

The role of tourist attractions on change of the traditional dwellings of mountain and mountainside villages (Dohezaar rural district, Tonekabon Township)

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Abstract: In this article, the researcher does her best to study the impacts and outcomes of this industry on the development of local and traditional dwellings from various dimensions and aspects, including form, architecture, function, etc. The data collected for this study are based on information, statistics, and also experts' opinions. The results of the present study can help us to evaluate, plan, and fulfill the development of rural tourism on the area under study, so it will provide a good background to reach the goals of tourism in the process of rural tourism development.

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1. Introduction

Today, tourism industry is among the main sources of income; at the same time, it is one of the effective factors of cultural exchanges among countries worldwide. It has particular position as the most expanded industry that provides services to the public because the global growth of tourism has gifted a worldwide and economic wealth gotten by chance that will be at first stages of the plans and programs of nations and societies throughout the world (Gaan, 2002: 18).

Therefore, it is necessary that tourist plans will be equipped by constant tools and techniques in order to decrease its destructive impacts in addition to guarantee its permanent productivity.

Villages are one of the sources which have got the attention of planners more than before.

Rural world is broadly a valuable part of our cultural heritage, and local and unique architecture of an area reflects and supports its identity well (Deragouni, 2008: 3). It provides great potential for visitors and tourists who are far from and near to the area by having social, cultural, and natural factors and attractions. Therefore, rural tourism can be the best choice for developing villages in relation to the rural area's situation and the necessity for its developing in sustainable form (Sharifzadeh and Moradnezhad, 2002: 52).

Western part of Mazandaran province with great potentialities is geographically suitable for developing tourism because of having moderate climate and natural unique landscapes such as thick

forests, paddy- fields, and Khazar (Caspian) sea sides. Because its area is very large, Dohezaar rural district, suburb of Tonekabon Township, will be in our consideration.

Since the income gained by tourism is definitely more than income of villagers gained through agricultural activities, this industry has been welcomed in many rural areas in spite of its negative impacts. Lack of tourism planning might mean that the crowds of visitors with different cultural values come to a village and this causes the culture of the village meltingdown, and also villagers will not have enough participation in the field of traditions and customs a lot (Fatahi Kanaani, 2005: 39). When tradition disappears, the whole figure of the society also changes; therefore, different structures are formed gradually, and the society is going to be structuralized. The new structure undertakes part of the functions of the tradition, and it itself is going to evolve following the changes in the society. The first trend is the appearance of new dwelling patterns (Saameti and shahnazi, 2005: 103).

The changes happened in Dohezaar dwelling patterns show that all the factors related to dwelling and development are also under change and development following the evolution in its shape and architecture. Therefore, the role of tourism in development of traditional dwellings (style and method of architecture, function, form, etc.) in Dohezar rural district has been taken into consideration, and we try more to bring into study and consideration these changes and their outcomes.

Geographical setting of the rural district under study

Dohezaar rural district, suburb of Tonekabon Township, is located in Mazandaran province. This province is located in the northernmost part of Iran in the south of Caspian Sea. Also, Tonekabon Township is located in the west of Mazandaran province and consists of three districts named central, Abbas Abad, and Khoram Abad. Its central district comprises one rural district called Goleyan.

Khoram Abad comprises three rural districts called Baladeh, Sehezaar, and Dohezaar, and Abbas Abad comprises three rural districts called Nashta, Langaroud, and Kellar.

The rural district under study is part of the divisions of Khoram Abad district, and it is bounded to the north by Khoram Abad district, bounded to the east by Sehezaar rural district, bounded to the west by Golyjan rural district and Ramsar Township, and bounded to the south by Moalem Kelayeh and Alamout regions in Qazvin province and the Alborz mountain range (Iran statistics center). In general, it is an area of land from which water flows into the Cheshmekilleh River. Dohezaar is the smallest rural district among the rural districts of Khoram Abad.

According to the last conducted general census in 2006, population of Dohezaar has been 1426 including 365 households. The number of villages has been estimated to be about 44, among which 16 villages are populated and 28 other villages are not populated (the office of budget and plan, 1986-2006). With regard to the geographical situation, this rural district is located in the geographical coordinates of 50 degrees and 35' minutes up to 50 degrees and 45' minutes of eastern longitude and 36 degrees and 30' minutes up to 36 degrees and 40' minutes of northern latitude (Iran statistics center, 2006: 4).

