

NETWORK CONSTRUCTION OF REGIONAL WELFARE HOME RENOVATED VACANT HOUSE IN DEPOPULATED AREA -Case study of “*Abu* welfare association” in Abu town Yamaguchi Prefecture -

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ABSTRACT: Depopulation and aging in farm area cause increase of vacant house and the elderly living alone in rural areas. Therefore, it is necessary to construct the life environment of living at ease in familiar region. Such a social background, making welfare base for various service have been started by constructing regional welfare home renovated existent buildings, facilities are established more easily than building, and they are paid attention as welfare base of the area. This paper deals with network between large scale compound welfare facilities and small scale welfare home utilized traditional fork house constructed by *Abu* welfare association in Yamaguchi Prefecture. The purpose of this paper is explaining the role of four welfare facilities by comparing and analyzing village structure, sphere of use and management way. The results are as follows. It is used not only welfare facilities for the elderly but also base of regional community by the management style matched to the character of the region, and it leads to the activation of the area. And users can select facilities according as their life environment and level of nursing care. Small scale welfare homes are placed in main three villages, so users can visit home at short time and easily. Facilities are established at low cost by setting handrail and repairing toilet and bathroom simply.

KEYWORDS: regional welfare home, renovation of vacant house

1. INTRODUCTION

1.1 The background of the research

From the latter half of 1980 years, it proceeded with the reform of the social welfare system, and the new gold plan (1994) that emphasis was placed for the maintenance of service base was settled on. Care insurance law (1997) was concluded after that and the gold plan 21 (1999) which made home welfare foundation by the health coverage system was settled on.

At the same time, to strengthen the area welfare support system, the health coverage system was introduced, and the social welfare law (2000) was

concluded and the social welfare business law and so on was revised. The goals of law are as follows.

(1) The establishment of the social welfare system that user's position is taken seriously (2) Improvement in the quality of the service (3) The fulfillment and activation of the social service (4) Increase in regional welfare. Furthermore, with revision care insurance law (2006), it changed into the policy of prevention emphasis,

The contents that the promotion of maintenance of the establishment of area inclusion center to provide the preventive care service and the small scale care home prepared the multiple functions with the start of area close adhesion service by the local

government were included.

On the other hand, in the architecture and city planning field, the decrease in population and the progress of aging in the local city and the increase in the vacant house and store due to the drain to the suburbs of households and city function are regarded as the problem. As for the rural area as well, it has a subject such as increase in the vacant house and the decline of community due to the decrease in population and aging. From the viewpoint of the decrease in environmental load as well, the aiming at the settlement of population and the regeneration of community by making use of existent stock and un-use land effectively is placed on the important subject.

Corresponding to the change in the social conditions like this, the maintenance of the welfare home has been started by making use of existent welfare facilities, public facilities, private house and so on. And not only the advantage to set up it with low cost but also the validity as the area close adhesion type's welfare base is paid attention. But, there are earnest subjects such as securing of the existent facilities which are suitable for the welfare facilities, the supply of improvement fee for the use change, and securing of the management cost, and it is hoped to construct the small-scale welfare facilities network in rural areas by solving these subjects.

Table1 Welfare policy for elderly in Japan

1989	Gold plan
1994	New gold plan
1997	"Nursing care insurance law" enactment
1999	society welfare base constitution reformation Gold plan 21
2000	"Nursing-care insurance system" enforcement "society welfare law" approval
2005	"revision Nursing care insurance law" approval

1.2 The construction of small scale welfare home with multiple functions

In Yamaguchi Prefecture, with a purpose of spreading the system that various services are available in the familiar place and peoples cooperate in the area, the model project has been carried out from 2004. This project aims that old people, handicapped persons, children and so on can easily use the vary welfare services in the familiar area by building the area welfare base which is made use of existent resources such as vacant house, and also it aims at promoting the system-making of management by the participation of inhabitant volunteers.

The project outline is shown in the table 2, Yamaguchi Pre. is the project proprietor, and the executive master is local government, social welfare conference, non profit organization and so on. It is aided in the construction of welfare home by making use of existent resources. Aid objects are the improvement and equipment cost which are necessary for the installation such as care equipment and the aid upper limit for the project fee is 6million

Table2 Outline of model project in Yamaguchi Pre.

Project Subject	Yamaguchi Prefecture
Operating Subject	Municipality, Social welfare corporation, Incorporated nonprofit organization
Achievement	7 examples(2004-4example, 2005-3example)
Activities	1.Base making that uses existing resource (facility maintenance)
	Project expense maximum : 6 million yen (only at the first year)
	example : Bamp cancellation, Making slope, Repairing toilet or bathroom, Buying nursing bed
	2.Mechanism-making of management that receives the local populace's cooperation
Load ratio	Project expense maximum : 600,000 yen (first year) 300,000 (second year)
	Example : inhabitant briefing holding, Volunteer expenditure
	For social welfare corporation : prefecture 1/3, municipality 1/3, project subject 1/3 For other operating bodies : prefecture 1/2, municipality 1/2
Management support	Prefecture
	1.Making base and supporting to entrepreneur who works on management 2.Installation of project promotion conference, Spread and enlightenment of approach case

