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Future Forecasts of Rural Population and Rural Communities

– The Transformation of Rural Communities and Rural Structure in 2045 –

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1. Population decline and aging are further accelerating in rural regions

In Japan's rural regions, populations are aging and declining ahead of cities, and together with the stagnation of joint activities due to the shrinking of rural communities, various functions long-borne by these regions (securing spaces for agricultural production, passing down rural culture, preserving the natural environment and national land etc.) are being lost.

We therefore first begin by reclassifying national census data by classification of agricultural area, and together with showing population changes by region since 1975, we calculated the population and aging rates for each region until 2045 using cohort analysis (Figure 1).

Looking at this, regional differences in population changes in rural areas are extremely large; while populations peaked and began to decline in 2000 in flat farming areas, and 1985 in hilly farming areas, populations in mountainous farming areas have been in consistent decline since 1975, with a 37% rate of decline over the forty year period (1975-2015).

Moreover, forecasting changes in population over the following 30 years, population decline is expected to further accelerate in rural areas, with the population of mountainous farming areas halving again, and with more than half the population aged 65 years or older.

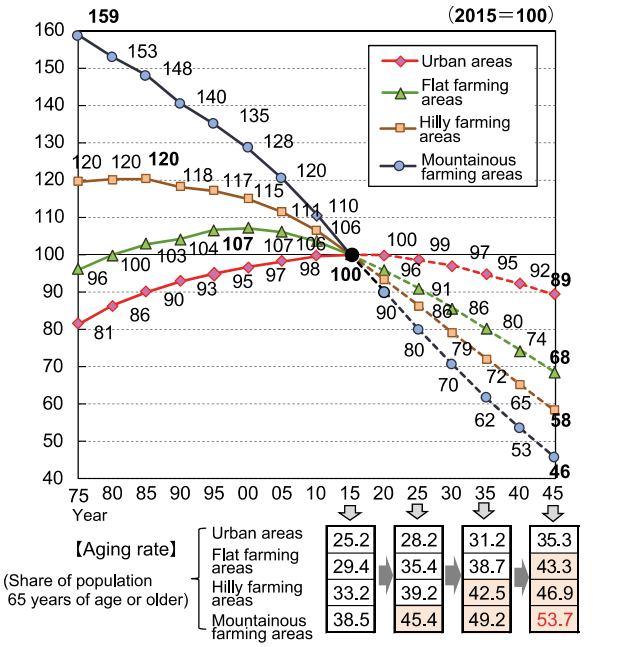

Figure 1. Population trends and future projections by classification of agricultural area

Note (1) Based on reclassification of national census data. Note that figures from 2020 (dotted lines) are values estimated using cohort analysis.
(2) Classification of agricultural areas is based on municipalities as of 2000, and tabulated using codes revised in April 2007.

2. The shrinking of communities becomes more severe in mountainous farming areas

The advance of population decline and aging has weakened the structure of rural communities, the nstituent elements of local society, and there are moreover large regional differences. By comparing the average figure of communities in each region with that of five years ago using median values (Table), the average total number of households per community has increased in both urban and flat

Table. Changes in rural communities in each region

		Average figure of rural communities (Median values)					Share of rural communities by increase or decrease in the number of households (2010-2015)	
		Average number of households in the community (Households)	Number of farm households (Households)	Commercial farm households (Households)	Average community population (persons)	Aging rate (%)	Increase in the number of households (%)	Decrease in the number of households (%)
Nationwide	2010	51	14	9	188	30.3	30.9	43.5
	2015	50	11	6	174	34.8		
Urban areas	2010	210	14	8	938	23.6	49.8	29.4
	2015	220	12	6	934	27.9		
Flat farming areas	2010	56	17	13	204	28.4	33.9	38.2
	2015	57	15	10	190	32.7		
Hilly farming areas	2010	39	13	9	126	33.6	24.4	49.7
	2015	38	11	6	113	38.2		
Mountainous farming areas	2010	26	10	6	72	39.9	17.6	55.2
	2015	24	8	4	62	44.6		

Source: Census of Agriculture and Forestry Agricultural Mountain Village Regional Survey (2010,2015).
"The See, Know, Use, Database for Agricultural Regions" (2015).
Note (1) The number of households and aging rate are calculated by community from national census data.
(2) Only 129,997 continuous settlements that were not split or merged between 2010-15 were included.

