The Housing Environment Evaluation of Munhwa-Mauel in Rural Area[1)]

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BACKGROUND

The movements to improve rural housing environments have been promoted since the beginning of Sae-Mauel project in 1970s. Since then policies to develop village units and to improve housing units and public facilities have been increased. These trends reflect rural inhabitants' strong desire to enjoy a quality of life .

The project of Munhwa-Mauel aims to improve rural housing environment conducted by the Ministry of Agriculture and Forestry since the early 1990s. As of 1998, among 105 districts under the project, 56 districts have been parceled out and sold. The number of Munhwa-Mauels is expected to increase under Government's policy to construct 772 Munhwa-Mauels by the year 2004, which may have a large influences on private sectors.

So far several studies have been conducted on the Munhwa-Mauel project. According to them Munhwa-Mauel has merits such that it modernizes the rural villages, and decreases the number of people moving out, while it causes conflict between the residents and the newcomers. Munhwa-Mauel also provides uniform housing layouts and unsuitable environments for the rural area, and lacks locality and facilities to promote income. As, however, the results of previous studies have not been verified through systematic researches, it is necessary to search a verified approach through the evaluation on housing environment in various aspects in order to provide planning guidelines for rural villages.

OBJECTIVES

The objective of this study is to provide proper planning guidelines for Munhwa-Mauels. This study classifies them into three types, and grasps the conditions of their housing environments. From the resident's individual evaluation, it yields the items satisfied by the residents and the problems pointed out. Moreover, it compares the residents' evaluations to the participating planners'.

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1) This study make partial use of the Rural Development Coporation's data from "A Post-Evaluation Study of Munhwa-Mauel Projects"

METHODS

Sample Villages. The sample villages were selected from the districts which have been charged by the Rural Development Corporation. They were chosen according to the amount of housing area within each of districts, the number of years from the first occupancy, and the types of villages. The sample villages should have more than 90% housing area of the district, and be at least a year since the first occupancy. Each of villages was classified into one of three types; the Newly built, the Expanded, and the Renovated. Considering the types, eight villages were designated; ① the Newly Built : Kyoung-Gi-do Yang-Pyoung-gun, Yong-Mun-myon, Kyoung-Nam Mil-Yang-gun Mu-An-myon, ② the Expanded : Chon-buk Go-Chang-gun Go-Soo-myon, Kun-San-city Na-Po-myon, Choong-Buk Young-Dong-gun Sim-Chon-myon, Kyoung-Buk Kim-Chon-gun Uh-Mo-myon, and, ③the Renovated : Kyoung-Gi-do Ga-Pyoung-gun Sul-Ak-myon, Choong-Nam Chong-Yang-gun Mok-myon.

Evaluation Subjects and Items. The subjects were the residents and the planners, and the following evaluation items were defined by several researches (24 domestic and 20 foreign articles) and field study;

- ***Physical Aspects*** : sufficient natural lighting, lighting & ventilation, sanitary conditions of water quality, wastewater treatment facilities, sufficient greenland, harmonious artificial and natural view, housing conformity, safety against natural disasters, security from car accidents, and an arrangement planning of site
- ***Living Conditions*** : gathering and disposal of waste, convenient access to the public transportation, and the center of living environment, the use of fundamental facilities (water supply and drainage, electricity/telecommunication, wastewater treatment), convenient of purchase, convenient of public facilities (a play yard, a park, a village hall, etc.), usage of an agricultural facilities (a public storehouse, farm machines storehouse, a public work site, etc), general management of the village
- ***Community Aspects*** : interactions among the inhabitants, interactions between inhabitants and neighborhood, freedom from crime, characteristics of villages, characteristics of village signs

Collections of Data. Evaluation data were collected by interviewing the residents (109 persons) in field survey, and obtained by surveying the planners (116 persons) on mails. The condition of housing environment was recorded by the researcher's observation. (1998. 9 ~ 1998. 10)

Evaluation Method and Analysis. The planners were questionnaired on the attitudes, while residents were interviewed on satisfaction with selecting one of the

five choices to display their status: (5) Satisfactory, (4) Little Satisfactory, (3) So and so, (2) Little Unsatisfactory, and (1) Unsatisfactory. In case where the respondents answered "Unsatisfactory", the reason was interviewed. Data were analyzed both quantitatively and qualitatively. The planners' cognitions were measured by '(5) Just So, (4) Little So, (3) So and So, (2) Little Expected, and (1) Unexpected' of each item. In order to observe the overall evaluations, comparisons on evaluation have been made between residents and planners (Mean and T-test).

RESULTS AND DISCUSSIONS

Sociological and Residential Characteristics of Residents. Respondents, most of whom are in 30s-40s (61.5%), have families with of 3 to 4 members (53.1%) . They have monthly incomes of about 500,000-1,500,000 Won (63.1%), and are more engaged with non-agricultural jobs (56.9%) than the agricultural ones (43.1%). Compared to the other rural areas, the residents of Munhwa-Mauel are younger and likely to be engaged in non-agricultural employment. More than half of the residents of Munhwa-Mauel (58.7%) have moved in from neighborhood areas, and they have composed of people from various backgrounds (29.4% from city or Gun and 11.9% from great cities). Houses with about 100 Pyung site size (74.8%) and about 25 to 36 Pyung unit (71.0%) are mostly built in 1990s, facing south (71.3%).