Table3 Outline of facilities and region

Project number	1	2	3	4	5	6	7
Facility	Nakamurasanchi	Engawa	Hagiminka	Nagomi-no-ie	Genki-house	Tanpopo	Shiawase-Salon
Address	Shimonoseki city Kikugawa town	Abu-gun Abu town	Hagi city Tuchihara	Yamaguchi city Aio	Yamaguchi city Ajisu	Nagato city Hioki	Shimonoseki city Touhoku town
Architectural time		1993	1986	1972			1987
Structure	Wooden house	Wooden house	Wooden house	Wooden house	RC	RC	RC
Floor	1	2	1	1	1	2	2
Building type	Farm house	Farm house	Independent house	Independent house	container	Shed	Store
Floor space(m ²)	235.16	283.46	175.77	105.3	207.05	124.06	163.62
Population(2005)	8,312	4,101	43,705	7,697	9,031	4,557	11,996
Population increase and decrease rate(2000-2005)(%)	1.3	-10	-5	-3.1	2.4	-2.4	-8.6
Rate of aging(2000→2005)	23.2→24.7	38.1→42.2	25.0→28.8	26.1→29.3	24.9→26.5	31.4→33.9	33.4→37.6

yen. In the case that a social welfare corporation is the project proprietor, each 1/3 is borne by the prefecture, local government and corporation, on the other hand the proprietor is except for social welfare corporation, the prefecture and local government bear each 1/2, but when it exceeds the aid upper limit, the excess is bearded by the executive master, otherwise 600000 yen is aided in the first year and 300000 yen in the 2nd year for system-making of the management by the local resident's cooperation.

Further more, about the management support, specialist's dispatch and the raising of talented people are supported to the project master by Yamaguchi Prefecture social welfare conference and also the system that the diffusion of the case is enlightened is being prepared by the project promotion conference.

The location of the homes constructed by this model project in the Fig. 1 and the outline is shown in Table 3. Cases 1, 2 are the homes converted the traditional farm house in rural area, and case 3,4 are the ones of wooden house located in the city. On the other hand in case5, the site was rented from local government, and marine containers had been reused. Case 6 is the re-use example converted the garage of government office building, and case 7 is the repaired facilities possessed by agricultural cooperative association in rural area, these are regenerated cases of non-residence facilities.

1.3 The purpose and method of the research

In *ABU* town, "*ENGAWA*" was opened in 2006

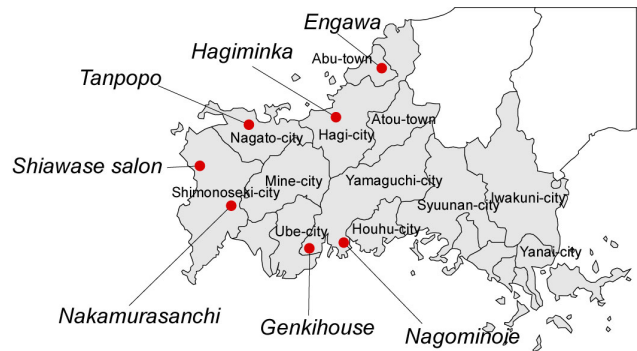


Figure1 Location of facilities

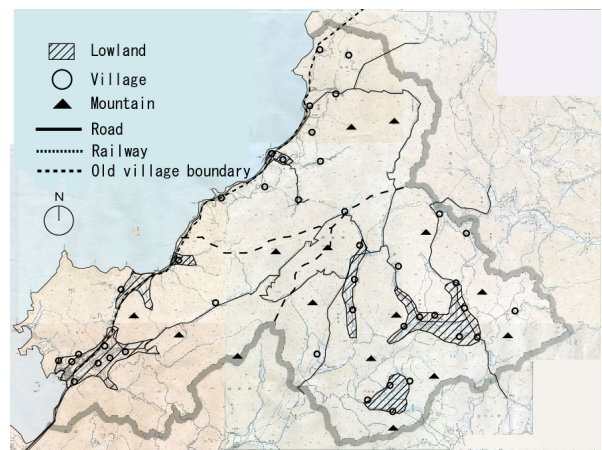


Figure2 Space map of object area

due to the model project of *Yamaguchi* Pre., after that, 2 homes had been opened one after another in 2008, so it pays attention as the nationwide advanced case that it proceeds with network construction of small-scale welfare homes in the depopulation area.

This research aims at explaining the formation terms of network in *ABU* town and examining the effect of one by the analysis of establishment details of the small-scale welfare homes, the architectural outline including the improvement and the use sphere.

2. THE OUTLINE OF ABU TOWN AND THE CHANGE OF POPULATION

2.1 The outline of *ABU* town

Three local governments of *NAGO* town, *UTAGO* and *FUKUGA* village combined in 1955 and it became *ABU* town. At the time, the population in *NAGO* area was about 5000 people and one in *UTAGO*, *FUKUGA* areas were about 2.3-2.6thousand-people. *ABU* town is located in the ravine area facing the Sea of Japan, and it is the typical rural area in Japan where the agriculture, forestry and fishing are the main industry.

The central city area of *NAGO* spreads out in the level ground part on the national route No.191 at present and public facilities such as *NAGO* railroad station, town office, day nursery, elementary school, junior high school, high school, cultural hall, martial arts palace, post office, agricultural cooperative association, medical facilities, purchase facilities and so on are accumulated and this area has been functioning as the central zone in the whole town. In the bay shore area adjoining the central zone, *NAGO* fishing port and fisherman's village are located and the roadside station and sport facilities has been constructed recently by the reclamation.