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farming areas, but in hilly and mountainous farming areas half of communities saw a reduction in the number of households over those five years, falling from 39 to 38 and 26 to 24 households, respectively.

Within which, in mountainous farming areas where the average size of communities is smallest, in addition to the number of households decreasing by two, the community population has also decreased by 10, from 72 to 62, and the aging rate has increased by five points from 40% to 45%, from which it was confirmed that the decline (shrinkage) and aging of rural communities is in a more serious situation.

The number of farm households in communities is decreasing in all regions; especially, in mountainous farming areas it is in single digits, eight farm households, and if limited to commercial farm households, just four farms. It is no wonder that the number of communities no longer able to manage and maintain agricultural roads and agricultural waterways by themselves has been continuing to increase in recent years.

3. Loss of community function due to shrinking and aging rural communities

The ongoing shrinking and aging of agricultural communities is a factor making various community activities difficult. Looking to Figure 2, which shows the proportion of communities "holding meetings on topics related to agricultural production" and "maintenance and management of agricultural waterways by the community" by community population as well as aging rate; the share of both begins to decline when the population of the community falls below 30: when this reaches single digits (9 people or less) the share of communities hosting meetings is 22%, with the share of community maintenance and management of drainage canals falling sharply to 41%.

A similar trend is observed by aging rate; when the aging rate exceeds 50%, the share of community activity gradually begins to decline; when this exceeds 70% the share of communities hosting meetings falls significantly to 31%, while the share of community agricultural waterway maintenance and management falls to 54%.

4. A sharp increase in "endangered communities" in hilly and mountainous farming areas

Next, rearranging national census population data and aggregating by agricultural community, community population by age was calculated in 5-year intervals up to 2045 using cohort analysis, and using the "The See, Know, Use, Database for Agricultural Regions (Statistics Department of the Ministry of Agriculture, Forestry and Fisheries) we estimated the number of communities that could be expected to continue into the future and the number of communities at risk of severe degradation of function.

The results are as shown in Figure 3, and of the currently 138,256 agricultural communities, "endangered communities" (Defined as communities with a population of 9 or less and an aging rate of 50% or greater) are expected to increase 4 times from 2,353 in 2015 (2%) to 9,667 by 2045 (7%), "super-aged communities" (Defined as communities in which more than 2/3s of population are aged 65 or older) are expected to increase

