

Vacant House Management and Homecoming Behavior of Owners in Mountainous Areas

—A Case Study in Kanna Town, Gunma Prefecture—

山間地域における空き家管理と所有者の帰省行動
—群馬県神流町を事例として—

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空き家所有者に注目し、空き家管理、所有者行動、彼らと農村社会との関係を、インタビュー調査とアンケート調査から明らかにする。1) 空き家化は、継続的に起きていて、おおむね空き家となって10年超で管理頻度・帰省頻度が低下する、2) 多くの所有者は、年1回以上定期的に、集落に来て、社会参加するか、個人的な余暇を過ごす。そして、一部の所有者は、月1回以上訪れたり、積極的に交際や個人的余暇を楽しむ。3) 人口、空間管理、社会参加への所有者インパクトが定量的に観測され、間接的に農村の持続に寄与していた。4) 所有者意識にはプライベート志向と社会志向が存在し、余暇活動と社会参加で類型化ができた。

Keywords: Related Population, Homecoming Behavior, Vacant House Management, Social Impacts
キーワード：関係人口、帰省行動、空き家管理、社会的インパクト

1. INTRODUCTION

In mountainous areas of Japan, vacant houses issues have been serious. According to the “Housing Survey(2018)” of Ministry of Internal Affairs and Communications, vacant house ratio of Japan is 13.6%, and the number of vacant houses is 8.49 million. The number of municipalities whose vacant house ratio were over 20%, was 161. Most areas in those municipalities are consist of mountainous areas¹⁾.

Asset value of vacant houses, as well as land value and market liquidity, is lower than that in urban areas. In recent years, many local governments in rural areas where there are a few real estate companies start to establish and operate “Vacant House Bank” (Around 40% (756) of them established). They are able to gather information of vacant houses and introduce them to city residents³⁾.

On the other hand, it would be argued that it is important to involve outsiders with local governments or residents for the sustainability of rural society. According to the website of Ministry of Internal Affairs and Communications, outsiders are categorized into i) “Exchange Population” like tourists ii) domestic migrants from places outside of local society, iii) “Related Population” like those who were born and grown up in the local society and moved out, or rural supporters such as experts or college students⁴⁾. In the study we focused on the people who were born and grown up in the local society and moved out. Because they have stronger bonds with residents than tourists do and their number is more than that of domestic migrants. It could be called them Vacant House Owner (VHO), which refers to those absent residents owning properties in local society. In depopulated and aging areas, it is a serious

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issue to sustain local association activities, local festival, and to manage houses, and farmlands⁵⁾.

VHOs were born and raised in their home settlements until they moved to cities for education or work. After their parents died or moved to nursing homes or to live with them in the city, they became the owners of those vacant houses and have connections to their original home settlements. Many of them return to these settlements and maintain their vacant houses, graves, or farmlandsⁱⁱ⁾.

The study aims (i) to clarify the present situation of vacant house management and attributes of VHOs, (ii) to clarify the present situation of another spatial management and recreational and social activities, and (iii) to discuss their relationships with rural society through their impacts on population and spatial management in the remote settlements. At last, we try to propose suggestions to develop social impacts for rural sustainabilityⁱⁱⁱ⁾.

According to studies in the field of rural planning, for example, Hirata et al (2010)⁸⁾, it has been pointed out that (i) the level of vacant house maintenance is not directly proportional to the distance from owners' dwellings to the vacant houses, (ii) bipolarization to low and high levels is observed in samples where the vacant house and owners' main residence are both located in the same municipality, and (iii) VHO who live faraway tend to keep a high level of maintenance.

Yusa (2006)⁹⁾ pointed out that after categorizing vacant houses from the viewpoint of the frequency of maintenance, there are correlation between the frequency of maintenance and social participation, and between the frequency of maintenance and intention of continuing spatial management in the future. Saito (2008)⁶⁾ focused on the relationship between vacant houses and farmland management, and stated that i) farmland management contributed to the sustainability of vacant house management ii) VHOs who maintained farmland tended to live nearer than those who only maintained vacant houses. Previous studies have shared the same research points with this study in terms of frequency of maintenance and social participation. Differently, the

characteristics of this study are that i) it focuses on the role of VHOs in rural sustainability, complementing residents' role, and that ii) the investigation was carried out in the late 2010s when aging populations and depopulation issues would be argued more seriously than those time when the previous studies were conducted^{iv)}.

2. METHODS

2.1 Study Area

The study area was Kanna Town in Gunma Prefecture (Figure 1). The aging population rate of Kanna is 61% (the fourth most {2005} of the aging rate ranking among all the local governments except Fukushima Prefecture which affected by 2011 nuclear accident). We also investigated in Nanmoku Village whose aging rate ranks first, but this study is about Kanna Town. Because the vacant house issue is also regarded as a serious one there, the local government has acknowledged the survey^{11) 12)}.