Heights and mountainous regions topographically comprise nearly ninety-five percent of the rural district under study. The highest point is the height of Siellan located in the west of Dohezaar being 4225 meters above sea level, and the lowest point is a place called Single Building Rush (Tak Sakhteman Rush) situated 300 meters above sea level. Dohezar villages are situated 300 up to 2000 meters above sea level, out of which about eighty percent are situated 1500 up to 1600 meters above sea level (Hassannezhad, 2002: 65). Therefore, they are located in mountainous and mountainside regions, and their climates are affected by different air masses with different sources including Siberian high at north-east, Azores and the northern Atlantic high (Ramsar weather station, 2009).

The existence of beautiful landscapes and pleasant weather can be considered as effective factors in attracting the attention of many tourists to visit the rural district.

Now the main point is that the presence of visitors has been increasing in recent years without considering substructures, local culture etc., and this causes rural dwellings become unsustainable from ecological, cultural, and economic aspects. Therefore, the main question of the research is what the role of rural tourism is in development of traditional dwellings of mountainous and mountainside villages in the west of Mazandaran province (Dohezaar rural district).

We must consider several goals for answering this question:

1. Preparing the fields of rural development in Dohezaar rural district together with preservation of traditional culture and earning a living for villagers.

2. Studying effective factors in the development of rural traditional dwellings and changing their functions.

- Studying and analyzing rural traditional dwellings with their methods of architecture and their functions.

- Decreasing rural migration by creating job and increasing income in the village by growing tourist activities.

- Recognizing advantages and disadvantages of rural tourism from different economic, cultural, social, and environmental aspects in Dohezaar rural district.

- Recognizing villages with high tourist potential for the preservation and revival of rural traditional culture and rural tourism development within them.

With regard to the goals of the research, the hypotheses will be raised as following:

1. Rural tourism brings about changes in traditional dwellings and in their functions in Dohezaar rural district.

2. Traditional dwellings of the rural district under study can be effective in gaining the attention of tourists and developing rural tourism by exploiting natural attractiveness hidden in their unique architecture.

3. By developing rural tourism, the previous job opportunities will disappear, and this may lead to increased migration.

In this research, the statistical population consists of the households living in the villages of the rural district, the officials and organs related to the villages, and the tourists coming into the rural district. There are sixteen populated villages with totally 365 households, out of which one-third of

villages were chosen randomly as the sample villages (Baraseh, HalouKaleh, Païen Oshtouj, Bala Oshtouj, Mian Kouh) through Cochran formula (Saroukhani, 2008: 135).

We prepared questionnaire for all officials because of their few numbers. Also, 187 households were chosen as sample by regular random sampling method and through Cochran formula (households' sample size). We had no information about the exact number of tourists; therefore, we chose 384 of them through following formula (tourists' sample size) (Saroukhani, 2008: 135).

Since the main goal of rural tourism development is sustainable economic, social, cultural, and bio-environmental development as well as reaching a long-term balanced growth and multilateral development in villages (Maghsoudi, 2004: 24), research methodology is based on documentary- library in statistics form provided by the general census of residence and population conducted in 1986-2006 and statistical annals of Mazandaran province, and also is based on field studies in observation, interview, and questionnaire form in addition to using descriptive- analytic method on the district under study which situates in the west of Mazandaran province.

2. Research findings

A structure can show the interaction among several factors and their complex relation, and one factor is not regarded only as an important one for forming the whole shape of dwelling (Zargar, 1999:30), so several factors and elements are needed for forming a rural dwelling and its architecture, and their effects will be observable when they are put together. We can mention the following factors which are effective and important in dwelling form and texture in this rural district:

The effects of natural and ecological surroundings on habitation texture:

Natural surroundings around villages and the phenomena that arise from it have caused a special form of dwelling. The climatic and geographical conditions of this rural district have caused villagers find a way to protect their rural dwellings against cold weather by applying different methods such as closing the narrow openings in the wall so that cold air and wind cannot get into a building, building thick walls, and building sloping roof in order to direct rain water to the ground. The falling and rising of the ground and also soil type have somehow an effect on dwellings. All the people in this cold region try to save energy from little amount of fuel and make the best use. Using much mortar in order to make compressed texture, building thick walls and ceiling,

and choosing appropriate building materials and the like are a series of actions taken for this purpose.

We can see a sloping (pitched) roof because of much rainfall. Also, the compression of building is the cause of weather coldness, so in this regard architectural volume with square plan is the best known because it suggests minimum outer surface versus maximum volume. In these villages, more concentration will be in closed and compressed forms of dwellings with two floors.

Because there is land shortage in the region, dwellings are built on steep slopes in order to use arable land more.

On the contrary, they make land smoothing by reducing the slopes especially gentle and slight slopes or shape it into terrace, and then it will be prepared for cultivation.