As for *UTAGO* area, *MOTOURA* and *IMAURA* fishing port and fisherman's village are the center of this area that is put in the Sea of Japan and national route 191, and farm villages spreads out in the hilly areas of that circumference. Public facilities such as town office branch house, elementary school and post office, fishermen's union and purchase facilities by fishermen's union and agricultural cooperative association have located in the level ground part in the central zone, but private store is hardly seen at present, and it has the distance of about 0Km from the central zone though *UTAGO* railroad station is located along the national route.

Mountain and hill district occupies most in

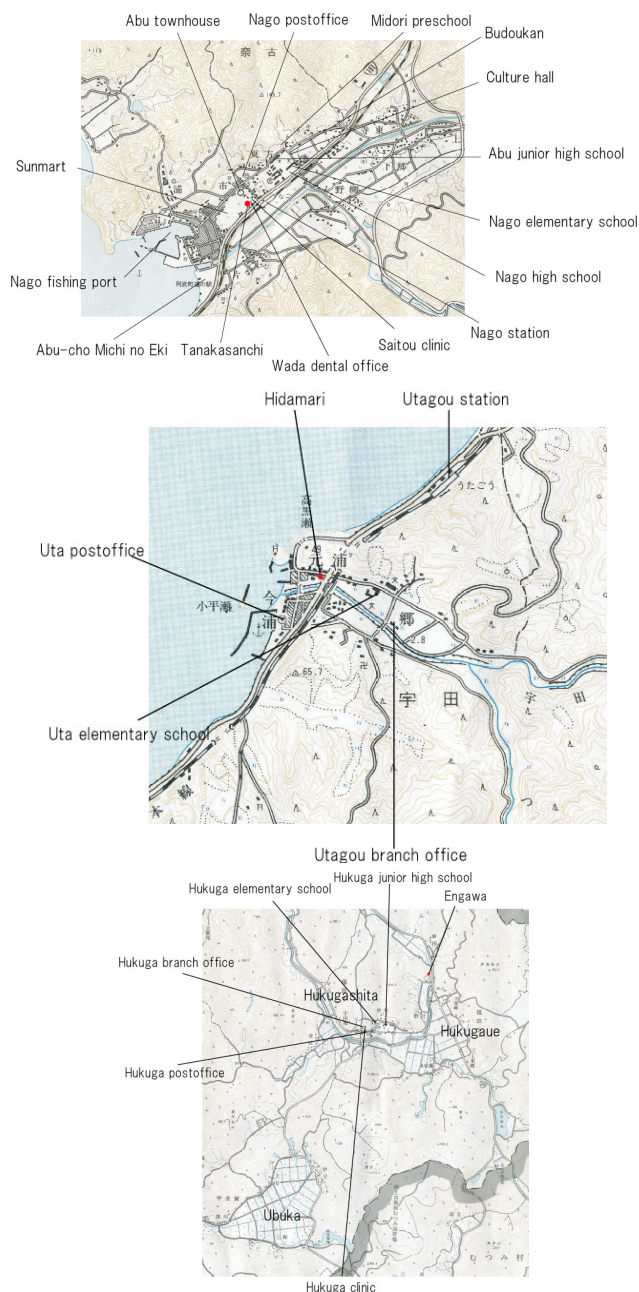


Figure3 Location of main facilities in central zone

FUKUGA area, and the central villages of *FUKUDAKAMI-SHIMO* and *UOGA* are located in the comparatively wide basin, but it has the distance of about 0Km from the central zone of the town, and the traffic convenience is poor with both villages as well. In *FUKUDAKAMI-SHIMO* village, public facilities such as public office branch house, elementary school, junior high school, post office, purchase facility by agricultural cooperative association and so on but private store is hardly seen.

Except for these central villages, small-scale farm villages are dotted at the circumferences of agricultural land in the valley of the mountain and hill area. .

2.2 The change of population, number of households and the trend of aging

Though the population of the town changed steadily with about 10000 people for 1945-1960 years, it shifted to the decrease after 1960 years when Japan changed in the advanced economic growth term and especially the population decreased drastically from 10000 to 7400 persons in 1955-1970 years (Fig.4).

After that, the decrease tendency has been continued, the decrease in 3300 persons has been brought from 7400 (1970) to 4100 (2005) in 35 years and this tendency is the same in any areas.

When this tendency is examined by the age after 1965 (Fig. 5), the decrease in head of household age group of 30-49 is remarkable, and it is estimated that the rate of decrease in population by the transfer of all of the households is high, as the result, the classes of 14 years old and under decreased drastically. Concerning the decrease in productive age group of 15-29 years old, it is estimated that the influence of transfer for the entering to the university or employment after graduation of high school is big.

On the other hand, 20 years of 1965-1985 showed the tendency to increase in head of household age group of 50-64 and the decrease by the transfer wasn't seen, but it shifted to decrease after 1985 when the 30-49 years population became lower than 50-64 years, and it decreased about 500 persons by 2005. The old man of 65 years old and over has a few social increase and decrease because of the rural area, and it shows the tendency to increase consistently due to the natural increase, and it is on the increase from 968 persons (1965) to 1781(2005).

