to the opposition that this system is not totally fair nor justified for tourism business owners.



**Figure 4: Average Income of Shirakawa-mura population**

Source: Annual data document of Shirakawa-mura administration (1993-2002)

3) Expansion of tourism industry increased the abandoned agricultural land: During the last decade, the increase in abandoned agricultural land has become evident. Agricultural land, particularly represented by rice field was seen as an important part of traditional landscape of Shirakawa-mura. In 1976, Ogi-machi had 23 hectares of agricultural land, but it was decreased to 9 hectares total in 2000. Among 9 hectares, an estimated 3 hectares of agricultural land are left uncultivated<sup>8</sup>. Document analysis and interviews find that boost in tourism industry has changed the attitude of local people toward agriculture. In 1980, population engaged in agriculture occupied 17.7 % of total work force but it was decreased to only 1.3% in 2002<sup>9</sup>. Many households own agricultural land for its additional income. Thus, it is often the case that with increased business in tourism, many could not afford to spend time and labor in cultivating agricultural land. Income from parking business and souvenir shops give more profit than selling agricultural products and this reduces people's motivation to keep rice field cultivated. Other analysis includes: an average size of traditional rice field in Ogi-machi is too small to introduce advanced machines, and thus, rice production is considered rather inefficient. However, World Heritage Shirakawa-mura Foundation considers this problem serious and started to introduce experimental methods to cope with this current situation.

4) Increased number of renovation of houses is gradually changing the landscape of the preservation district: Since late 1980's Shirakawa-mura suffered from constant decrease in its population. However, in 1998, after being listed as World Cultural Heritage Site, population saw an increasing trend. It recorded over 2,000 in 2003 after 13 years. Explanation include: a) expanding tourism industry is attracting young generation to return to the village; and b) increased public construction projects also attract labor population<sup>10</sup>. Shirakawa-mura welcomes this trend, particularly increase of young families. However, at the same time, increased number of reconstruction and renovation of houses is affecting the overall landscape of preservation district. Traditionally, since 1971, all requests on reconstruction of architecture have been submitted for approval of Preservation Committee. The number of application increased drastically since 1996 to cope with increasing population of the village. The current guideline on reconstruction of architecture within preservation district allows maximum of 50% expansion to the current residence. Increasing number of such reconstruction of residence is gradually changing the overall landscape of the preservation district. This shows the difficult problem of balancing the demand of residents and conservation of cultural heritage site.

### Management methods experimented

Given the background mentioned above, the Shirakawa-mura experimented several methods to deal with the growing problems. This section introduces two particular experiments: 1) traffic control experiment; and 2) agricultural land reform experiment.

#### 1) Traffic control method

In cooperation with the Road Division of the Ministry of Land, Infrastructures, and Transportation, Shirakawa-mura government and community carried out traffic management experiment in 2001. The experiment had four objectives: 1) to test adaptability of traffic control system at world heritage site; 2) to test the feasibility of introducing park & ride system; 3) to see the effectiveness of pre-reserved parking system; and 4) to analyze the economic impact of traffic control to tourism industry<sup>11</sup>. It had four aspects of its organization as shown in Table 1:

**Table 1. Traffic Management Experiment in Shirakawa-mura (2001)**

methods	details
1. Restricted entry of vehicles to Shirakawa-mura, Ogi district (central part of the world heritage site)	<ul style="list-style-type: none"> <li>• Between 9:00-15:00 entry to the district by automobile was restricted</li> <li>• Resident pass was issued to the local resident but cooperation to limit the use of automobile was promoted</li> <li>• Special pass was issued to the visitors who pre-registered for special visits including lunch</li> </ul>
2. Introducing shuttle buses and bicycles	<ul style="list-style-type: none"> <li>• A total of three parking lots were created (560 parking space) to introduce shuttle bus to transport visitors</li> <li>• Shuttle bus from parking to the preservation district is free of charge and runs every 10 to 20 minutes</li> </ul>