The slope of the ground is toward north- south in such a way that the height decreases from north to south. Soil type is also effective in forming dwelling and its architecture, and one of the actions taken in this direction is to choose hard ground in order to prevent consumption of extra energy and building materials. The other factors such as landscape and sight will also be in our consideration. Since Dohezaar rural district is a mountainous region covered in trees, we can see special form of dwelling there because of having cold winter, mild summer, and pleasant weather in spring and summer. With regard to this, there has been a distinction between dwelling land and agricultural land, and dwellings have been built on the places where beautiful views can be seen. The existence of these beautiful views and sights attracts the attention of many tourists to come to this region in various seasons especially in spring and summer.

The effects of built environment on habitation texture:

Basically, transport roads have become more important than before for villagers by developing communication means and gaining access to the areas like suburbs which are important economically, socially, and politically. By constructing asphalted roads which connect rural district to Tonekabon Township, villages' texture has taken different forms since 1986 for many reasons such as the location of communication routes, having traffic density, and/or in a simple word their economic importance.

The appearance of villages such as Haloukaleh and Païen Oshtouj has not been changed because they are far from the main road, so rural culture and customs have not been changed and being kept more, while nearness of villages like Baraseh, Miankouh, and Bala Oshtouj to the main road have caused them a situation more different from their previous ones both from demographic aspect, health and

educational services, and being impressed by tourism impacts (changes in traditional dwellings, rural culture and customs, rural environment, etc).

In general, the emphasis should be put on the point that there is a direct relation between the concentrations of dwellings (concentrated texture), economic conditions, and means of living by a series of observations taken from different rural habitations in Dohezaar rural district. There is enough water, and land ownership is in a good condition; also there are green and large fields over which livestock can graze, so farming has flourished in these villages.

The conducted censuses show that these villages have had large texture and have been more populated than now because of the reasons mentioned before.

Although water is vitally important and effective in improving work conditions and in flourishing cultivation, the relative shortage of even ground is quite noticeable in these villages. However, livelihood founded on farming and animal husbandry has brought about numerous concentrations through gaining few yields of such land and the income of animal husbandry. The arrival of tourists to the rural district especially in spring and summer increases its population, and sometimes the number of tourists is even more than local residents. This is an incentive factor for farmers to decrease agricultural activities and sell their lands and livestock to gain more interest.

Also, there have been green pastures in the above heights, and each village has a pasture for its livestock. Since villagers' means of living depends on farming, dwellings must be built in two floors in order to be more robust in comparison with common rural dwellings regarding this specific function. They have been built separately (apart from each other) in different directions, and there are no bounds among them. Therefore, we reach the village through several routes, not by specific ones. Also, they are located on the steep slopes of mountain; as a result, it is difficult for vehicles to go a long way from villages more. We can find these kinds of deconcentrated and irregular forms of villages in Germany and Turkey (Saiedi, 1994: 64), Macedonia (Alti Parma Kovska, 2008: 8), and Slovakia (Gekestad, 2008: 13) rural habitations.

The effects of built habitat on work conditions and livelihood have brought about long-term changes in dwellings. Indeed, there is no need to the places where farmers locate their products, animals, and tools, known as the centers of exploitation.

The current trend is toward more private life on the basis of new ways of earning a living and the effects of built environment. Hence, the new dwellings become smaller, and there are not places in which farmers locate their products, animals and tool the same as traditional dwellings. Also, more than

one family is not seen in a single house. According to the table below, the changes in dwellings in villages like Baraseh, Miankouh, and Bala Oshtouj by having highest percent of people who have been hired as a laborer in public works are more remarkable than in villages like Haloukaleh and Païen Oshtouj.

Table 1: A comparison of the number of employed people of the sample villages with Dohezaar rural district in 2009

Name of village	Population	Aged ten and above	The number of employed people	The percent of employed people
Baraseh	252	228	58	25.4
Miankouh	93	123	28	23
Païen Oshtouj	53	86	21	24.4
Bala Oshtouj	119	119	25	21
Haloukaleh	69	93	14	15
The total number of sample villages	586	649	649	22.4
Dohezaar rural district	1497	1184	228	23.6

Source: Iran Statistics Center- General conducting census of residence and population-Tonekabon

Township.

A comparison between figures of recent years and those of previous years shows that the number of people who have dealt with animal husbandry and cultivation is decreasing in these three villages, and this can be effective in kinds of people's needs and demands regarding their jobs and way of earning income. In general, this caused the dwellings to become more isolated, enclosed, and confined with specific dimensions and almost not being changed.