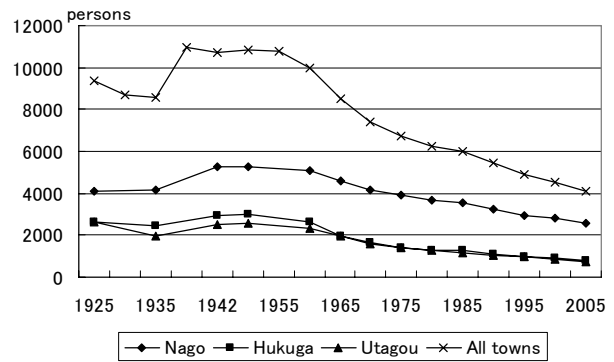


Figure4 Transition of population

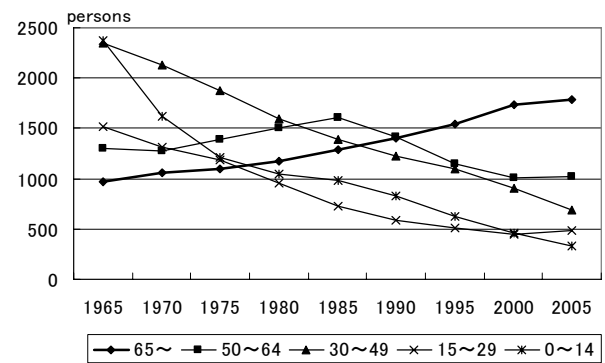


Figure5 Transition of population by age

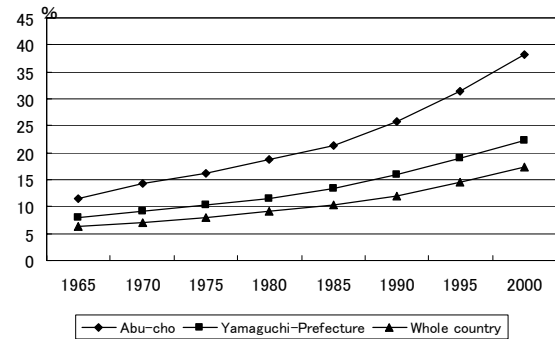


Figure6 Transition of elderly rate

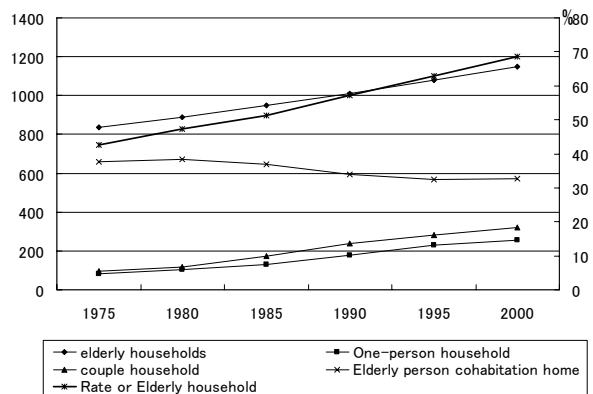


Figure7 The number of elderly households

Because the total population of the town decreases and only the population of 65 years old and over is on the increase, the aging rate (population of 65 years old and over /total population × 100%) has risen rapidly to 38.1% (2000) since 11.4% of 1965's, so the progress of aging is remarkable comparing with the average of Yamaguchi Prefecture (22.2%) and nation (17.3%) (Fig.6).

About the change of the household number in which old person is included(Fig.7), the number increased into 1148 households (2000) from 835 households in 1975, and the rate occupied in all the households has been risen drastically from 42.7% to 68.6%. Especially, the increase in the household of single aged and aged married couple is remarkable and the households of living together with child decreased conversely, therefore it is predicted that the social demand to the welfare service to support old people's life will increase.

3. WELFARE FACILITIES CONSTRUCTION PROCESS IN ABU TOWN

3.1 From the merger to the care insurance system introduction

After the merger in 1955, the universal partnership was organized by 7 local governments including ABU town and "KIYOGAHAMA home for the aged (1961)" was constructed as the first welfare facility in HAGI-ABU area, and also the Maternal and Child Health Center (1962) was set up in same year. The social welfare conference was make a start in 1965 (the permission of the social welfare corporation was taken in 1979), in the next the introduction of home management service (1969) and the geriatric free medicine (1972) was realized, and the fundamental outline of medical welfare for elders was prepared in 1960's. From 1975 to 1995 when the rapid decrease in population progressed, though the rest house for old people (1976) and sanitation center (1983) were

Table4 Construction process of welfare facilities

1955	Abu town inauguration	
1961		Kiyogahama nursing home
1962		Abu towno mother and child health center
1965	Abu town Social welfare council	
1969	Home care aid system	
1972	Free system of Geriatric medicine	
1976		Abu town roujinn ikoino ie
1983		Abu twon hygienic center
1997	nursing care insurance law	
1998		Kiyogahama Seikouen Day survise center ,Care management center
2000		Keijyuen
2005		Deai
2006		Engawa
2008		Hidamari Tanaka house

