

Study on the Classification of Rural Landscape which Needs to be Conserved in Daegu

Lee, Sook-Hyang* · Tadakazu Kaneko** · Yoichi Kumagai**

*Dept. of Landscape Architecture, Graduate School of Agriculture,
Tokyo University of Agriculture

**Dept. of Landscape Architecture Science, Faculty of Regional Environment Science,
Tokyo University of Agriculture

ABSTRACT

The Korean rural landscape has changed significantly due to nationwide modernization and industrialization in recent years. Moreover, as urbanization progresses due to population and economic growth, rural areas surrounding the suburbs of cities are feeling the pressure of encroaching urban sprawl. Use of land for human-made structures such as road and housing development is also increasing, resulting in the destruction of nature in rural areas. Adopting a concept of conserving rural landscape in future development projects is therefore highly desirable. The main focus of this study is to look into the traditional concept of the village and to classify some elements of the traditional rural landscape. Daegu Metropolitan City, the third metropolitan city in Korea, is chosen as the subject of the study. The existing 227 villages have been studied on the basis of their principles and types of village locations in relation to the traditional concepts of 'Feng-shui' and 'Tackriji'. The characteristics of the village location are divided into two aspects: the natural landscape, such as topography, hydrosphere, and azimuth, and the historical and cultural landscape, such as customs (Only the natural landscape aspect is included in this study). The natural landscape, a condition of the village location, is divided into three areas: topography, hydrosphere, and azimuth. There are two types of topography: flatland type and mountain type. There are two sub-types in the mountain type: ridge and valley, which depend on the village location in relation to the shapes of the mountains. There are four types of hydrosphere which include waterways and three directions of mountain depending on the shape: front, behind and side. The direction of the village is analyzed from the direction which the houses in the village face. Therefore, the natural landscape element as a condition of the village location is closely related to the traditional concepts of the village.

Key Words: Rural Landscape, Natural Landscape, Conservation, GIS, Village

1. Introduction

A new community movement known as 'Saemaul'¹⁾ spread throughout Korea in 1970s. As a result of this modernization movement, the traditional village landscape changed considerably. It revolutionized the rural landscape as well as the way of thinking of village people and the social structure in the village.²⁾ Moreover, as urbanization progresses, owing to popu-

lation and economic growth, particularly the rural areas in the suburbs of the cities are feeling the pressure from urban development. Land use for human infrastructure comprising roads and housing development is also increasing. As a result, crop land, forests, and villages, which previously dominated the rural landscape, are rapidly diminishing. In many cases it was found that the urban aesthetics were lowered due to development that failed to take into consideration the surrounding

landscape and rural areas which did not harmonize with existing natural landscape.

The recognition of natural landscape conservation has increased in recent years and by recognition of the value of landscape, landscape plans as well as management methods have been established or are expected to be established in the future.³⁾ However, there are difficulties in planning landscape maintenance due to the lack of a classification system of landscape itself and a lack of analytical data on the present state of the rural landscape. There were three main parts in the 2004 project with 'the basic plan to improve the quality of people's life and to develop the community in farming, mountainous and fishing villages': improvement of social services, improvement of education systems, and development of the community. The concept of conservation of the natural environment and landscape was added to the third part, development of community projects. This is an indication of the recognition that landscape in the farming and fishing villages has been destroyed and that conserving nature is extremely important.⁴⁾ The rural areas are places where valuable natural environments and historical and cultural environments still exist and are also important places where the customary lifestyle of residents is maintained. Therefore, the idea of conserving the rural landscape should be considered in all future development plans. The main purpose of this research is to classify landscape that needs to be conserved as Korean rural landscape by classifying the characteristics of the background for the establishment of rural landscapes and the characteristics of natural, cultural and historical landscape elements of existing villages for clarification of their relationship with characteristics of factors comprising villages.

II. Researching Areas

The subject of the study is Daegu Metropolitan City in the southeast of Korea, located in the basin region surrounded by three mountains: Palgong Mountain, Daeduk Mountain, Beesul Mountain. Daegu(大邱) became a metropolitan city in 1995 when it merged with Dalseong County(達成郡). There are seven districts and one county in the city. The area of the city is 884.33km² and the population is 2,513,219. Dalseong County comprises 47% of Daegu in area and its main industry is farming. It has significant potential for development as well as risk of disappearance of its natural and cultural environment