The prominent types of mountain and mountainside dwellings in Dohezaar rural district

Not only dwellings meet the need of people to live and being protected, but also they include part of productive system and are known as a center of exploitation. Types of existing rural dwellings are accounted as the obvious examples of this feature (Sartipipour, 2005: 1).

Traditional and vernacular dwellings: There are two types of them classified into two groups called Darvarchin and Zigameh according to their ages.

New dwellings (dwellings that are built of concrete block):

These have been inspired by the style of urban housing, and their building materials are the same as it. Their ages are not so long and back to ten or fifteen years ago.

According to the rural household's questionnaire, the number and percent of all types of dwellings will be provided in the table 2.

Table 2: The number and percent of all types of rural dwellings of the sample villages in 2009

Name of village	Kinds of dwellings			Sum	percent			Sum
	Darvarchin	Ziganeh	New dwellings		Darvarchin	Ziganeh	New dwellings	
Baraseh	8	30	21	59	16	51	33	100
Miankouh	6	26	19	51	15	51	34	100
Paien Oshtouj	3	15	6	24	12.5	62.5	25	100
Bala Oshtouj	2	14	10	26	8	54	38	100
Haloukaleh	4	19	4	27	15	70	15	100
The total number of sample villages	23	104	60	187	14	56	14	100

Source: Rural household's questionnaire

Concerning the effective factors for rural texture, some villages like Baraseh, Miankouh, and Bala Oshtouj attract the attention of visitors and tourists more than others by having better and appropriate telecommunications, services, and infrastructure, so in this regard changes taken place in these villages are more than in the other ones.

Classification of dwelling forms and their methods of building

Vernacular architecture that reveals the glory of art in unknown local buildings is an important part of cultural heritage of one land (Alti Parma Kouska, 2008: 9).

We will take into consideration different types of rural traditional dwellings and their methods of building in brief, concerning different dwelling forms on the villages under study.

Darvarchin dwelling: These are built in mountainous and mountainside regions and near to forest. The word "Darvarchin" is the combination of three words, i.e. dar which means tree, var which means side by side, and chin which means lay (to put in order). It is often a one – roomed dwelling with a roof called Latehsar.

It is constructed in such a way that they determine building site and wall places on the ground at first. Then, they dig the ground beneath them and fill it with rounded and big stones in order to prevent the damp rising from the ground reaches wood. The last row of stones run parallel, so timbers will be on horizontal and even form. Having laid the timbers, they ram the square sawn timbers made of thick trunks of tree, which are called sakat in local dialect, into the ground in such a way that they stand on each two sides of a wall in vertical form and in pairs. These are put at the end of timbers in order to support and join them together. Sometimes they shape one or two heads of timbers into notch and saddle before laying them in order to be joined together in the

corners, and sometimes they lay the timbers just on each other without doing it; hence, the only things that cause the walls to be firm and stand are sakats.

We should also note that there is a space for one timber between the timbers in this case. Having laid all of them, they build a wooden truss and cover it with local roof, called Takhtelat in local dialect. They rarely prepare a window, and sunlight and air come into the dwelling through entrance door and the cracks between the timbers. In cold seasons, they plaster a layer of clay and straw all over the walls or between the cracks of timbers in order to keep it warm. Darvarchin"dwellings" are the shelter and safe place for mountain- dwellers.

Roof Latehsar: It is a kind of roof in traditional dwellings. It is constructed through fastening long pieces of wood called zegal on wooden truss in parallel form at first, and there is a 30 cm distance between them. Then, square pieces of wood like small board called takhtelat are laid over zegals in orders from bottom up in such a way that the above rows will be over the below rows and cover more than half of them. Therefore, rainfall water is directed toward the lower part. It is about zero point five to one centimeter distance between takhtelats in order to prevent displacement when rainfall comes, and they become expanded. Of course, it should be noted that each takhtelat which is in higher place covers the line of junction of the one which is in lower place in order to prevent water from entering the building. The main point is that there is no junction between takhtelats and beneath zegals (long pieces of wood), and they often put a rounded stone over them in order to prevent displacement when wind blows. If a strong wind blows, those rounded stones will also be displaced, and in the case of earthquake they will fall down as well as rounded stones. Therefore, this kind of roof is not safe and stable, and it is dangerous. Takhtelat is often made of the wood of trees such as alder and oak by chopping them into square pieces or forming them into sheets.

Its size is not standard in Iran. Its thickness is about one or two centimeter(s), and its length and width are about 25 up to 40 centimeters. This kind of roof covering is not so durable against atmospheric factors, and it becomes dry and worn out in front of sun. Also, it is not strong against rainfall; as a result, the drops of water can leak into it. Also, the appearance of moss on it is the result of rainfall, and this helps its decomposition. Nonetheless, it is very popular in mountainside regions and even the roof of shrines as well as those of dwellings and barns is covered by this. We can see examples and method of building of this kind of dwelling (Darvarchin) in Turkey and its surroundings because of the existence of forest (Toloun, 1995: 125).