Kanna town is located in the southwestern part (called "Seimou" area) of Gunma Prefecture, where 88% of the land use is forest. In the town, the residential area is mainly distributed along Kanna River, which flows from Ueno Village (next to the western part of the town) to Fujioka City (next to the eastern part), and along the branches, which is surrounded by mountains with heights of more than 1000 meters. There are no supermarkets or convenience stores, but several self-operated stores. There is a grocery store, a liquor store and a few restaurants in the center of the town, while the rest of them have been closed¹³⁾.

The population of the town is 1775 (949 households) in 2020, but was around 10,000 in 1950, which indicate that the population has decreased to one fifth from 1950 to 2020. In 2000, Manba Town and Nakazato Village were combined into one town, Kanna¹⁴⁾.

Historically, silkworm breeding, arum root farming and forestry were popular industries in the area. But these industries have declined since high economic growth era in Japan. Today, almost all the farmers

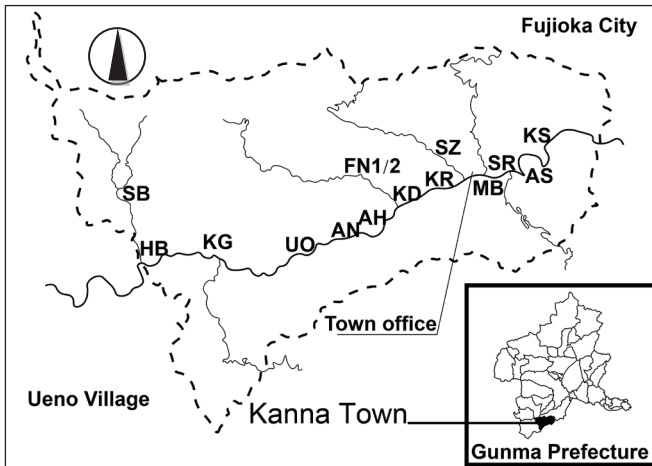


Figure 1 Study Area

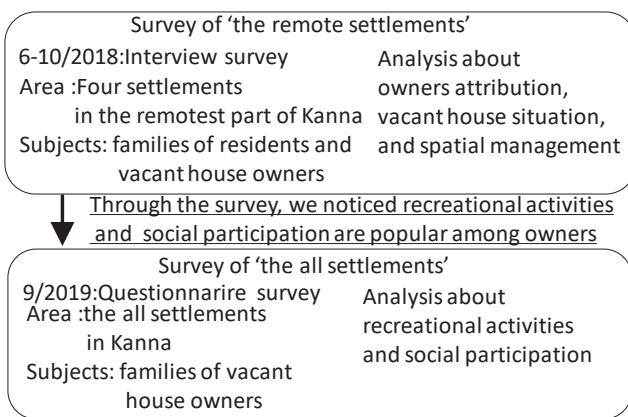


Figure 2 Process of the Surveys and the Analysis

Table 1 Outline of Survey

Item	Interview survey	Questionnaire survey
Survey date	6-10/2018	9/2019
Study area	four settlements of the remotest part of Kanna	all settlements in Kanna
Ask who	residents	vacant house owners (VHOs)
Subjects	residents and VHOs	VHOs
Number of valid responses	128 (VHOs), 114 (residents)	37 (VHOs)
Number of subjects parameter	130 (VHOs), 118 (residents)	117 (VHOs)
Method	visiting and interviewing all residents in two settlements about themselves and VHOs	mailing questionnaire sheet with return envelope to VHOs who pay property tax from outside Kanna
Abstract of question items	period of being a vacant house	period of being a vacant house*
	dwelling of VHOs	dwelling of VHOs*
	factors causing vacancy	factors causing vacancy*
	attribution of VHOs and residents	attribution of VHOs and residents*
	frequency of homecoming of VHOs	frequency of homecoming of VHOs*
	frequency of house management of VHOs	frequency of house management of VHOs*
	farmland management of VHOs and residents	farmland management of VHOs and residents*
	-	Social participation of VHOs
-	Private activities of VHOs	

* These items were shown on the "notes" part.

are self-sufficient, and there were only 30 commercial farm households among 200 farm households in the town. Many residents commute to neighboring city, Fujioka whose population is around 65,000¹⁵⁾.

2.2 Methodology

Firstly, basic data were collected by the interview survey in the area where the depopulation issue was the most serious and seemed more easily to be observed. In 2018, the interview survey was conducted in four settlements, SB, FN1, FN2 and SZ that are in the remotest part of the town (hereinafter called "the remote settlements"). We defined ^{v)} "the remotest parts" as the places located along the brunch of Kanna River (another parts are located along main stream of Kanna River) and also located "at the dead end," which means there are no settlements along the road from there to the mountains. The local government officer recommended these four settlements for the survey because the number of vacant houses was almost the same as that of lived-in houses.