	<ul style="list-style-type: none"> <li>• Among the parking lots, one parking was reserved for pre-reserved visitors (85 space, 300yen each) and another parking was prepared for non-reserved visitors (338 space, 500 yen each)</li> <li>• One parking was reserved for sightseeing bus only (2,000 yen)</li> <li>• Free rental bicycles were set up for visitors</li> </ul>
3. Pre-reservation of parking lots and discount parking fees	<ul style="list-style-type: none"> <li>• Internet parking reservation was introduced with discounted price</li> <li>• Reservation desk and mobile phone reservation were set up</li> <li>• Information on parking availability was announced at the above mentioned parking-reservation system</li> </ul>
4. Introducing electric automobiles	<ul style="list-style-type: none"> <li>• Two electric automobiles (five passenger seats each) with drivers were prepared for handicapped visitors</li> <li>• Three electric automobiles (two passenger seats each) were prepared for experimental ride for local residents</li> </ul>

Source: Report of Shirakawa-mura basic traffic plan, Gifu prefecture, 2001.

The result of the experiment suggests several positive aspects of this traffic control system. They include: 1) average time of visitors' stay in the district increased by 50% from 1.5 hours to 2.2 hours, and consequently, an average spending per visitor increased by 10%; 2) the level of noise by visitors decreased; 3) over 90 % of visitors responded positive to the introduction of traffic control system; and 4) 70% of local residents requested the introduction of traffic control system.

Despite the experiments in 2001 and 2002, the systematic traffic control management has not yet been introduced. The interviews reveal that 10 percent of residents in preservation district oppose to the traffic control. The dominant reason is the possibility of negative impact on tourist business, particularly for those who own private parking space attached to the shops and restaurants. Shirakawa-mura administration believes that traffic management has to be initiated by local community and thus, has not imposed any measures as a policy. In fact, in 2003, local community of Ogi-machi took an initiative to organize the experiment for three days during the peak season, introducing one-way system to control the traffic. It was planned, organized and implemented by the Ogi-machi management committee. This initiative is considered as a major step for the introduction of appropriate method. With these experiments and survey conducted in the past, the Construction Division of Shirakawa-mura administration suggests the following points in the basic traffic control plan. It identifies the maximum visitors that preservation districts could hold per day is 10,000. The plan would not support constant increase of visitors. Rather, it aims at providing tourism experience of high quality within maximum number of visitors per day. The specific measures include reservation system for parking with price control, traffic control within preservation districts (30days per year), and allocation of 850 parking spaces to several different locations.

## 2) Agricultural land reform experiment

With growing problem of abandoned agricultural land, several different experiments took place in Shirakawa-mura since 2000. Conservation Committee formed a team to cultivate the land with technical support of World Heritage Foundation. In 2001

and 2002, an Old People Club and a public school respectively took an initiative to cultivate unused land and produced rice. Although such experiments had a positive effect, the World Heritage Foundation finds the necessity to introduce systematic plan to deal with 3 hectares of uncultivated agricultural land. Board of Education and Industry Division of Shirakawa-mura administration spent last three years to analyze the current situation along with research on alternative methods used in other parts of Japan. Such alternative methods include land-ownership system, introducing subsidy to cultivation of land, rehabilitating agricultural land with environmental education. The difficulty includes the balance between introducing subsidy and keeping motivation of current farmers who produce rice and other agricultural produce without additional subsidy. Further, since the Shirakawa-mura community has kept the policy of “not for sale” “not for rent” and “not to destroy” with regards to the property in the village for long time, it is important that land-ownership method is limited within the residents of Shirakawa-mura.

### **Integrated Conservation Approach in Shirakawa-mura**

Analysis of the evolution of development plans of Shirakawa-mura as well as research on the activities found that integrated conservation approach is reflected in the effort of Shirakawa-mura to preserve the cultural heritage site in sustainable manner. These initiatives include: 1) World Heritage Shirakawa-go Conservation Foundation was established in 1996; 2) the Fifth Development Plan (2001-2010) of Shirakawa-mura is characterized by holistic approach to development; 3) traditional “Conservation Committee” has evolved to reflect the voices of various stakeholders; 4) Integrated plan of action was formulated to tackle the existing problems.