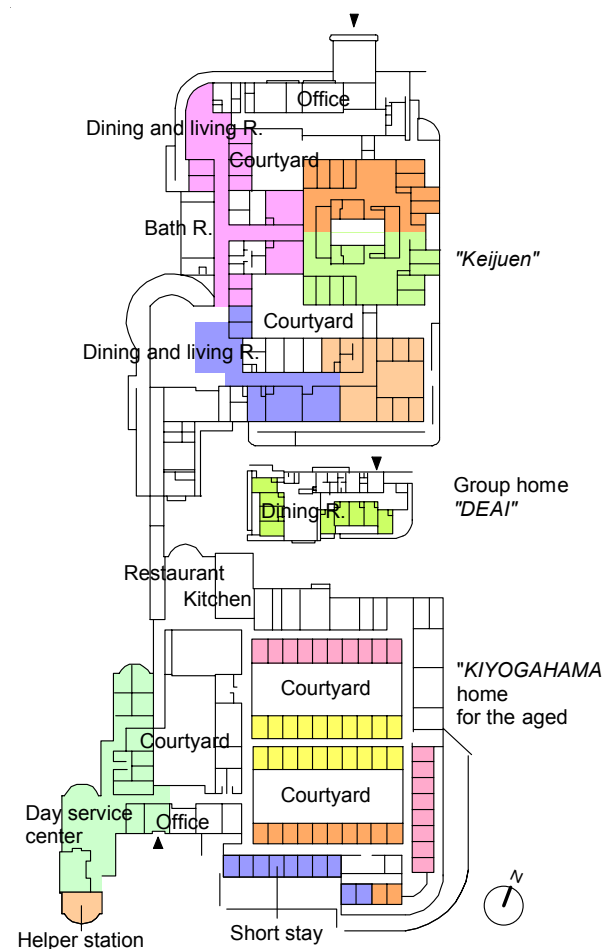


Figure8 Plan of town welfare facilities



Photograph1 Town welfare facilities

constructed, other remarkable dealing wasn't seen (table 4).

3.2 The construction of town welfare facilities

After the "care insurance law" enactment in 1997, the fundamental construction plan of welfare facilities including the reconstruction of existent home for the aged (1961 opening) was settled on toward the introduction of care insurance institution. For the introduction of the care insurance system, nursing home for the aged (the number of persons admitted: 50), day service center provided with the residence room for short stay(ten rooms) and the home care support center (helper station) was set up in 1998 (bottom part of Fig.8).

In 2000, by the special supports by nation, the special nursing home for the aged (admitted number: 50persons) which introduced the advanced unit care system completely was newly constructed (top of Fig.8), and the group home (admitted number: 9 persons) of wooden one-story house which is the community life home for dementia old person has been prepared newly in 2005, as the result the level of protective institution for elders improved greatly in the quantity and quality, so the role of the wide area welfare base for elders including not only ABU town but also the circumference area has been bearded.

In addition to the existent social welfare conference, new management organization "ABU Welfare Association" was established to promote the effective application of these facilities in 2000. It is placed on the special incorporation which bears the old people's welfare of the town, and the construction and management form of "public fund and private management" type that public society constructs a facility, and private organization is entrusted with the management has been adopted. At the institution of this special corporation, capable talented person of the welfare field had been hired newly as the management person in charge and staff, and they are working as the kernel of the area welfare work promotion, and it doesn't stop for the

Table5 Outline of small scale welfare facilities with multiple functions

Facility	Engawa	Hidamari	Tanaka House
Structure	wood	wood	wood
Floor	2	2	2
Total floor space(m ²)	283.46	129.42	119.61
Renovation cost	2,400,000	8,500,000	0
Establishment year	2006.6	2008.6	2008.6
Business days	Tue~Sun	Sun~Fri	Mon~Sat
Business hours	9:30~17:30	9:30~16:00	9:30~16:00
Number of users	27	10	24
Number of staff	3	3	3

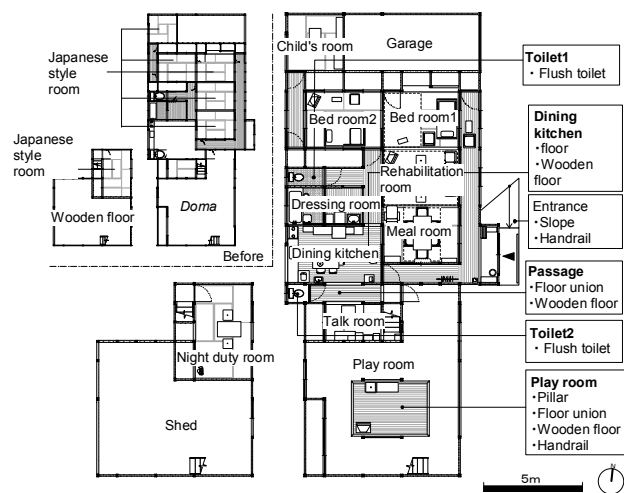


Figure9 Plan of "ENGAWA"



Photograph2 "ENGAWA"

management of central facility, they are the core staff grappling with the construction of welfare facility with multiple functions with small scale and multiple functions.