Zigameh dwelling (round-log construction): The second kind of traditional and vernacular dwellings is known as zigameh. Their age is less than Darvarchin dwellings and backs to thirty years ago. Indeed, they are complete shape of Darvarchin dwellings that changed after people came together in one place. Their method of building is in such a way that square- sawn timbers which are made of the wood from the oak tree are put on the base course. It is called chineh sardar in local dialect. The square-sawn timbers are stood on the base course in four corners, and other square- sawn timbers or (floor joists) called bamdar in local dialect are laid on the previous ones across: there is a 40 to 60 centimeter distance between them, and they carry the weight of ground floor and transfer it to the base course.

On the next step, other square- sewn timbers are stood on the joists parallel to chineh sardar. These are called nale paien in local dialect. Then, they nail kinds of woods with various thicknesses on the lower columns (nale paien) and upper columns (nale bala) diagonally and these are plastered with clay- straw mortar. These various thicknesses of woods are called zigameh in local dialect. Also, they create empty spaces as window when they fasten these woods to the column. For topping out, they lay pieces of timbers (floor joist) on the upper columns lengthwise and create a rectangle on the middle joist with dimension of 110 cm * 80cm. This is called sukesh in local dialect and it divides floor into four parts. They nail vertical and horizontal beams on them. They call vertical beams as sarchub and horizontal beams or bearers as zirlati. Parts of sukesh and sarchub have projected about 70 centimeters from the edge of the floor. They call it bargardan. There are two methods for roof covering. One is by using takhtelat, and another is by using tin- plates. If they use tine- plates, they nail them to the lower tin-plates. Floor boards are made of woods from the beach, hornbeam, and maple trees. They are fastened to the floor joists. Sometimes, they are plastered with clay- straw mortar. The inside and outside walls of dwelling in which they use clay- plaster mortar are painted with yellow or violet clay.

According to Table 2, nearly fifty- one percent of dwellings are zigameh in Baraseh, and nearly fifty- one and fifty- four percent of them are also of this kind in Miankouh and Bala Oshtouj. The number of them is sixty- two point five and seventy percent in Paien Oshtouj and Haloukaleh.

New dwellings (They are built of block): These have been built following the design of non- natives. Their building materials would be new with expensive and competent foundations. Indeed, one of the effective aspects of the arrival of tourists is the changes in form and type of dwellings' construction.

Many tourists come to this region in various seasons, and none of them have a private dwelling, so they have to rent rural dwellings, and this is an incentive factor for villagers to demolish traditional dwellings and build new ones with urban style and materials because the desire of tourists for renting a house is often toward new dwellings with more amenities. This caused villagers to take a step toward building new dwellings with new building materials individually or in group called "Nima Korati" in local dialect.

To start its construction, the foundation of dwelling will be laid at first on an appropriate ground level by using stone. Then, they fill it with stone and cement mortar and make a concrete footing beam. Afterwards, building the walls will be conducted, and vertical bandage will be made in the middle of the walls and in the corners of building. These form an integral and solid (cubic) shape. The horizontal concrete bandage and rough grading will be conducted over the wall levels. For building floor, they use hollow- block floor which is made of round bar and cement. It depends on rural people to choose the kind of floor. If they want to use the empty spaces above the floor as storage, they choose hollow concrete block and floor joist (hollow- block floor); otherwise, they choose expanded metal. In general, new dwellings are built in concrete carcass form with hollow- block floor and with pitched roof in corrugated asbestos form.

- General characteristics of the west of Mazandaran mountain and mountainside traditional building form:

- A) Pitched roof
- B) Veranda and ambulatory around building
- C) Extroverted form
- D) Two floors (building height)
- E) The existence of base/ foundation course (bed of ground floor is higher than ground)
- F) Using two-sided ventilation (consulting engineers of cultural heritage, 2008: 7)

- Form and function of building:

Architectural culture has special and unique characteristics in Dohezaar region regarding natural environmental conditions and the other factors such as land shortage, the existence of steep slope, and special weather conditions, so there is a distinction between vernacular buildings and the buildings located in lower heights and/or in plains. In this region, most dwellings have rooms with low ceiling, and they are often located on a platform. This happens in order to equalize the slope of the ground and prevent the damp rising from the ground from going into rooms. The existence of high buildings and platforms beneath them would make a distinction between mountain and mountainside dwellings and

the dwellings located in plains. In the villages such as Paien Oshtouj, Miankouh and Haloukaleh, dwellings have not been extended in area because of land shortage. Economic factors and villagers' livelihood have a strong effect on the form of dwellings and their methods of architecture in the villages under study in addition to land shortage and the steep slope of the ground. As mentioned before, most villagers are farmers, and their dwellings have been affected by their activities. As a result, they have built them in two floors in order to keep their animals on the first floor and reside themselves on the second floor. The second floor which is residential includes rooms and veranda, and it must be built in such a way to have enough light and good ventilation.

