Support to the Formulation of the Plans in Relation to the Housing Safety Net in Municipal Governments --Development and Publication of the "Program for Estimating the Number of Households That Require Consideration for Secured Housing" --

(Period of research: FY2020 - FY2021)

HASEGAWA Hiroshi, Building Department   Director (Ph.D. in Engineering)
UTSUMI Koya, Housing Planning Division, Housing Department   Senior Researcher (Ph.D. in Engineering)

(Keywords) Municipal governments, households that require consideration for secured housing, estimating program, public housing, unoccupied private houses

1. Introduction

The formulation of the following plans by municipal governments is desired in order to stably secure housing for those who require consideration, such as low-income earners, senior persons, and child-rearing households.

① "Plan to Elongate the Lifetimes of Public Houses etc." to systematically promote maintenance management and improvement of the public housing stock.

② "Plan to Promote Rental Housing Supply for Those Who Require Consideration for Secured Housing" to promote the registration and supply of rental houses that do not reject the residence of those who require consideration for secured housing by making use of unoccupied private houses etc. (hereafter referred to as "safety net houses: SN houses").

On the other hand, to set a target concerning the necessary amount of use of public and private unoccupied houses in the future in these plans (hereafter referred to as "the necessary number of public houses etc."), the appropriate method of estimating the number of the households of people who will require consideration for secured housing in the future has been a problem. This is why NILIM has developed and disclosed a program (October
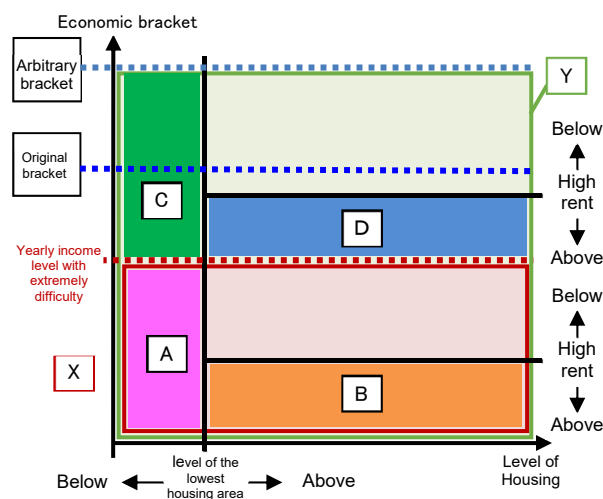
Y: Households applicable to measures for public households (original bracket and arbitrary bracket *1)

X: Households belonging to "yearly income level with extreme difficulty" among households applicable to measures for public housing

A: Households below the level of the lowest housing area among the households below the yearly income level with extreme difficulty

B: Households at high rent paying level and above the level of the lowest housing area among households below the yearly income level with extreme difficulty *3

C: Households "below the level of the lowest housing area" that are the households with a yearly income level with extreme difficulty

D: Households at the high rent paying level that are above the level of the lowest housing area and that have a yearly income above the yearly income level with extreme difficulty

*1. The original bracket is for the households at or below the 25-percent income quotient. The arbitrary bracket is for the households that are defined in an ordinance as those that require consideration for secured housing with the upper limit being the 50-percent income quotient.

*2. Yearly income level with extreme difficulty: The households that do not reach the yearly income necessary for residence at a house in the area that satisfies the level of the lowest housing area (houses at the average rent per unit among private rental houses in each area) defined in the Housing Life Basic Plan (a nationwide plan) within the ratio of the maximum payment of appropriate house rent.

*3. Households paying high rent: Households paying for the rent above the average rent payment ratio among the households with a yearly income of less than two million yen that reside in a private rental house in each area.

Photo-1. Households within the scope of the estimate with the estimated PG along with their definitions.

8, 2021; January 14, 2022) that can estimate the number of people who require consideration for secured housing in the mid-to-long term, depending on the actual circumstances and needs of a local area (hereafter referred to as "estimated PG").

This essay introduces a method (idea) with which the necessary number of public houses etc. can be specified based on the results of estimation.

2. Overview of the Estimated PG

The estimation program uses statistical research, such as censuses (Statistics Bureau, Ministry of Internal Affairs and Communications) and Statistical Survey of Housing and Land (Statistics Bureau, Ministry of Internal Affairs and Communications) and is able to make a long-term estimation of the number of households with income lower than the yearly income level with extreme difficulty ("X" in Fig-1) and households with specific needs in terms of housing level and/or the rent load (from "A" to "D" in Fig-1) among the households for which measures for public housing are applicable ("Y" in Fig-1) in every five year period from 2020 to 2045.

3. Method of Specifying the Necessary Number of Public Houses etc.

For determining the target for the necessary number of public houses etc., the standard method is to set the target based on the total number of households after multiplication with the calculation ratio shown in Table-1, which is applied to the estimated number of households in each classification of A to D in Fig-1.