The subjects of the interview in the remote settlements were all residents. They were asked about themselves and 128 VHOs (out of 130 whose houses were vacant in the settlements). Because, in general, in such a mountainous area where their social bonds are strong, residents usually know details about VHOs whose vacant houses are located in their neighborhood. 114 effective interview records out of 118 residents were received. Questions included attributes, spatial management activities of VHOs and residents, and situations of other vacant houses ^{vi)}. During the survey, we had several chances to interview VHOs in face, and noticed that they enjoyed recreation and participated association's events or collective work at times. So we wanted to know whether these activities were popular or not in other settlements and planned to do the next survey. In 2019, a questionnaire survey was carried out by mail. One condition of survey subjects was that they paid housing property tax for houses in the town. And the other condition was that their present

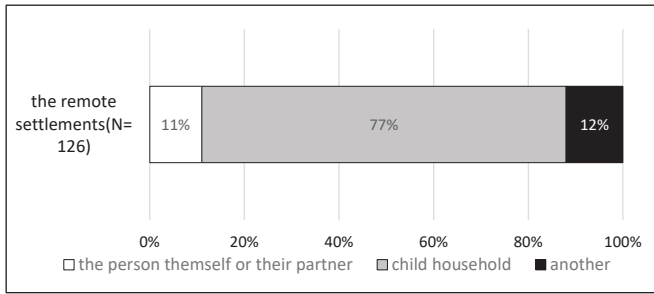


Figure 3 Attribution of VHO

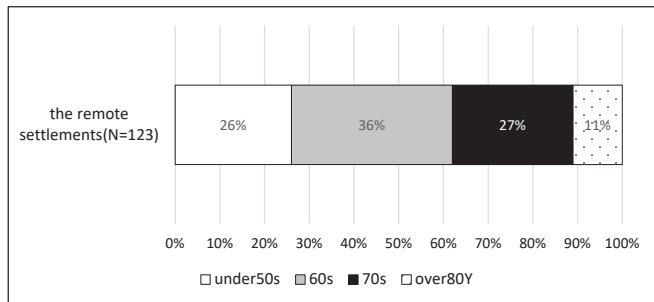


Figure 4 Age of VHO

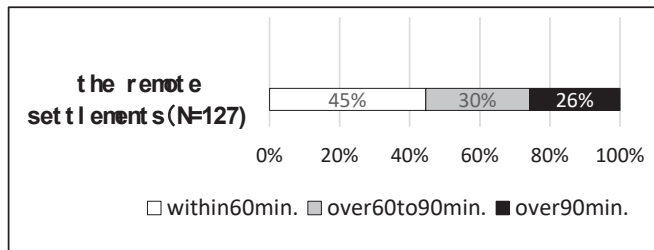


Figure 5 Dwelling of VHO

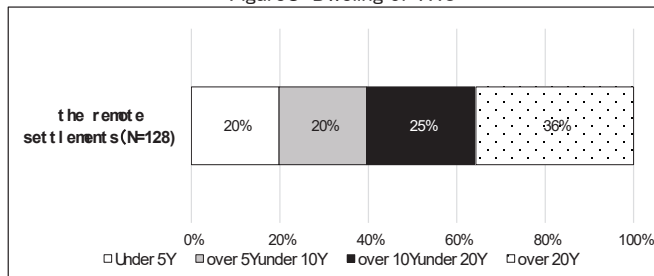


Figure 6 Period of Being Vacant Houses

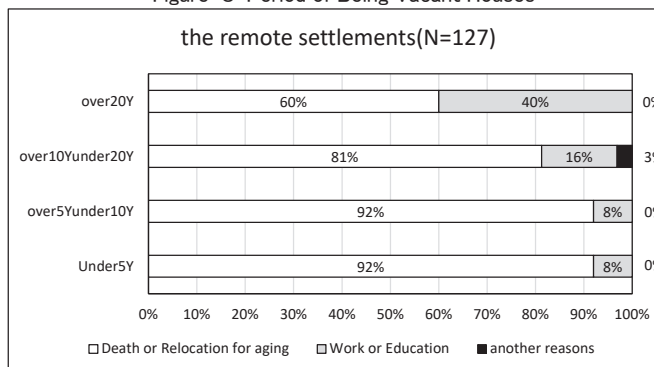


Figure 7 Period and the Factors Causing Vacancy

address was not in the Kanna town. In cooperation with the local government, some outlier subjects were excluded before posting. For example, they were

excluded in the cases where children paid the tax for parents who were still living in the house. Because of “Act on the Protection of Personal Information”, we could not treat their address directly. We have to ask local government officer to extract address of VHOs, to print it on envelopes, and to send envelopes in which we had packed questionnaire sheet. For the reduction of their administrative burden, we did not ask them to extract VHOs living in Kanna town, whose number is expect to be a little small. So there is possibility that address extraction procedure by the local government had not been done adequately. In addition to this, we could not extract the VHOs who had not paid property tax. Because the number of subjects are little smaller(117) comparing to those(128) in only four settlements of the interview survey. That is the limitation of the study method.