This method of building has special functions. One of them is that it separates human living place from the place where animals are kept. Another is that the base of the second floor which is actually the ceiling of the first would be so warm because there is no direct connection to the ground, on the one hand, and because of the breathing and metabolism of the animals which are kept in the first floor, on the other hand. In fact, maximum use of the existing space of dwelling is the sign of its small and limited size and area and lack of its physical development in the region under study. Therefore, we can say that vernacular and traditional dwellings have three special functions in mountainous and mountainside region of the west of Mazandaran:

The place for keeping crops and the place as a tool shed;

The place where people live (human living place);

The place where animals and fodder are kept

These three functions are seen in traditional dwellings clearly, but they are replaced with two functions in new dwellings. They are as follows:

The place where crops and tools are kept, They are kept in the ground floor and also in the empty space existing between roofs and ceiling;

The place where people live, They live in the above floor.

We can find some examples of rural dwellings with these three specific functions in Mediterranean villages and also in some rural areas of France (Loubo, 1975: 77).

- Materials used in traditional and new dwellings

Kinds of materials used in traditional dwellings are as following:

Soil: It is the main material for building dwellings such as Darvarchin and zigameh. It has been used in different forms in order to build a stable dwelling, to separate a space, and to cover a wall.

Wood: It is one of the most common materials used in traditional dwellings and has various

functions. It is mostly used because it is easily constructed, it requires no special skill, it is widespread in the region, and it needs no much labor force.

Stone: Stone is one of the most important materials available for villagers. It is useful for bedding (base course and foundation(s)) and useful for making steps. As time passes, changes have happened in development of rural dwellings, and building materials have been replaced by expensive and urban materials. We mention in following a number of them in brief:

Plaster: It has been used in different forms for building new dwellings for example as inside plastering decorative element and strong mortar.

Iron: Iron is not a local material and comes from outside of the region. It has become popular since it has various constructability, structural stability, and durability, and also for its simple usage. Nowadays, it is used in the sample villages despite the difficulties existing in its preparation. It is mostly used for making metal door and window, metal pillar in veranda, principal, and metal rail in new dwellings.

Brick: It has been used rarely for building new dwelling units because it is too expensive and is not much available in the region. It has been used only in one case in Bala Oshtouj and Baraseh.

Concrete block: The effects of the dwellings made by tourists and non- native people since 1986 caused villagers to use it for building dwelling despite the fact that it is expensive in comparison with local materials and conducts heat so fast. The percentage of dwellings in which they use concrete block is as following:

Baraseh 33 percent, Bala Oshjouj 38 percent, Miankouh 34 percent, Paien Oshtouj 25 percent, and Haloukaleh 15 percent.

Figures indicate that the second group of materials has been used more in the villages with high percentage of tourists. Also, changes in development of dwellings from traditional into new are occur so fast.

As we can see, thirty percent of dwellings have been built of new materials in the twenty – three last few years. We can predict that villagers will give up their traditional dwellings and live in new ones in the future. Also, government will help them by granting bank loan, and this is a good motivation for them.

- Physical qualifications of rural dwellings (/the quality of dwelling)

- The age and lifetime of dwellings: Age is one of the important parameters in qualitative examination and evaluation of a building. In general, it shows the percentage of habitable buildings, and also it shows the number of buildings out of the range of the existing resources because their appropriate

length of life has come to their end (Farhangimanesh, 1995: 482).