Table-1 Calculation ratio for target setting for the necessary amount of public houses

| Classification	Priority	Calculation ratio
A	Low-income bracket and living in a small house with ratio lower than the level of the lowest housing area. The highest priority	Mandatory to calculate 100%
B	Residing in a house above the level of the lowest housing area, but included in the low-income bracket; therefore, the high rent paying ratio is exceeded and the priority is highest after A	Ideal to calculate 100%
C	Income bracket above the yearly income level with extreme difficulty; however, as they reside in a house below the level of the lowest housing area, the priority is as high as B	Ideal to calculate 100%
D	The high rent payment ratio is exceeded; however, this is the bracket of income exceeding the yearly income level with extreme difficulty and they reside in a house above the level of the lowest housing area, so the priority is the lowest.	Included in the calculation depending on the actual situation of the local area and/or the need for policy
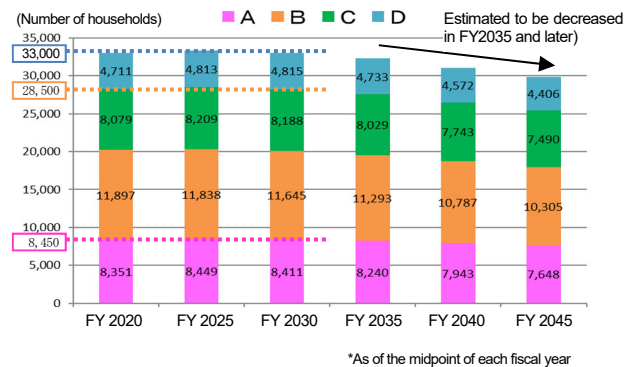
Fig-2. Results of the estimation of the number of households in each classification of A–D (example of City X)

We will show some specific examples. Fig-2 shows the results of the estimation of the number of the households in each of classification of A–D in a certain city (City X). It is estimated that the future trend in the numbers of each household should be generally the same up to FY2030 and should start decreasing thereafter. As for the number of

necessary public houses etc., approximately 8,450 houses should be necessary up to FY2030 for Classification A, which is necessary to calculate up to 100 percent. Furthermore, when we add Classifications B and C (up to 100 percent), approximately 28,500 houses should be needed up to FY2030. On the other hand, Classification D is judged to be included or not be included in public housing aid etc. on the basis of needs etc. in the policies of municipal governments (for instance, residence of younger generations, promotion of U, I, and/or J returns, support for child rearing, and so on; if this is also calculated, approximately 33 thousand public houses etc. should be needed up to FY2030.

Among the necessary amount shown above, as for the necessary amount of public houses, it is mandatory to secure a number of houses that is equivalent to the number of households in Classification A. In addition, it is preferable to secure a number of houses that is equivalent to the number of households in Classifications B and C. If the number of existing public houses is short, it is thought to be necessary for unoccupied private houses to be rented as private houses by governments and/or to supply SN houses etc.

Table-2. Estimated number of households in Classifications A–C according to the number of household members.
Results (example)

*Sixty years of age or seniors included in the estimation of one-person households.

	FY 2020	FY 2025	FY 2030	FY 2035	FY 2040	FY 2045
1*	5,718	6,043	6,240	6,301	6,230	6,132
2	10,118	10,207	10,142	9,921	9,551	9,188
3	6,628	6,630	6,519	6,303	5,991	5,690
4	3,972	3,801	3,606	3,386	3,153	2,969
5	1,516	1,456	1,393	1,325	1,243	1,174
6 or more	373	359	344	325	305	290
Total	28,327	28,496	28,244	27,562	26,473	25,443

From the viewpoint of public housing stock management, setting the target for the amount necessary for each public house size is also important. Fig-2 shows the results of the estimation of the number of households in each Classification of A–C in City X according to the number of members in each household. As of FY2020, two-person households accounted for the highest number of households, followed by three-person households. However, if viewed on a year-on-year basis, it is estimated that one-member households (60 years of age or older) should increase and that households with two or more members should decrease.

Therefore, it is suggested that it will be necessary to modify existing houses for large-scale households into share houses for single-member households and/or to increase the amount of small-sized houses making use of opportunities to reconstruct houses. However, if too many single-member households of seniors or the like are gathered at public apartment complexes, there will be problems in community functionality, self-governing functions, and so forth. It is important to specify some targets of the necessary amount in different house sizes while we link the use of public houses and unoccupied private houses (e.g., unoccupied private houses rented by governments) as public houses and/or using SN houses to cover part of the increase in single-member households etc.

4. Conclusion

We expect that the formulation of plans in relation to the housing safety net by municipal governments will advance with the use of the estimated PG. We will continue our follow-up in the future and will provide technical support to municipal governments in relation to setting targets for the necessary number of public houses etc.☞ Click here for more details

1) The following website discloses the estimated PG.
http://www.nilim.go.jp/lab/ibg/contents/SPG/stockProgram.html
2) The following links provide the user manual for the estimated PG and the technical description of the estimated PG.
NILIM material No.1168, NILIM material No.1183
http://www.nilim.go.jp/lab/bcg/siryou/tnn/tnn1168.htm
http://www.nilim.go.jp/lab/bcg/siryou/tnn/tnn1183.htm