A total of 117 questionnaires were distributed, and they were received by mail and resulted in 37 effective questionnaires. The questions were about VHOs attribution, spatial management activities, social participation and recreational activities. We did not exclude questionnaire subjects of the remote settlements. These subjects are hereinafter referred to as “all the settlements” because questionnaires were distributed to all VHOs in the town (Table 1, Figure 2).

The number of questionnaire subjects is a little small, In addition to this, we did not got reliable data about recreational and social participation in interview survey, as stated above. Consequently, we mainly show the results of interview survey in the anterior part(Chapter3: 3.1,3.2), while partly showing the results of questionnaire survey in the “Notes” part. And then we only show the results of questionnaire survey about social participation and recreational activities in the middle part(Chapter 3:3.3). In the last part, we only show the results of interview survey about the relationship between VHOs and residents(Chapter 3: 3.4).

Firstly, the characteristics of vacant houses (VHO attributes, VHO spatial management) in the remote settlements were clarified.

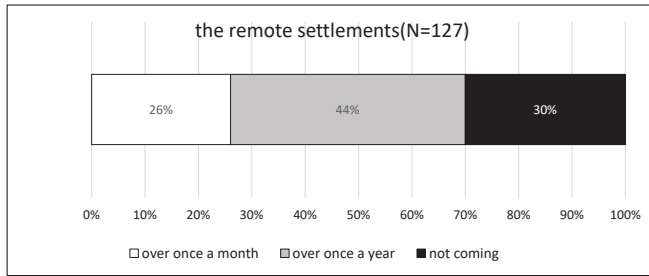


Figure 8 Frequency of Homecoming

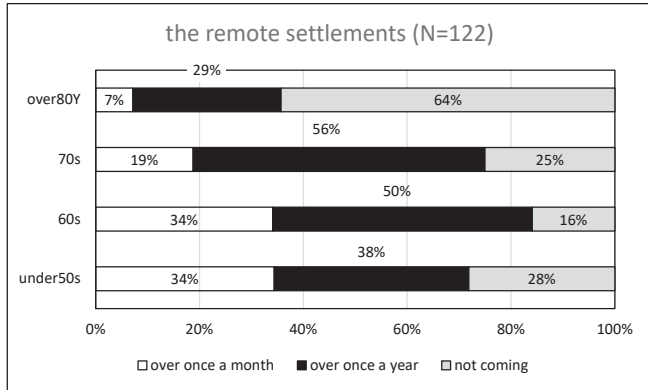


Figure 9 Age of Owner and Home coming

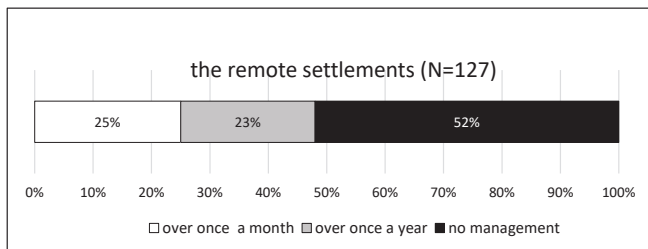


Figure 10 Frequency of Vacant House Management

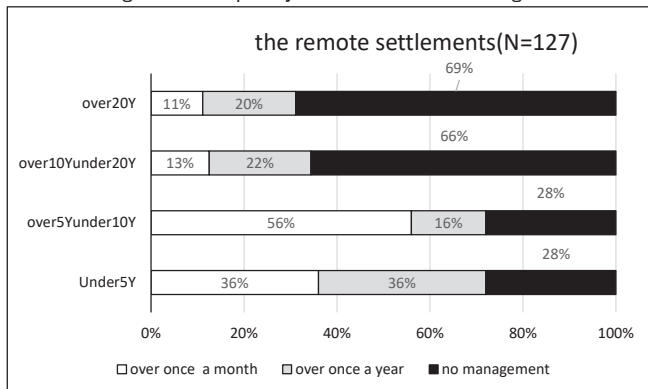


Figure 11 Period and Vacant House Management

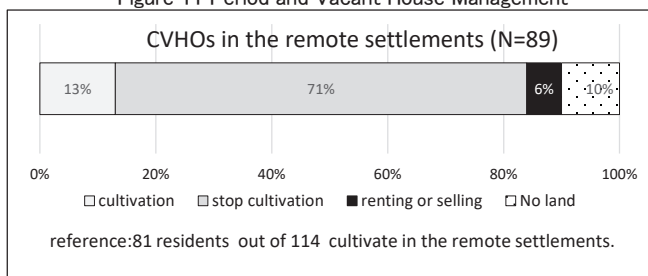


Figure 12 Farmland Management

Secondly, the characteristics of recreational activities and social participation of VHOs in all the

settlements were clarified.