Sociological Characteristics of Planners. Respondents are mostly in their 30s (33.0%) and 40s (54.8%). They specialized in civil engineering (51.8%), and are involved in clerical employment (24.1%) in charge of parceling. They have been engaged in Munhwa-Mauel project for about three years in average.

Conditions of Housing Environment. Houses are mostly one-storied houses (82.0%), and are mainly made of blocks and bricks (85.0%), and the roof of slab (79.0%). The average sizes of the sites are 105 Pyung. Renovated villages (136.5 Pyung) have larger sites than the newly built (92.5 Pyung) and the expanded villages (98.4 Pyung). There are more cases in which the houses have no secondary structures (53.0%). Public facilities are classified into agricultural system, convenience and welfare system, systems to promote income and incinerator. Among these, facilities to promote income are found to be the most lacking ones. Renovated villages lack of all kinds of facilities compared to the other types of villages. The expanded villages - Kim-Chon-gun Uh-Mo-myon and Kun-San-city Na-Po-myon - have more facilities than the other villages. It is because the size are big, and the center of living environment are connected with the public services(Myun office).

The places to keep agricultural machines are located left as empty lots, or

used as parking lots. The residents make use of facilities for the aged, the gate balls, and the welfare halls. However, they do not use parks, public parking lots, health, aerobic playground, tennis court, conference halls, and libraries. The residents in village make use of parks and playgrounds, if they are located near the entrance or at the center of the villages. Due to the poor management, health, aerobic playground, and libraries in conference halls are not used as much.

Residents' Housing Satisfaction with the Village Types. Almost all of the residents evaluated the town to be satisfactory. Significant difference in evaluation was evident between the newly built or the expanded villages and the renovated villages.

Residents of the newly built villages are not satisfied with water sanitary (2.95), town signs (2.67), and preventions against crimes (2.85). However, they were satisfied with harmonious environment (3.85) and the layouts (3.95).

Residents of expanded villages are somewhat more satisfied with their environment than the ones living in the newly built towns. This is due to the fact that expanded towns have more public facilities than the newly built. However, residents in the expanded villages are not satisfied with agricultural facilities since people tend to rely on the older facilities.

Residents of both the newly built and the expanded show dissatisfaction on overall management (2.55 of the newly built types and 2.78 of the expanded types due to the conflict that arises between the residents and the newcomers.

Residents of the renovated villages are satisfied with lighting, ventilation (5.00), green areas (4.84), harmonious scene (4.60) and close interactions among residents (4.85). They showed a need for more public facilities. Residents of all types of villages need to improve quality of water and to decrease car accidents and crime rate.

The results of the interviews point out that unsatisfactory items relate to water quality, and the maintenance of services and facilities (playground, community center, exercise facilities, parks, etc.). Namely insufficient and improper management and maintenance, and the non-existence of manager cause various problems. Therefore it is necessary to educate and train residents by experts for self-management.

Comparisons on Evaluations between Residents and Planners. Both the residents and the planners evaluated 'the amenity of life' positive, and planners are more positively responded than the residents. As a result of t-test, significant differences were found in the variables like safety against car accidents, convenient access to the public trasportation and the center of living environment, the use of fundamental facilities, convenience of public facilities, usage of an agricultural facilities, sanitary conditions of water quality, characteristics of villages ($p<.001$). For these items residents evaluated more negative than planners, and it is because they have more experiences in daily life. But planners were lightly negative about sufficient

[Table 1] Resident's Satisfaction in the Types of Villages

mean

Evaluation Items		the Newly Built type (20)	the Expanded Type (69)	the Renovated Type (20)	Total (109)
Physical Aspects	· sufficient natural lighting, lighting & ventilation	4.75	4.80	5.00	4.83
	· sanitary conditions of water quality	2.95	3.33	3.58	3.31
	· wastewater treatment facilities	3.83	3.93	4.20	3.97
	· sufficient greenland	3.10	3.10	4.84	3.41
	· harmonious artificial and natural view	3.68	3.72	4.60	3.88
	· housing conformity	3.85	3.56	3.47	3.60
	· safety aginst natural disasters	4.20	4.36	3.70	4.15
	· security from car accidents	3.10	3.26	2.55	3.10
	· an arrangement planning of site	3.95	3.80	3.93	3.85
Living Conditions	· gathering and disposal of waste	3.70	3.83	3.89	3.81
	· convenient access to the public transportation and the center of living environment	3.65	3.49	3.25	3.48
	· the use of fundamental facilities(water supply and drainage, electricity/telecommunication, wastewater treatment)	3.50	4.12	4.10	4.00
	· convenient of purchase	3.20	3.22	2.75	3.13
	· convenient of public facilities (a play yard, a park, a village hall etc.)	3.55	3.61	3.00	3.49
	· usage of an agricultural facilities (a public storehouse, farm machines storehouse, a public work site etc)	3.06	2.33	3.50	2.88
	· general management of the village	2.55	2.78	3.56	2.87
Community Aspects	· interactions among the inhabitants	3.70	3.72	4.85	3.93
	· interactions between inhabitants and neighborhood	4.25	3.48	4.40	3.80
	· freedom from crime	2.85	3.54	3.05	3.32
	· characteristics of villages	3.80	3.62	3.63	3.65
	· characteristics of village signs	2.67	3.76	3.39	3.50
Total	· the amenities of life	4.30	4.38	4.50	4.39