#### 1) World Heritage Shirakawa-go Conservation Foundation:

World Heritage Shirakawa-go Conservation Foundation was established in 1996. The Secretariat consists of four professionals, headed by a member of Board of Education of Shirakawa-mura, and it includes one architectural engineer. In addition, during tourist season (April to November) additional staff members are hired to assist its management. The major activities of the Foundation include research, assistance and guidance of world heritage conservation activities, management of public parking, pre-examination of reconstruction applications, partial restoration of cultural architectures and cooperating with major construction activities in preservation districts. The Foundation is characterized by its close collaboration with different divisions of Shirakawa-mura administration, such as Environmental Planning Section (General Affairs Division), Agriculture and Forestry Section, Construction Section, and Tourism Section of Industry Division. Prior to this Foundation, each section worked relatively independently. This Foundation makes it possible to share information and activities among experts and people involved in cultural heritage conservation, reflecting various opinions and other related activities.

#### 2) Evolution of Development Plans

Five Development Plans were prepared in the past in Shirakawa-mura. Although the effort of local community to preserve cultural properties is stated in these plans, each plan had different emphasis reflecting evolution of the region. The first three Development Plans (early 1970s-1995) mainly aimed at development of industries to support economic activities in the region. For example, the Second Development Plan (1975-1985) focused on the tourism to improve living of people in hazardous

snowy region. The Third Development Plan (1986-1995) is then emphasized on preservation of cultural properties as well as development of viable local products. The earlier development plans were relatively single sector oriented to promote particular segment of local economy rather than introducing holistic approach to the regional development<sup>1 2 1 3</sup>. The Fourth Development Plan (1995-2000) identified the importance of improved basic infrastructure along with preservation of natural environment, as well as preservation of cultural heritage for the next generation<sup>1 4</sup>.

The Fifth Development Plan (2001-2011) is characterized by its integrated objectives of development of nature, people and living, and its economy<sup>1 5</sup>. The interviews and document analysis reveal the following three major aspects of this plan: 1) integration of tourism development, cultural preservation, and quality of individual living; 2) bottom-up approach as a process of development; 3) local residents as the center of development plan with emphasis on young generation. First, for the first time, development of tourism is identified as a part of cultural oriented policies of development. It also emphasizes the importance of tourism development in relation to the other sectors. Management plan of the heritage site together with enhanced quality of living of local community has become the focus of its total development plan. The preservation of cultural properties is not only seen as tourism attraction, but rather, it is identified as non-monetary reward and pride of the local community. Second, it is also noted that bottom-up approach was utilized as a process of collecting residents' opinion to organize the Fifth Development Plan. The third parties carried out interviews and organized community meetings to widely listen to the voices of local residents. Third, the local residents themselves are the center of this development plan. "For villagers to read", "Easy to understand", "With the language of Shirakawa villagers" were the key factors always considered. Unlike the previous development plans, involvement of external development experts was kept minimal, and rather, the voices of different groups in the community were emphasized. Particularly, active involvement of children was considered most necessary as an important next generation, and every child in the village submitted their opinion in writing. This development plan was distributed in each household in Shirakawa-mura. Interview with the team in charge of development plan supported the idea that a listing as a World Cultural Heritage Site positively increased the sense of responsibility of villagers, and thus, the organization of Fifth Development Plan received strong support of the community.

### 3) Evolution and initiatives of Conservation Committee since 1971

Shirakawa-mura "Conservation Committee" was established in local community in 1971. With the initiatives of local groups, the committee aimed at protecting environment and landscape of the region, particularly, in preservation districts. Until today, any request of changes such as new construction, renovation and road pavement are submitted to monthly meeting of "Conservation Committee". Standard procedure of the monthly meeting includes analyzing the request of renovation for approval to its plan according to the existing guidelines and resident regulations (Figure 5). During the 15 years between 1977 and 1991, 461 cases were examined and majority of the plans were either approved or reformulated for approval based on guidelines. Further, it should be noted that the process of its application involves different groups, such as Ogi-machi Preservation group, Board of Education, and Council of traditional building preservation (Figure 5). This indicates the any changes within the preservation districts are well informed and examined by different

levels of local community and administration. Normally, this process takes between two weeks to one month. This self-sufficient procedure illustrates a strong commitment and the initiatives of the local community to preserve the traditional and cultural properties as well as improving the quality of life of local residents.