Thirdly, in the remote settlements, VHOs' relationships with rural society were clarified by comparing the family numbers and the activities of VHOs with those of residents, in terms of population, spatial management. It aims to prove that VHOs have social impacts on rural society, meaning that they have made contributions to rural sustainability.

3. RESULTS AND DISCUSSION

3.1 Characteristics of a Vacant House and an Owner

(1) Owner attributes

In the remote settlements, 11% of VHOs are the original owners (or their partners) who relocated from the house, while 77% are their children's households (Figure 3). A number of vacant houses have been inherited by their children. 12% of VHOs are their relatives or others (mainly strangers who bought the houses from the original owners). It is predicted that remoteness is more likely to be the barrier to selling vacant houses to strangers, or of entrusting house management to relatives. In the remote settlements, 62% of VHOs are under 60s, and 38% are over 70s, especially 11% are over 80s (Figure 4). We conclude that the aging of VHOs is progressing^{vii)}.

(2) VHO residence location

In the remote settlements, 45% of VHOs live within 60 minutes away from the settlements and their vacant houses are in the same municipality or the neighborhood cities called Fujioka City or Takasaki City (the local central city of Seimou area, southwestern area of Gunma) (Figure 5). 30% live in the area that are 60–90 minutes away from the settlements, including eastern part of Gunma prefecture or northern part of Saitama. 26% of VHOs live over 90 minutes away, mainly in Tokyo area or southern part of Saitama prefecture, where they have to pass the main highway to reach their vacant houses. But by analyzing the address, we know that 57% live in Seimou area, the same southwestern area of Gunma (the data is omitted)^{viii)}.

(3) Period of being vacant

In the remote settlements, 20% of vacant houses

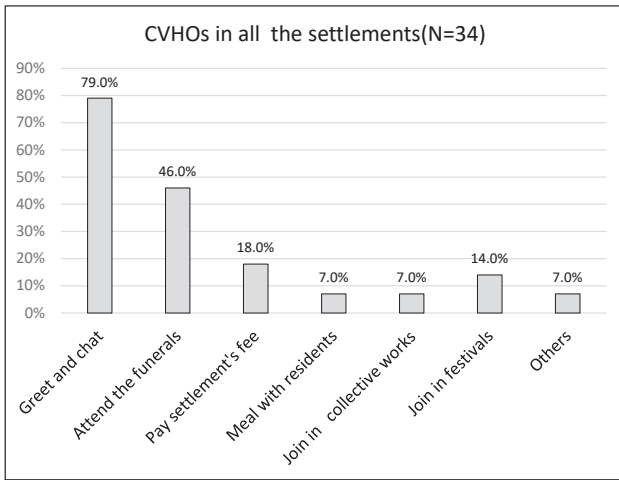


Figure 13 Social Participation

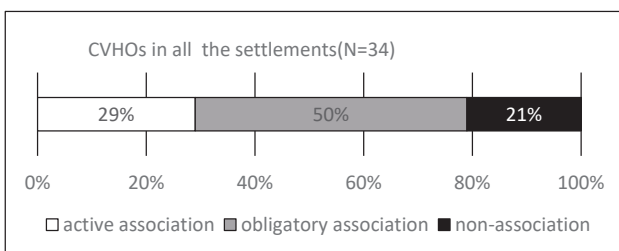


Figure 14 Type of Association

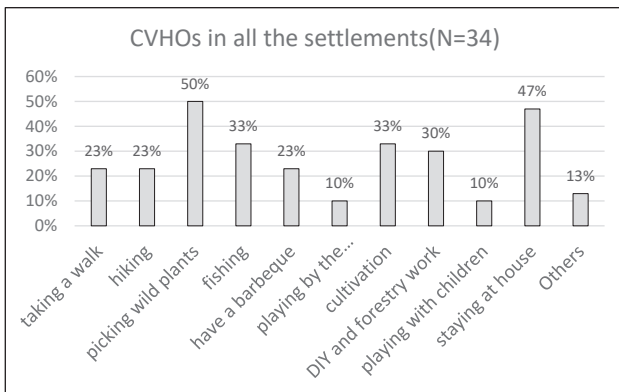


Figure 15 Private Activities

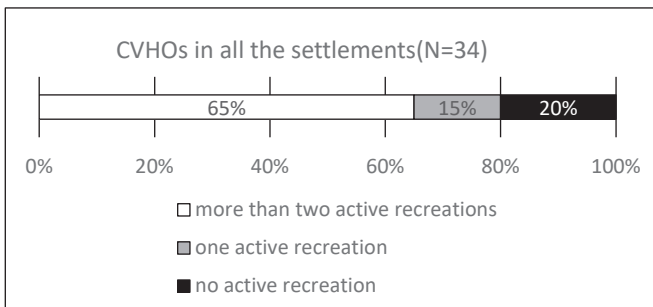


Figure16 Type of Recreational Activities

have been vacant for less than 5 years (Figure6). 40%of vacant houses have been vacant for less than 10 years. The number of vacant houses has continued to rise in recent years. And 36% of vacant houses have been vacant for more than 20 years ix).