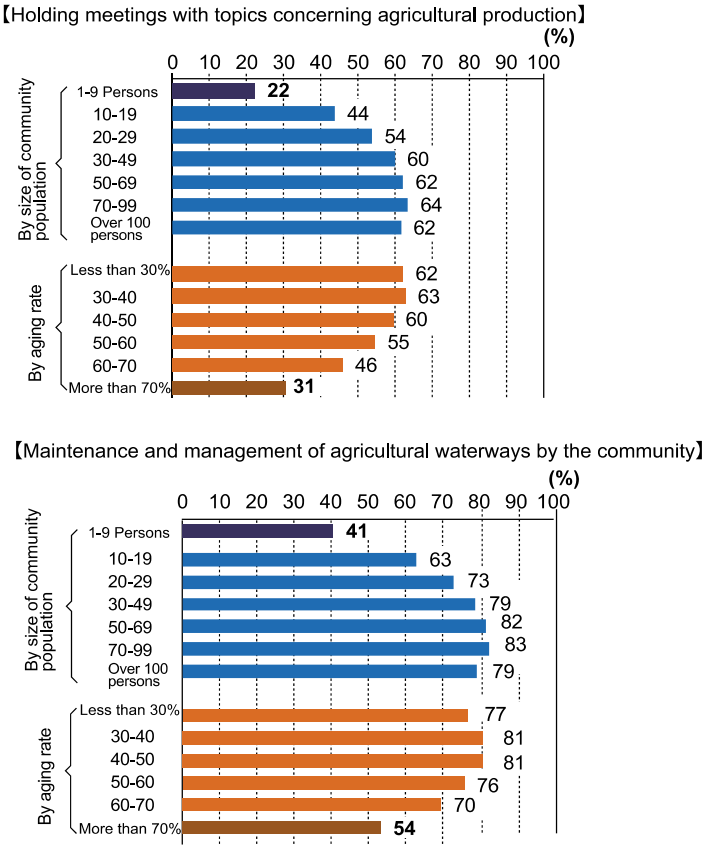

Figure 2. State of implementation of community activities (2015)

Source: Census of Agriculture and Forestry Agricultural Mountain Village Regional Survey (2015).
"The See, Know, Use, Database for Agricultural Regions" (2015).
Note. Community population and aging rates are based on population data from the national census, estimated for each agricultural community.

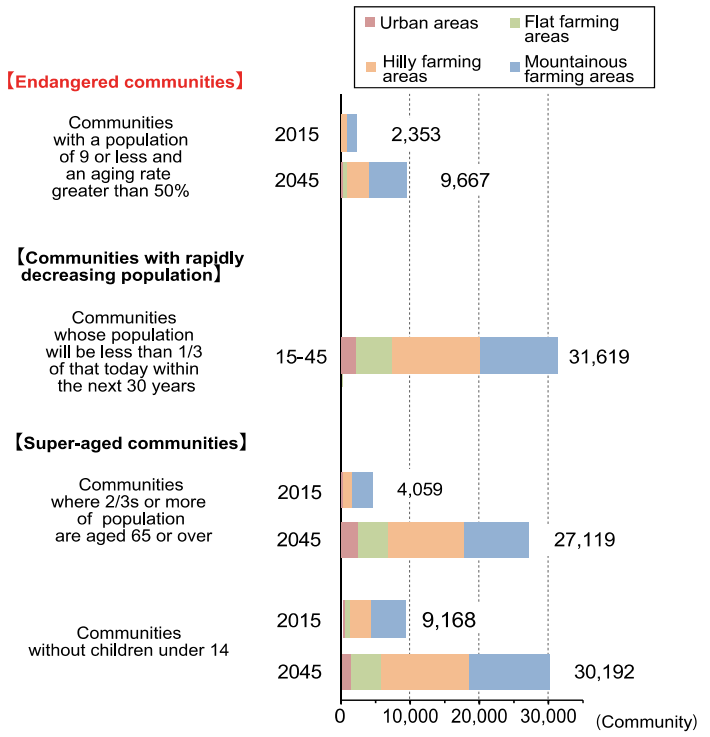

Figure 3. Estimated results for "Endangered communities"

Source: "The See, Know, Use, Database for Agricultural Regions" (2015).
Note. Based on community population by age estimated using cohort analysis performed for each community.

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from 4,059 (3%) to 27,119 communities (20%), with "communities with rapidly declining populations" (Defined as communities whose population will be less than a third of that today within the next 30 years) reaching 31,619 communities (23%). In addition, it is estimated that 30,192 communities (22%) will not have children below the age of 14. Many of these communities are agricultural communities located in hilly and mountainous farming areas.

Incidentally, the nine prefectures in which "endangered communities" will exceed 10% of all communities over the 30-year period to 2045 are Hokkaido, Ishikawa, Wakayama, Shimane, Yamaguchi, Tokushima, Ehime, Kochi, and Oita, and of these, this rate is expected to reach almost 20% in Hokkaido, Tokushima, Ehime and Kochi.

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