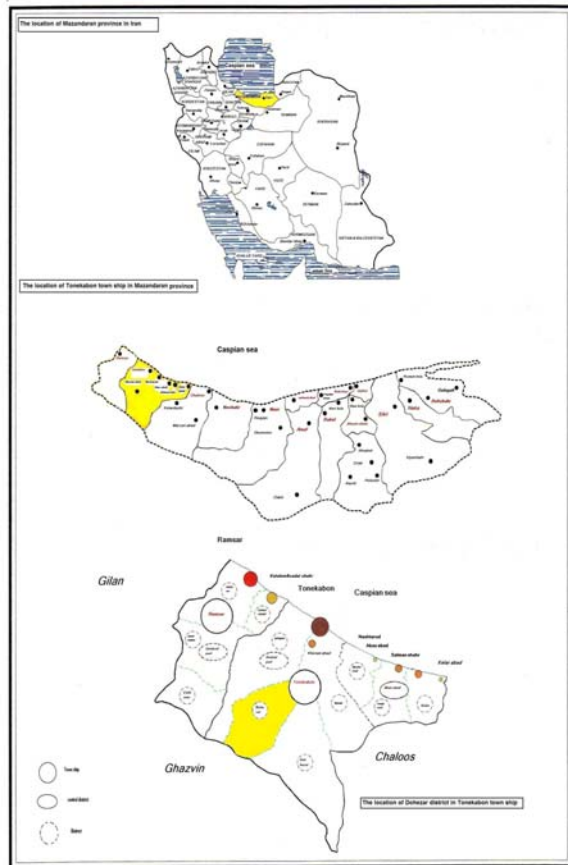


Fig 1: location of land studied in this paper.

Table 3: Kind of materials used in rural dwellings and its percent on the understudied villages in 2009

Name of village	Materials		Sum	Percent		sum
	The first group (clay and wood)	The second group (Iron and concrete block)		The first group	The second group	
Baraseh	38	21	59	67	33	100
Miankouh	32	19	51	66	34	100
Païen Oshtouj	18	6	24	75	25	100
Bala Oshtouj	16	10	26	67	38	100
Haloukaleh	23	4	27	85	15	100
The total number of sample villages	127	60	187	70	30	100

Source: Rural household's questionnaire

Table 4: The age and lifetime of rural dwellings on the understudied villages in 2009

Name of village	Age less than 10	Age 10-20	Age 20-30	Age 30-40	Age 40 and above	sum	Percent					sum
							Age less than 10	Age 10-20	Age 20-30	Age 30-40	Age 40 and above	
Baraseh	17	13	9	8	12	59	29	22	15	13	20	100
Miankouh	16	12	10	7	6	51	31	23	20	14	12	100
Païen oshtouj	5	4	5	5	5	24	21	21	21	16	21	100
Bala oshtouj	7	4	5	5	5	26	19	19	19	15	27	100
Haloukaleh	4	8	5	6	4	27	15	22	18	30	15	100
The total number of sample villages	49	41	34	31	32	187	26	22	18	17	17	100

Source: Rural household's questionnaire

The history of habitation is not very old in the region under study, and this arises from villagers' livelihood and method of living. According to the table, dwellings called Darvarchin were the first ones and their formation and construction date back to the years before 1961, and their ages back to sixty or seventy years ago. After that, building dwellings called zigameh became popular, and number of them increased because of the wood sufficiency, the easiness of construction, environment compatibility, and nothing to do with special skill. As we can see, they include 57 percent of the whole.

By constructing asphalted roads since 1986, villagers have been impressed by the method of urban housing architecture which are constructed by non-natives in the region for temporary staying. This caused such dwellings to constitute a good percent of dwelling, i.e. about 30 percent during twenty- three years.

- The changes in dwelling and their role in the economy of household

Rural heritage includes architecture and its unique landscapes. Following on, they include dwellings and manufacturing units that have been formed during periods of time in order to mechanize industrial development (Sungiorgi, 2008: 5). One of the basic differences between traditional and new dwellings is in their functions. This is the result of the changes which have happened in pattern, the decrease of the ground area and floor area, and changes which have happened in rural texture. The main changes which have taken place in vernacular dwellings are divided into three groups:

- Changes in type and pattern of dwelling;
- Changes in building materials;
- Changes in size and cost of building a dwelling

Changes in type and pattern of dwelling: these which have a significant effect on the function of rural dwelling can naturally be observed in the size and number of rooms existing in the dwelling. The number of rooms inside is more in new dwellings in comparison with traditional ones, and sanitary service is situated inside. Also, number of windows and their size are more and bigger than those in traditional ones. Although new dwellings are formed in two floors, the first floor is regarded as a place for keeping crops and as a tool shed or as a place offered for tourists to rent. There is no room for keeping livestock in new dwellings, and if they are not sold, it will be kept away from dwelling. Although the appearance of dwellings has changed, transformations have not gone forward parallel to these changes. For example, the base course is high yet, roof is hipped, and veranda is located on the front of a building.

- Changes in building materials:

Using local material has been effective and correct because of its compatibility with environment and the experience of the past generations in several years. They used wood and clay in vernacular and traditional dwellings which are the best insulation to protect dwelling unit against heat and cold. New materials have created several changes in rural dwellings' texture. One of them to mention is roof covering in some dwellings.