In the remote settlements, About 92% of vacant houses which have been vacant for less than 10 years, the factor causing vacancy is “death or relocation for aging”, while about 40% of them which have been vacant for more than 20 years, the factor is ”work or education”. In recent years, almost all of vacant houses have been vacant because of aging (Figure7).

3.2 Homecoming Activities and Spatial Management

(1) Homecoming activities

In the remote settlements, 26% of VHOs come back to their home settlements more than once a month, and 44% come more than once a year, but 30% do not come or come less than once a year (Figure8). In other words, 70% of VHOs come back to their home settlements on a regular basis [we call them “commuting vacant house owners” (hereinafter CVHOs)]x).

Around 70-80% of VHOs whose age are under 70s, come to home settlements on regular basis, while 64% of them whose age are over 80s, had not come (Figure9).

(2) Vacant House Management

In the remote settlements, 25% of VHOs maintain vacant houses more than once a month, 23% maintain more than once a year, and 52% do not maintain them (Figure10). In other words, 48% of VHOs maintain the houses continuously. Considering that 30% do not come or come less than once a year (indicated in the paragraph in front), it is predicted that 22% of VHOs come home on a regular basis for grave praying or weed cutting around the houses instead of maintaining vacant houses xi).

72% of vacant houses which have been vacant for less than 10 years, are maintained, while only around 30% of them which have been vacant for more than 10 years are maintained. Vacant houses which have been vacant for more than 10 years, tend to be abandoned (Figure11).

(3) Farmland Management

In the remote settlements, 13% of CVHOs cultivate farmland, 10% have no farmland, and 71% have stopped cultivating (Figure12). Most cultivators of CVHOs come more than once a month because they

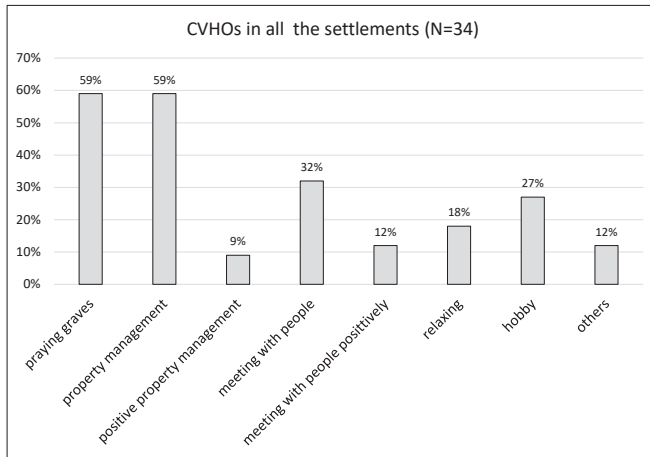


Figure17 Homecoming Purpose

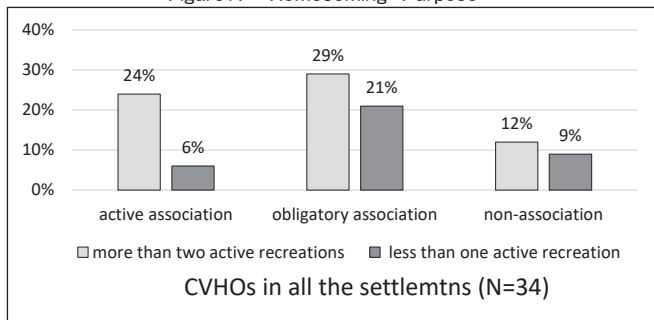


Figure 18 Association and Recreation Type

Table 2 Calculation Process of Social Impacts

No.	Definition	Remote settlements
1	Residents households(parameter)	118[①]
2	VHO households(parameter)	130[②]
3	VHO ratio(VHO /VHO+residents)	②/(①+②) (52%) [③]
4	CVHO /VHO	(33+56) /127 (70%) [④]
5	CVHO ratio(CVHO /CVHO+residents)	a/(a+①) {if:a=②*④}(44%)
6	High-frequency CVHO/VHO	33/127(26%)[⑤]
7	High-frequency CVHO ratio(high-frequency CVHO/high-frequency CVHO+residents)	b/(b+①) {if:b=②*⑤} (22%)
8	Building keeper VHO /VHO	(32+29) /127 (48%)[⑥]
9	Building keeper VHO ratio(building keeper VHO /all building keepers)	c/(c+①) {if:c=②*⑥}, (35%)
10	CVHO cultivator/CVHO	12/89 (13%)[⑦]
11	Residents cultivator/ residents	81/114(71%)[⑧](Figure12)
12	CVHO cultivation ratio(VHO cultivator/All cultivators)	d/(d+①)*⑧) (if:d=②*④*⑦) (12%)

have to care plants on regular basis. According to the interview survey records (the data is omitted), they use vacant houses as the place that can be used to take a rest, change clothes after cultivating, or store the farming tools. It is predicted that cultivation could emerge a strong motivation for homecoming and undertake vacant house management.

