

Process of Disappearance and Continuing Conditions of Rural Communities in Hilly and Mountainous Areas

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1. Objective and Method

Rural communities are a basic unit of society in rural area. Recently, the vitality of these rural communities has been declining gradually due to depopulation and the aging of population, and this is a factor to cause the stagnation of agricultural production and increase in abandoned farmland in hilly and mountainous areas.

In this study, we clarified the process of disappearance and situation of the future of rural communities in hilly and mountainous areas from a statistical analysis, and examined the continuing conditions of rural communities, which play a key role in regional resource management.

We made dynamic statistics of rural structure (correlation table according to the total number of composition farm households), and used this for the analysis. The regions targeted by this analysis are hilly and mountainous areas in Shimane Prefecture where many smaller rural communities exist.

2. Outline of the Results

(1) In rural communities of “5-9 farm households” which would stop functioning as a community function by the retirements of only a few farm households, the ratio of rural communities which stays in the same scale class as 90 years is highest with 66%. This suggests a situation in which farm household cannot easily abandon farming in these rural communities (Table 1).

(2) It was confirmed that rural communities which became areas with scattered farm households and communities in which farm households have disappeared when the total number of farm households fell below five came to appear, and the ratio of both rose rapidly at three or fewer (Fig. 1).

(3) In the estimate by Markov model which used correlation table by the number of composition farm households, it was forecast that the number of rural communities of 16% decreased by 2020. As for the details, areas with scattered farm households is 12%, and communities in which farm households have disappeared is 4%. Moreover, in the continuing rural communities, it was expected that the total number of composition farm households decreased further, and rural communities of fewer than 10 farm households will be in the

majority by 2020 (Table 2).

The following can noted from the results of these analyses.

First, in hilly and mountainous areas, at least five farm households or more are necessary to maintain the functions of the rural community. Therefore, it is important not to decrease the total number of composition farm households any further.

Second, in rural communities by which the total number of farm households has already become few, measures for the large area reorganization are important for continuing rural communities.

Glossary

Rural Communities

These are communities formed by agriculture in local areas. Originally, rural communities naturally developed over time and served as a basic unit of society, where various groups and social relationships have been formed on land or between blood relations among households.

Areas with Scattered Farm Households

These areas used to function as rural communities in 1990, but now most parts have become urbanized; and the few farm households that are left are scattered among non-farm households. Or those with a significantly decreasing population and only a few farm households are left. Therefore they cannot be regarded as functioning as rural communities.

Communities in which Farm Households have Disappeared

Rural communities which lost farm household after 1990. Therefore, it is either a community of non-farm households only or an uninhabited community.

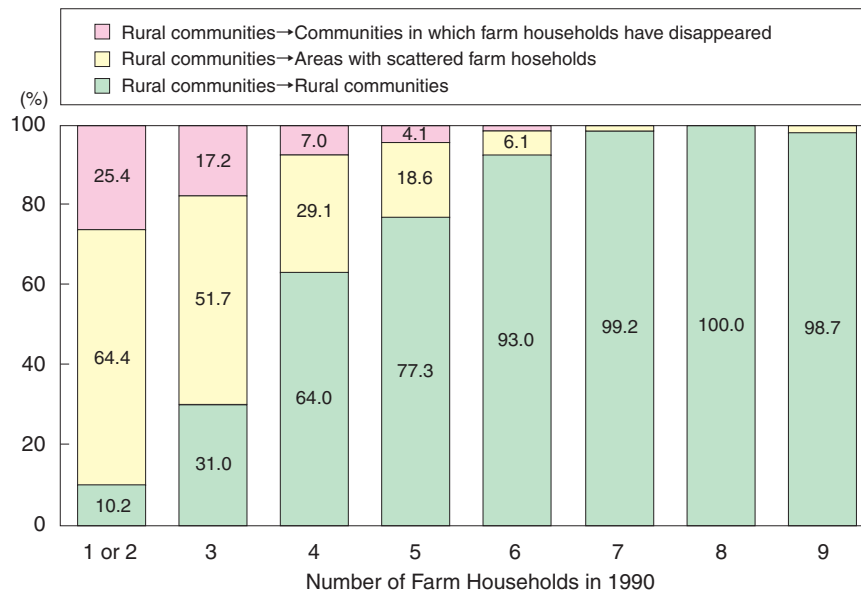
3. Related Publications

Hashizume, N. (2004) Statistical Analysis on the Continuance of Rural Community in Hilly and Mountainous Areas, *Journal of Agricultural Policy Research* 7: 1-24.

Table 1. Trends in numbers of farm households in rural communities
(Hilly and mountainous areas in Shimane Prefecture)

Unit: % (community)

		Rural communities in 2000								Areas with scattered farm households	Communities in which farm households have disappeared	Number of rural communities in 1990
		4 farm households and under	5~9	10~14	15~19	20~24	25~29	30 farm households and over	Total			
Rural communities in 1990	4 farm households and under	33.5	4.9	0.5	-	-	-	-	38.9	45.8	15.3	100.0 (203)
	5~9	27.1	65.8	1.7	-	-	-	-	94.5	4.7	0.8	100.0 (602)
	10~14	2.6	41.1	54.3	1.3	-	-	-	99.3	0.5	0.2	100.0 (858)
	15~19	0.7	4.9	46.1	46.6	1.1	0.2	-	99.5	0.2	0.3	100.0 (614)
	20~24	-	0.6	13.1	48.6	35.4	1.7	-	99.4	0.3	0.3	100.0 (350)
	25~29	-	0.4	1.3	12.8	50.2	34.8	0.4	100.0	-	-	100.0 (227)
	30 farm households and over	-	-	-	1.0	9.7	29.0	60.4	100.0	-	-	100.0 (207)
	Total	8.4	25.9	26.4	16.3	8.7	4.8	4.1	94.5	4.1	1.3	100.0 (3,061)

**Fig. 1.** Continuing rate of small-scale rural communities
(Hilly and mountainous areas in Shimane Prefecture)**Table 2.** Estimate results of the number of rural communities
(Hilly and mountainous areas in Shimane Prefecture)

Unit: community, %

		Number of rural communities by the number of composition farm households								Areas with scattered farm households	Communities in which farm households have disappeared
		Total	4 farm households and under	5~9	10~14	15~19	20~24	25~29	30 farm households and over		
Number of rural communities	Year										
	2000	2,893	257	792	809	498	265	146	126	127	41
	2010	2,683	325	893	720	391	185	92	78	160	50
	2020	2,428	372	920	613	294	123	57	49	195	60
Composition ratio	2000	100.0	8.9	27.4	28.0	17.2	9.2	5.0	4.4	4.1	1.3
	2010	100.0	12.1	33.3	26.8	14.6	6.9	3.4	2.9	5.5	1.7
	2020	100.0	15.3	37.9	25.3	12.1	5.1	2.4	2.0	7.3	2.3
Increase/decrease rate	00-10	▲ 7.3	26.3	12.7	▲ 11.0	▲ 21.5	▲ 30.2	▲ 36.9	▲ 38.4	25.9	22.2
	00-20	▲ 16.1	44.6	16.2	▲ 24.2	▲ 41.0	▲ 53.5	▲ 60.7	▲ 61.5	53.3	47.4

Note: It is estimated by using Markov matrices of the rural community transition table. Therefore, these results are based on the tendency to 90-2000 year.