The use of board sheathing has been replaced by sheet-tin roofing, and it has become popular by building round- log construction or so-called zigameh since 1971. Although it has some advantages for residents undoubtedly and does not need to get repaired yearly and also decreases the danger of fire, it makes so much noise when rainfall comes and has no desirable insulation to protect the dwellings against heat and cold in comparison with board sheeting. Also, we mention the changes happened in the materials which have been used for making walls, doors, and windows.

- Changes in size and cost of building a dwelling: Cost of building a dwelling would be considered as a criterion by which families gain access to acceptable and appropriate dwelling (Zanjani, 1995: 139). Cost of building is low in most villages because materials are available in the region, and it is a local tradition for villagers to participate in the process of construction and building and facilitates it to some extent. This is an important issue that, to what extent the income of each rural family that has been gained by economic and productive activities can be paid for dwelling. Also, villagers have to spend much money in order to build a shelter even in the villages where its building materials exist and have low cost. According to the field work taken from sample

villages, cost of building a traditional dwelling has been estimated to be from about 3.000.000 Rials up to 3.500.000, so this dwelling meets the need of villagers regarding their income and kind of economic activities. Also, there is no need to special skill and knowledge about how traditional and vernacular dwellings are built, and villagers have achieved them through the experience of the past generations.

But, building materials are imported from the outside for building new dwellings, and they involve freight cost. Also, payment of building is an extra cost because building new dwellings with new materials is an expert affair, so it involves hiring mason and foreman bricklayer from the same village or other villages and sometimes from city. Its building cost is estimated approximately 2500000 up to 3000000 Rials per square meter. Since its building cost is high, villagers have to sell their land and livestock in order to provide it. Size of dwelling has also changed. As we can see, it has been 40 up to 50 m² (square meters) in area in traditional dwelling, but it reaches its maximum which is about 70 up to 80 square meters in new ones, and more than this size costs high and is too expensive for them as far as the provision of building materials will be out of the ability of residents and local tradesmen. All the changes and developments mentioned above bring about changes in the function of new dwellings. For example, all the places regarded for keeping domestic animals and products have disappeared or have been changed their location, so there are not multi-functions for a dwelling, and it is only the place where people live and take a rest.

3. Conclusion

There have been effective and remarkable factors on the way of the formation and location of mountain and mountainside rural habitations (Dohezar rural district), among which tourism potentialities (natural views) are the main. This factor has an essential and determinative effect on the form and texture of the villages under study, and has got the attention of many tourists in recent years. Accordingly, developments and changes have occurred in the fields of economy, culture, and form around villages. Also, the ever- increasing presence of tourists without considering substructures and local culture in recent years not only has had economic and livelihood profits and advantages but also brought about the un-sustainability of rural habitations from ecological, economic, and cultural aspects. As we see, rural functions have been changed from producer factor into user force following the changes in agricultural land usage. One of them happened in rural traditional dwellings that

changed their forms and architecture from traditional into urban style. We divide the dwellings of the area under study into two groups concerning form, outside decoration, and kind of building materials. They are called traditional and new dwellings. Traditional and vernacular dwellings are also divided into two groups called Darvarchin and Zigameh. The age of the first one dates back to more than forty years ago, and the second group has appeared 25 up to 30 years ago. New dwellings have been built since 1986 by the construction of Tonekabon–Dohezaar asphalted and appropriate road and by the arrival of many tourists. The size and room of dwellings have also changed following the changes in rural dwellings. Materials used in traditional dwellings come from rural surroundings, and dwellings have been built with lowest cost. Furthermore, they have been built so as to be adjusted to the environment. The functions of dwelling in traditional form are in relation to villagers' livelihood and economy (as they are based on farming), but they have disappeared in new one or have been replaced by new functions according to the needs of residents. Villages such as Baraseh, Miankouh and Bala Oshtouj have attracted the attention of tourists more in comparison with Païen Oshtouj and Haloukaleh because they are near the main road and possess more amenities and services; as a result, people of these villages have been influenced by the culture of tourists and their buildings, and they tried to sell their land and livestock to pay cost of building new dwellings. Many functions have changed in new dwellings including the dimensions of the dwelling, the number of doors and windows, kind of building materials, roof top, the number of rooms and their area, etc. Although safety factor and structural integrity are very high against natural disasters in new dwellings in comparison with those in traditional ones, kind of livelihood and economic activity of the villagers are related and adjusted to vernacular and traditional ones. Therefore, we can say that the number and percent of new dwellings are increasing nowadays, and traditional and vernacular dwellings will be replaced with ones with new functions in the near future.

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