3.3 Social Participation and Recreational Activities

(1) Social Participation (Multiple Answers)

In all the settlements, 79% of CVHOs greet or chat

with other residents during their homecoming, and 46% come back to attend funerals (Figure13). Because most CVHOs greet, chat or come back to attend funerals, it is predicted that these activities would be the most basic activity as an absentee resident. We defined greeting, chatting or attending funerals as the obligatory association. As a result, these activities are hereinafter called “obligatory association.”

“Have a meal with residents,” “join in activities organized by the settlements (e.g., collective work),” or “join in the festivals” are each marked by around 10% (7%,7%,14%) of CVHOs.

These activities can be seemed more active, which means they seem to have active intentions to communicate with rural society, and in other words, they would not do these activities if they do not have active intentions. Hence, we defined these activities as the active association (they are hereinafter called “active association.”).

29% of CVHOs undergo active association, and 50% of CVHOs undergo some obligatory association or do not undergo any active association (Figure14). This means that 79% of CVHOs have social contacts with local residents when they come back to home settlements.

(2) Recreational Activities (Multiple Answers)

In all the settlements, 47% of CVHOs choose to relax or stay in the vacant houses (Figure15). According to the interview records in the remote settlements (the data is omitted), recreational activities include not only relaxing or staying in the vacant house, but also watching TV, avoiding the heat of summer, enjoying the quiet atmosphere, and staying alone. It can be predicted that CVHOs do not come merely for property maintenance but also for relaxation and fun. Hence, these activities are hereinafter called “resting recreation.”

Moreover, 50% of CVHOs pick wild vegetables and 33% do fishing, 33% cultivate, 30% undergo DIY or forestry work, 23% go for a walk, 23% hike, 23% play at the riverside, 10% undergo barbeque.

They seem to have strong intentions toward having

fun which means they would not do if they do not have strong intentions. These activities are hereinafter called “active recreation.”

65% of CVHOs who visit with active recreation and marked more than two active activities are regarded as “active recreation type”, while 15% of CVHOs marked only one active activity (Figure16).

(3) Homecoming Purpose (Multiple Answers)

In all the settlements, about homecoming purpose, 59% of CVHOs each marked “for grave praying” and “for property management”. 32% marked “for maintaining relationships” (Figure17). Their homecoming seem to be obligatory. On the other hand, 9% of CVHOs marked “for property management with joy”, 12% marked “for association with joy”, 18% marked “to stay and relax”, and 27% marked “for recreational activities”.

It means that there are obligatory consciousness and pleasure consciousness and in some cases both exist simultaneously in one CVHO’s mind. 43% of CVHOs marked “for property management with joy,” for association with joy”, “for stay and relax” or “for recreational activities”. It could be pointed out that there are some CVHOs who enjoy homecoming actively. Especially, private recreation seems to be one of the motivations of homecoming for some CVHOs.

(4) Categorizing CVHOs

In all the settlements, CVHOs can be categorized into six types according to recreational activities and social participation (Figure 18).

24% of CVHOs are “active type” who undergo more than two active recreations and have active associations. 6% are “association type” who have active associations without more than two active recreations. 29% of CVHOs are “recreation type” who undergo more than two active recreations and have obligatory associations. 21% of CVHOs are “keeping links with residents and property type” who do not undergo more than two active recreations but have obligatory associations. 12% of CVHOs are “isolated recreation type” who neither undergo more than two active recreations and nor have association with residents. 9% of CVHOs are “isolated type” who

undergo less than one active recreation and do not have association with residents.

3.4 VHO Relationship with Rural Society

In the remote settlements, the number of VHO families was compared with that of residents, and the number of VHO activities [spatial (house, farmland) management] was also compared with that of resident activities, in order to define the relationship between VHOs and rural society. In other words, we wanted to estimate the social impacts of VHOs on rural society and construct a framework of social impacts (Table 2).

In the remote settlements, the total population of VHOs families is 52% of both residents and VHOs

(which can be called VHO ratio), meaning that the vacant house ratio is 52% of all main buildings (Table 2: line 3). 70% of VHOs are CVHOs and the total population of CVHOs is 44% of both residents and CVHOs (which can be called CVHO ratio) (Table 2: lines 4 and 5).

The ratio of CVHOs who come more than once a month is 22% of both CVHOs who come more than once a month and residents (which can be called a high-frequency CVHO ratio) (Table 2: lines 6 and 7).

In the remote settlements, 48% of VHOs maintain vacant houses. This accounts for 35% of all building keepers who are both residents living in their houses and VHOs maintaining vacant houses (which can be called the building keeper VHO ratio). (Table 2: lines 8 and 9).

In the remote settlements, 13% of CVHOs cultivate farmland, and this accounts for 12% of all cultivators (which can be called the CVHO cultivation ratio).