3.3 The construction of small scale welfare facilities with multiple functions

After the construction of central welfare facilities of the town, dealing with the maintenance of small scale welfare home with multiple functions was started, and "ENGAWA" was opened by ABU welfare meeting in FUKUGA area due to the model project of Yamaguchi Prefecture in 2006. After that, in 2008, "HIDAMARI" in UTAGO area and "Tanaka HOUSE" in NAGO area were opened one after another, as the result small scale welfare home was prepared in all former 3 areas before the merger and the network of area close adhesion type was built (Table 5).

3.3.1 "ENGAWA"

"ENGAWA" is the home converted a traditional farmer's house (figure 9 and photograph 2). Because an aged owner entered the special nursing home for the aged that was managed by ABU welfare association and the residence became vacant, the use debits and credits contract was concluded with the owner, and established as the old people day service and infant keeping service facility in June 2006.

The offer service is satisfactory in such cases as the bathing, staying service, and six days out of one week are opened as the care insurance use facility. Specially, it is characteristics that a life program of one day isn't set up, lunch is cooked with user and staff, physical exercise, recreation, bathing and staying service are offered and sometimes crop work in the neighboring agricultural land, tightened rope and straw sandals-making as well are being done.

There is registration of twenty care insurance old people to ten capacities, and the non-care insurance people have six registration. Though three staffs usually look after care insurance people, two exclusive staffs join on the use day of non-care insurance person.

Under the condition that bathroom, kitchen can use as it is, and equipment such as handrail was installed at the time of building (1993), so the main

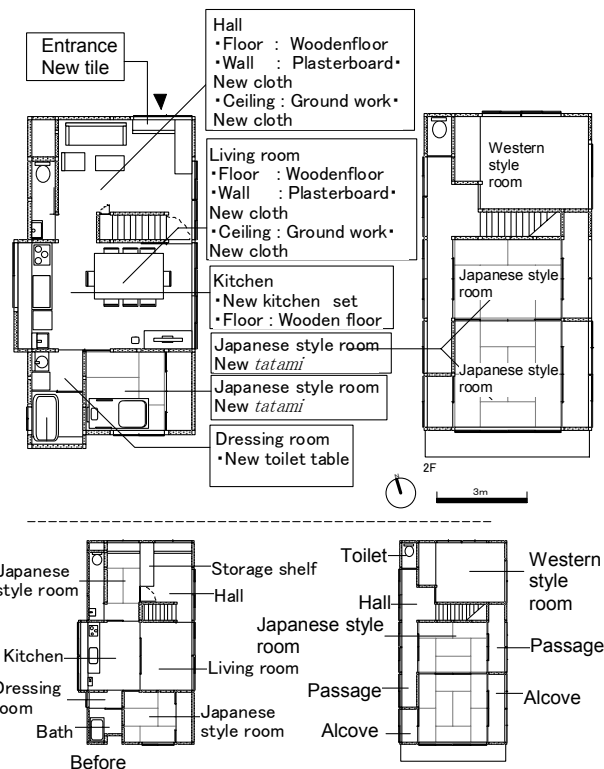


Figure10 Plan of "HIDAMARI"



Photograph3 "HIDAMARI"

improvement is as follows, the installation of joint septic tank, waterization of rest room, change of floor panel, remodeling of earth floor to play room and the set up of slope at the entrance. Therefore, watering, drainage equipment and electric construction cost 1.6million yen and others are 0.8 million yen including various expenses, so the total amount of improvement cost is small with 2.4 million yen.

Japanese-style six mats rooms are the functional training and living place of user and staff. Room 3,4 takes the place of lunch and the user's physical exercise, recreation, and a bed is put on the room 1,2, and user can do a nap and so on freely, and 4.5 mats room is used for the child keeping service after school, the consultation room is used for office work.

3.3.2 "HIDAMARI"

After the council request of central fishing village in *UTAGO* area where the aging progresses and vacant house exists in many, to develop the old people day service business by *ABU* welfare association, the search of candidate house for facility was started inside the village, but time for 2 years was needed because there was no debits and credits precedent of owner-occupied house, finally borrowing of wooden 2-storied high vacant house(130 m²) of which owner built new house in the village was realized. As for the first floor, there is kitchen, living room and two Japanese-style rooms; the second floor is constructed by Japanese-style guest rooms and one Western-style room (child room).

To make the first floor part day service facility, The equipments of kitchen, bathroom, lavatory and rest room and interior, exterior of the 1 floor part had been repaired completely except for 4.5 quires Japanese-style room in which Buddhist family altars gills was set (figure 10 and photograph 3) . Though the improvement cost 8.5million yen, it was completely supplied by the own funds of welfare society, and no public subsidy was invested.

It was opened in August, 2008, the present use registrants are ten persons and three staffs are being engaged. Furthermore, the welfare volunteer activities are taken except for the day service in this home and the training meeting is held regularly in Japanese-style guest rooms of the second floor.