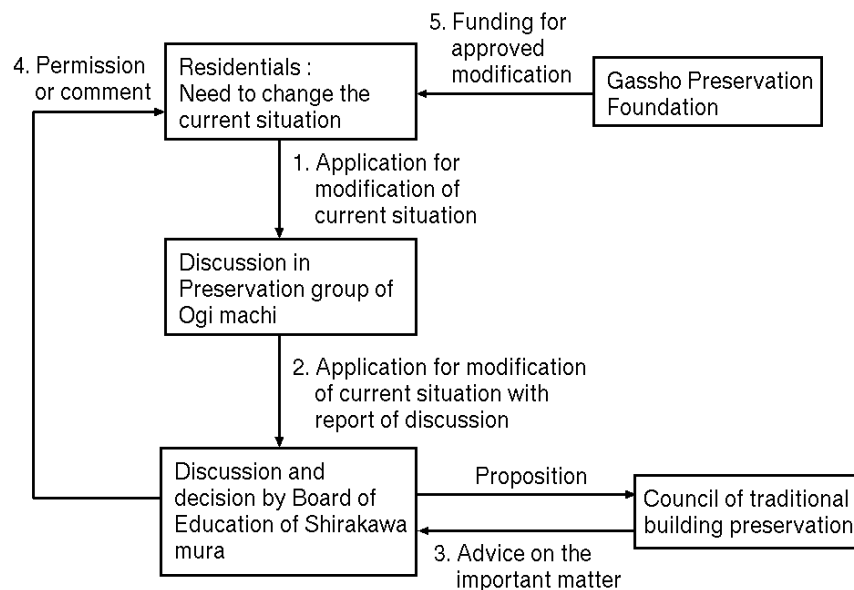


Figure 5: Application Procedure for Renovation of Architecture  
(Source: Document of Shirakawa-mura administration, Shirakawa-mura, 2003)

#### 4) Integrated Plan of Action

Since late 1990s various studies took place to deal with the growing problem. Shirakawa-mura administration carefully analyzed these studies and produced a plan of action, called “A total plan of Shirakawa-mura”. The content of this plan of action has three major areas: traffic control, agricultural land reform and preservation of landscape. Since traffic control and agricultural land reform plans were discussed earlier in this paper, this section covers preservation of landscape plan.

**Preservation of landscape Plan:** Construction Division, Agricultural Division, and Board of Education work together in formulating preservation of landscape plan. It is noted that importance of preservation of Gassho style houses as a main architecture is easy to receive attention. However, preservation of landscape includes other properties and objects surrounding Gassho style houses. Board of Education of Shirakawa-mura takes initiatives to identify other important cultural properties to be included in conservation guidelines. Preservation Charter of Cultural Preservation of Shirakawa-mura, clearly specifies that restoration of cultural property of the region shall follow the traditional techniques with materials locally available<sup>16</sup>. This is to follow Nairobi Declaration of 19<sup>th</sup> UNESCO General Conference (1976), defining the importance of the balance and harmony when restoring the cultural properties. In Shirakawa-mura, the restoration activities carefully select appropriate stonewall and hydro facility equipment, rather than creating totally new facilities.

Problem identified in the region is inter-sectional. It includes traffic control issue, abandoned agricultural land, as well as overall landscape of the preservation

districts. In order to cope with these problems, various sectors such as transportation division, tourism division, agriculture sector, education and culture sectors, as well as construction division, need to work together. This plan of action reflects such needs and closer cooperation among different sectors are required to implement the plans.

## Conclusion

The study looked at the case of Shirakawa-mura, a World Heritage Site in rural Japan. This case represents the complexity of preservation of cultural property as residential site, giving special attention to the balance between the tourism development and keeping good quality of life of local residents. Analysis of development plan of Shirakawa-mura and activities and experiments conducted in the region shows the efforts and commitment of local community to preserve their residential areas as traditional cultural heritage. At the same time, evolution of “Conservation Committee” and the new process to prepare the latest development plan created the opportunity of local voices to be heard and reflected in development plans. It also illustrated how the positive effect of being listed as a World Cultural Heritage Site, along with the growing problems they faced triggered local community to develop its own improvement plan in integrated manner. This case shows the integration of different sectors of local government and community is a key to its sustainable development, along with conservation of cultural heritage site, particularly, in small and traditional village of Shirakawa-mura.

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