4. CONCLUSION

(1) House vacancy has been continuously emerging over the past 10 years (some has been emerging within the last 5 years) and is mainly caused by the aging of residents. The ratio of VHOs who neither come back to home settlements nor maintain vacant houses that have been vacant over 10 years, is double of the ratio of those whose houses have been vacant within 10 years. In addition to this, it is more difficult

to reuse deteriorated vacant houses. It would be suggested that support for homecoming and housing management of VHOs whose houses have been vacant within 10 years is required. And the support for VHOs whose age is over 80s, would be suggested. Because 64% of them had not come to home settlements. It is predicted that declining driving skill is the critical factor for sustaining homecoming.

It would be noted that 75% of those VHOs live within 90 minutes away from the settlements.

(2) It has been confirmed that most VHOs (70% in the remote settlements) come back to their home settlements on a regular basis (more than once a year) and that some VHOs come more than once a month (26% in the remote settlements). It has also been confirmed that some come with active association (29% of CVHOs in all the settlements) or with private active recreation (65% of CVHOs in all the settlements).

From the point of view of social impact, in the remote settlements, VHOs occupy half of both residents and VHOs, and CVHOs who commute more than once a month occupy 22%. 35% of all building under maintain are kept by CVHOs. 12% of all farmers in the remote settlements are CVHOs. VHOs have a certain kind of impact on population and spatial management. As depopulation will continue progressing in mountainous areas, the social impact of VHOs will increase relatively. VHOs' more direct contribution to sustaining rural society would be expected (ex. such as to support the shopping of elder residents or to attend residents association's meeting)

(3) It is predicted that there are private and social intentions separately among VHOs. VHOs can be categorized as being involved in recreational activities (based on private intentions) and social participation (based on social intentions).

43% of CVHOs enjoy homecoming actively in all the settlements. They consider homecoming behavior as a kind of leisure, and this way of thinking would promote homecoming behavior. Both these intentions should be respected, and the idea that changing private activities into social activities seem to too

simple and superficial.

(4) To include VHOs in rural society as a kind of residents (I prefer to call them "commuting residents"), promoting and sustaining homecoming, spatial management, recreational activities, and social participation and giving an incentive for these activities are required.

It has been proposed that i) creating an association, ii) holding events like vacant house workshop, and iii) making a gathering place like community cafe can promote communication among VHOs or between VHOs and residents (including domestic migrants).

And also, it has been proposed that delivering highway discount tickets is helpful to assist homecomings directly.

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NOTES

- i) For example, Nanmoku village in Gunma prefecture where the aging ratio is the highest among all vacant house ratio is 28%. See ref.2)
- ii) For example, Yamazaki and Sakuma (2017) and Saito (2008) explained the life cycle stages of VHOs and their homecoming activities in general. See ref.6),7)
- iii) We defined social impacts are consist of population and spatial management(vacant house and farmland management), because we think VHOs contribute to rural society directly through housing maintenance work and cultivation work.
- iv) Masuda used the word "Province vanishing" in 2014 which lead to the policy "Promotion of Overcoming Population Decline and Vitalizing Local Economy" starting from 2015. See ref.10)
- v) The four settlements are located along the branch of Kanna River, but another settlements are located along Kanna River and also along main road, where the valley is flatter than those of the four settlements. In fact the vacant house ratio of them was around 40% which is different from officers' impression.
- vi) The settlements are divided in small neighboring groups, we ask residents about vacant houses and its VHOs activities located in the same neighboring group.
- vii) For the reference, in the remote settlements, More vacant houses have been inherited by their children's households than in all the settlements because around 77% of VHOs in the remote

settlements are children's households, while 60% in all the settlements, and 26% of VHOs are under 60 in the remote, while 8% in all.

viii) In all the settlements, VHOs tend to live in farther places, which means that 41% live over 90 minutes away from there, because of transportation convenience in cities.

ix) For the reference, in all the settlements, 11% have been vacant for less than 5 years, while 51% have been vacant for more than 20 years. It could be predicted that in all the settlements, less vacant houses occur in recent years, while in the remote settlements, it seems that there are not many old vacant houses because that a certain amount of vacant houses collapsed was observed during our field survey.

x) For the reference, in all the settlements, around 30% of VHOs come back to their home settlements more than once a month. The portion of the high-frequency maintainer [more than once a month] is approximately the same in both areas. But 19% do not come or come by less than once a year, which is less than the percentage in the remote settlements. It is predicted that the main cause is transportation convenience.

xi) For the reference, in all the settlements, around 32% of VHOs maintain vacant houses more than once a month. The portion of the high-frequency maintainer [more than once a month] is approximately the same in both areas. But 22% do not maintain anymore, which is less than the percentage in the remote settlements. It is predicted that it mainly caused by transportation convenience, the same as the conclusion of homecoming indicated in the paragraph in front.

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