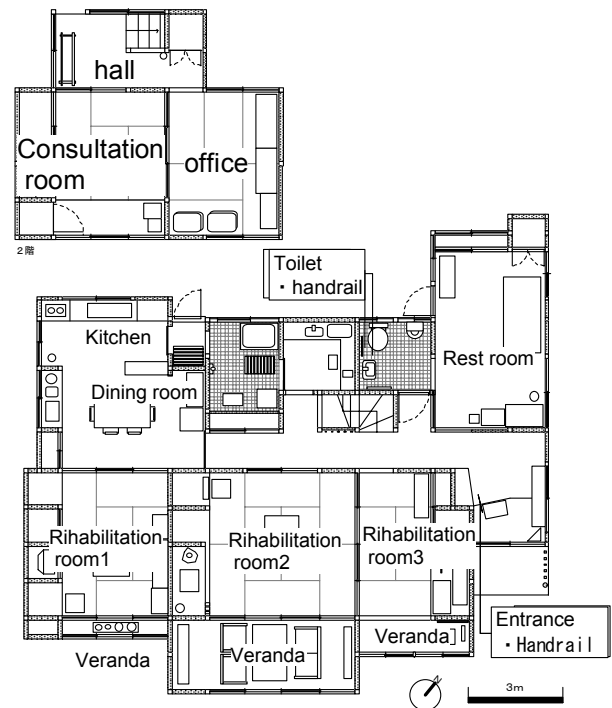


Figure11 Plan of "TANAKA HOUSE"



Photograph4 "TANAKA HOUSE"

3.3.3 "Tanaka House"

"Tanaka House" is located in center of *NAGO* area, and adjacent to *NAGO* railway station, town office, post office, medical office, shopping center, and close to the nursery school and elementary school as well, so the convenience of this place is high. In the beginning, it was intended to be borrowed 1 ridge of the house with 2 ridges as the staff member dormitory of the welfare society, the owner of the house decided to move to the special

nursing home managed by the welfare society, then the other 1 ridge became possible to borrow at the same time, so the use debits and credits contract was concluded with the condition of maintenance of the house and the care of Buddhist family altar.

Simple improvement such as the set up of hand rail was done and opened in June, 2008 (Fig.11, Photo.4). The welfare society could obtain consent to use furniture, household electric appliances and dinnerware as well as it is for the owner lived to the front, so the various expenses for opening were restrained small.

Though time hasn't passed after opening, the present use registrant has already reached 24 people, and 3 staffs are being engaged because of the reason that it is excellent in the conditions of location, and it stands near to the city area and fishing village.

Except for the day service function, this home is being expected to become the place where old people who use a public office, post office, medical office, bank, shopping center and so on can drop in without reserve, and otherwise child's keeping service has been started because this home is in the close place to the nursery school and elementary school.

3.4 Formational terms of the facility network

By the social welfare association managing the central welfare facilities of the town, the construction of small scale welfare facilities with multiple functions repaired the existent private house was realized in three central districts for a short term.

The following points are pointed out as the condition that the facility network of close adhesion type was concluded in this area. (1) Along with the introduction of health coverage system, by the local government, central welfare facilities (home for the aged, day service center, home care support center) of the town was prepared, and at the same time the

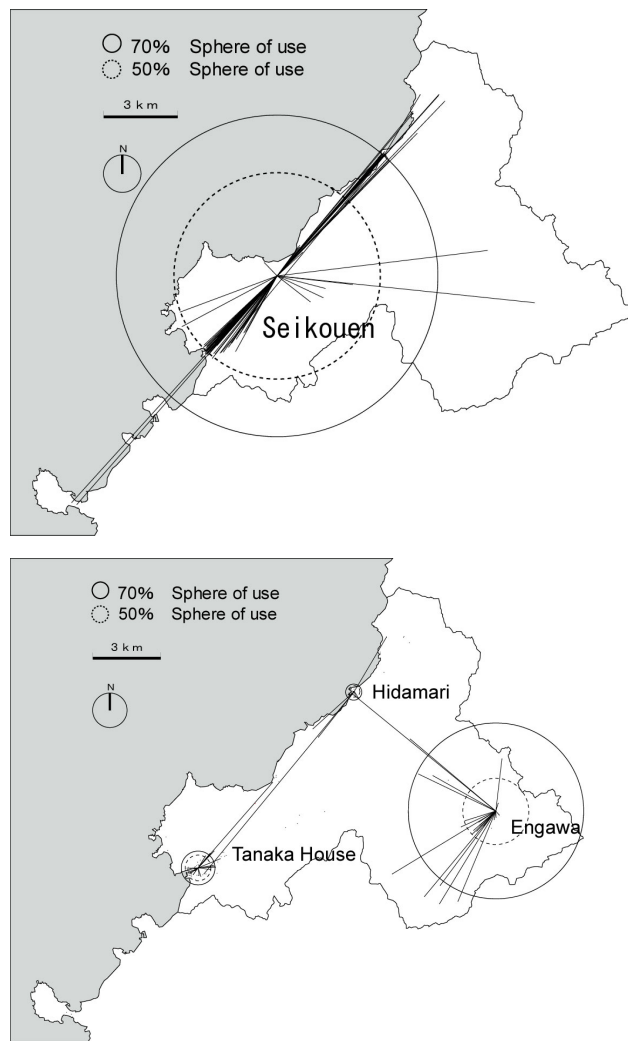


Figure12 The use sphere of welfare facilities

social welfare corporation was established newly as a management organization and the promotion system of the welfare policy was established. (2) As the business of welfare association, the network construction of small-scale welfare facilities of area close adhesion type was set as the goal except for the management of central facilities. (3) The residence which became vacant could be borrowed from the owner who moved to the home for the aged that the corporation managed, or the borrowing of vacant house for facility realized by the request of the area council and the complete cooperation. (4) The welfare corporation had the ability of raising the improvement cost without depending on public assistance, the talented people who are necessary for the management and know-how of management.