( ) Samples

[Table 2] Comparisons of Subjective Evaluation between Residents and Planners

mean

Evaluation Items		Residents (109)	Planners (119)	t-value	Sig.
Physical Aspects	· sufficient natural lighting, lighting & ventilation	4.83	4.51	3.673	.000***
	· sanitary conditions of water quality	3.31	4.54	-7.229	.000***
	· wastewater treatment facilities	3.97	4.45	-3.189	.002**
	· sufficient greenland	3.41	3.43	-.102	.919
	· harmonious artificial and natural view	3.88	3.64	1.623	.106
	· hosing conformity	3.60	3.27	2.090	.038*
	· safety against natural disasters	4.15	4.62	-3.561	.000***
	· security from car accidents	3.10	4.12	-5.629	.000***
	· an arrangement planning of site	3.85	3.52	1.878	.062
Living Conditions	· gathering and disposal of waste	3.81	3.68	.839	.403
	· convenient access to the public transportation and the center of living environment	3.48	4.31	-5.127	.000***
	· the use of fundamental facilities(water supply and drainage, electricity/telecommunication, wastewater treatment)	4.00	4.89	-6.381	.000***
	· convenient of purchase	3.13	3.41	-1.597	.112
	· convenient of public facilities (a play yard, a park, a village hall etc.)	3.49	4.53	-6.568	.000***
	· usage of an agricultural facilities (a public storehouse, farm machines storehouse, a public work site etc)	2.88	3.98	-4.579	.000***
	· general management of the village	2.87	3.12	-1.383	.168
Community Aspects	· interactions among the inhabitants	3.93	3.79	.829	.408
	· interactions between inhabitants and neighborhood	3.80	3.32	2.948	.004**
	· freedom from crime	3.32	3.05	1.511	.132
	· characteristics of villages	3.65	3.98	-2.167	.031
	· characteristics of village signs	3.50	4.43	-5.360	.000***
Total	· the amenities of life	4.39	4.29	.859	.391

( ) Samples * P<.05 ** P<.01 *** P<.001

natural lighting, lighting & ventilation ($p<.001$), interactions between inhabitants and neighborhoods ($p<.01$) and housing conformity ($p<.05$). Despite of non-significance, they also evaluated more negatively the harmony of village and natural view, an arrangement planning of site, and interactions among the inhabitant. This implies that planners have different perspectives from the residents on the village, and it is necessary to consider agricultural characteristics in planning landscapes.

CONCLUSION

The findings of this study show that there is a significant difference in the renovated villages and the newly built or the expanded villages. The obtained data point out the followings: In the newly built and the expanded villages, harmonizing the town scene and the natural view, the layout considering natural characteristics, and arranging public facilities to improve residents' interactions should be emphasized. In the renovated villages, convenient access to the public facilities and purchase should be taken into account. All types of villages should reflect the layouts to minimize car accidents and crime, and to improve the residents' interactions, and plans to effectively manage the public facilities. In addition, systematic approaches to minimize the conflicts between neighborhoods such as the program for Residents' Interaction Promotion may be needed .

Current Munhwa-Mauel project is mostly promoted by newly constructing the area and expanding the existing area. These villages are necessary to be developed to suit the locality. That is to say, since the location of the village has a great influence on the characteristics of the residents, distinctive plans and studies on housing layouts, public facilities and the housing types according to the locality should be proposed. As this study has been conducted based on the subjective research, further studies based on the objective index should be carried out in the near future.

Reference

SeungBin Im, SoonJae Cho, ChangSug Park. (1995). Project evaluation by the rural villagers on and spatial analysis of the reconstructed villages under the rural village improvement project (Type A). Journal of Korean Society of Rural Planning, 1(2), 53-66.

IckHwan Kim. (1995). A study on the improvement method of settlement environment in rural area. Housing Research Journal, 6(2), 123-137

youlll Kim, BongWon Kim, Handol Kim. (1994). An evaluationof rural residential

environment : Q.O.L. and Residential satisfaction. The Journal of Korea Planners Association, Vol 29, No 2.

Margaret J. Weber, Jacquelyn Mccray, and Mikyoung Ha. (1993). Housing assessment criteria of rural households. Social Indicators Research 28, pp. 21-43.

ChangSug Park. (1999). Evaluation on the behavior patterns and the improvement necessity of the Korean rural settlement. Ph. D. thesis, Univ. of Seoul National.