4. THE USE SPHERE OF WELFARE FACILITY

About the use sphere of the day service center based on the whole town use and the small scale welfare home with multiple functions, the actual condition of the function sharing as the network is shown at first, and a consideration is added about the effect on the construction of small-scale facility from viewpoint of the conditions of location and contents of service.

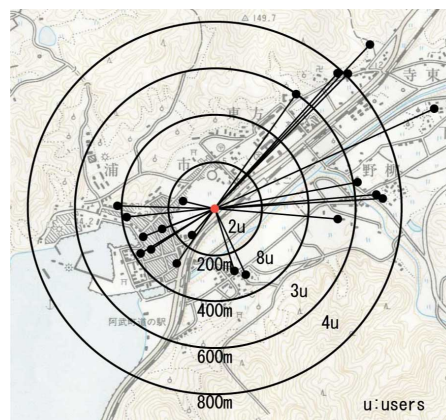


Figure13 The use sphere in *NAGO*

4.1 The use of the central town facility

There are many day service users of the whole town facility with 89 people at present, and the number of *NAGO* area close to the facility is 56 persons, in the order of *UTAGO* (24person), *KIYO* area (4person), and it is the characteristics that there is much use of the resident who lives at the point where is convenient for the pick-up on the line of the national route (Fig.12). It guesses that the user from *NAGO* and *UTAGO* area is composed by two types, one is the user who hopes the technical rehabilitation at the central facility where the equipment is satisfactory and another is the continued user before the opening of small-scale facility. On the other hand there are a few users from *FUKUGA* area with two people at present, but before "*ENGAWA*" was opened in *FUKUGA* area, there were six users, and then it took more than one hour for pick-up.

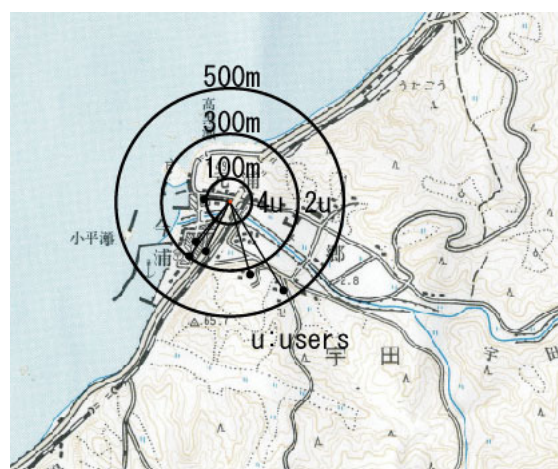


Figure14 The use sphere in *UTAGO*

4.2 The use of small scale welfare home with multiple functions

As for *FUKUGA* area, because small-scale villages are distributed in wide area and there are some users from *UOGA* area of no welfare facility, the use sphere of "*ENGAWA*", is wide comparing with other 2 facilities. 50% use sphere is 2km, and 70% sphere is large with 5km, so the home has

covered the whole area of *FUKUGA*. 2 years passed from opening, and user increased by the guidance of the home and the understanding of the local inhabitant of *FUKUGA* area, and there are 26 users at present. Effect on the use sphere sharing by network construction is admitted from the fact of four people's changing from the whole town facility use to "*ENGAWA*" after opening.

Because the use sphere of "*ENGAWA*" is comparatively large, the welfare corporation has a plan to prepare a new home in *UOGA* area where there are many users to cope to the increasing demand of welfare service and it is the plan to shorten pick-up time at the same time.

The use sphere of "*TanakaHouse*" is comparatively small, and the sphere is within range of 0.5km in user's 50% use blocs and 0.8km of 70%

because of the location in the center of town area. The location of "HIDAMARI" is in the fishing village where is in the center of the area, the use sphere is within range of 0.3km in user's 50% use blocs, and 0.5km of 70%, so the sphere is smallest in 3 homes.

5. CONCLUSION

Due to the simultaneous progress of decrease in population and aging, the local government in depopulation area has difficult subjects of correspondence to the increase in demand for medical welfare to support old people's life and the service level maintenance in the cause of the financial pressure due to the decrease in tax revenue and local delivery tax reduction.

Though the central facilities construction of the town has been realized in ABU town, even in the present condition the user is close to ninety people, and it is predicted easily that it can't cope with the demand any more in near future by 1 facility when the future increase in demand is anticipated. Therefore, the central facility with satisfactory equipment is placed on the facility for the old people who hopes the special rehabilitation, and on one side the small scale welfare home with multiple functions is arranged in disperse and by placing it on the home to provide the service for the old people who likes the homelike atmosphere which is available without reserve, correspondence to general increase in demand, shortening of pick-up time and cost reduction by sharing use sphere and the fulfillment of old people's choice branch of day service menu become possible.

The trial to combine the central facility with advanced function and the distributed arrangement of small scale welfare home with multiple functions that made use of existent building and to build the network of facility use is evaluated as an effective method to secure the amount and quality of welfare

service corresponding to the increase in the demand and to realize the reduction of repair cost at the same time.

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