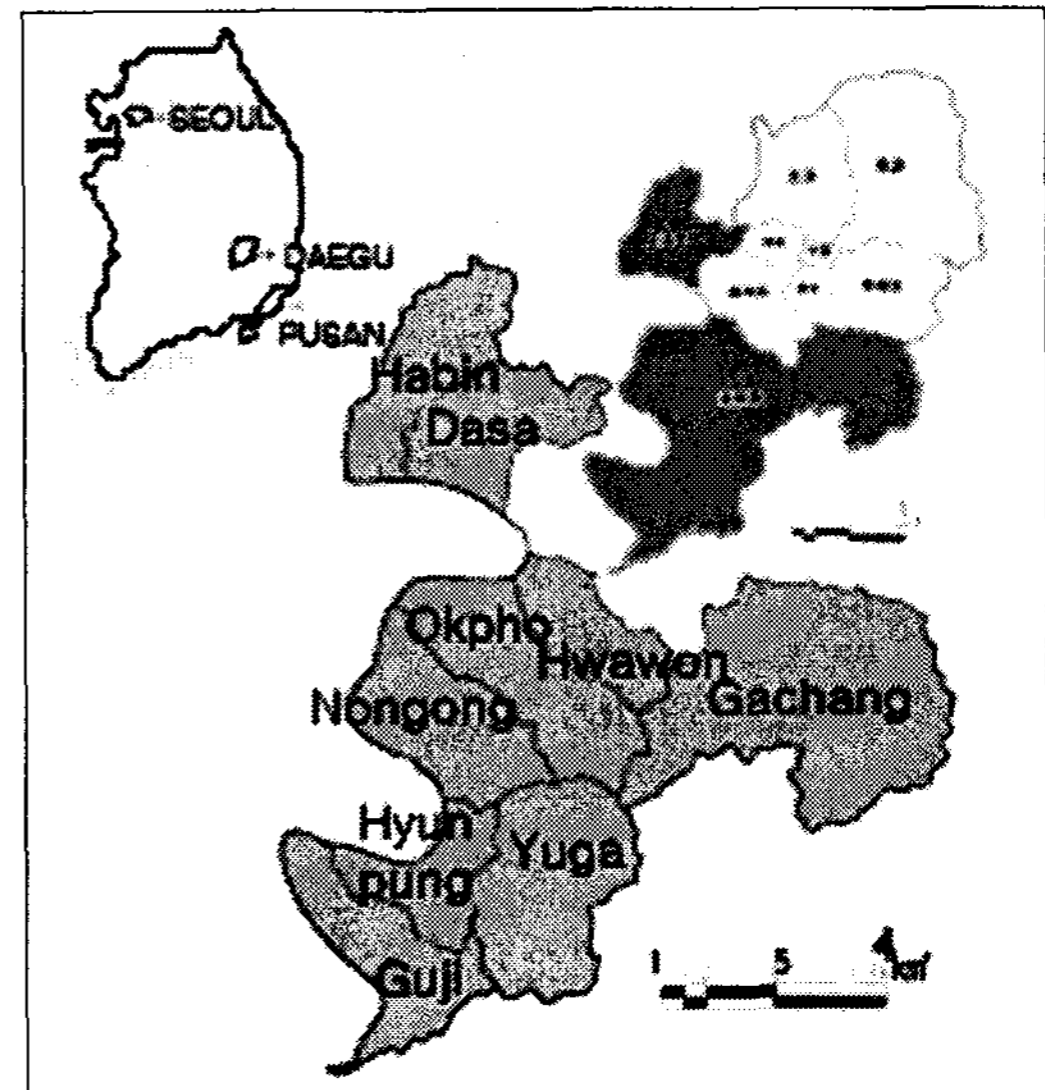


Figure 1. Location of researching areas

since the county merged with Daegu.

III. Method of Study

1. The journal of Dalseong village, which contains information regarding the time of village formation and characteristics of the natural and cultural village environment, was used as a source to select villages that were formed centuries ago and have survived until now as subjects for the research.
2. The characteristics of village location are classified according to traditional standards with respect to location and type of rural landscape from existing research.
3. The characteristics of village location were inferred from traditional concepts of the village. The topographical map(1/25000) published by the National Geographic Information Institute was used to classify the elements of the natural landscape followed by an analysis of elements of the natural landscape to clarify the connection between the elements of the village location and the traditional concept of the village. The analysis was based on GIS(ArcView 3.2) from ESRI in reference to a numerical map(2000) on a scale of 1 to 25,000 and a geographical map on a scale of 1 to 25,000.

IV. The Present State of Village

An analysis of the present state of villages, which is the main element of the rural landscape, was undertaken to gain

Table 1. The present state of researching areas(Unit: km²)

		Dry field	Rice field	Forest	Park	House
Daegu	1995Year	55.82(6.3%)	110.48(12.5%)	489.31(55.3%)	5.07(0.6%)	89.74(10.1%)
	2006Year	49.01(5.5%)	93.51(10.6%)	483.88(55%)	6.35(0.7%)	104.63(11.8%)
Dalseong	1995Year	27.74(6.5%)	68.3(16%)	262.15(61.4%)	0.2(0.04%)	13.02(3%)
	2006Year	26.06(6.1%)	64.85(15.2%)	260.96(61.1%)	0.2(0.04%)	15.51(3.6%)

Table2.The present state by land use(Unit: km²)

		Dry field	Rice field	Road	River	Water site	Factory site
Daegu	1995Year	55.82	110.48	39.33	44.45	1.72	16.73
	2006Year	49.01	93.51	49.49	44.38	1.97	18.75
Dalseong	1995Year	27.74	68.30	10.48	24.56	0.78	3.80
	2006Year	26.06	64.85	12.12	25.05	1.02	4.67

a clear understanding of the characteristics of the rural landscape. Two hundred eighty-six villages were created in Dalseong County up until the Chosun Dynasty. Only 227 of them have survived up until now. The phenomenon of disappearing villages started only after 1998. The classification of existing villages according to the time of their formation is shown in Table 4. According to the table, 45% of villages came into being during the Chosun Dynasty, and it is also clear that a significant ratio of the villages existed even before

Christ.

V. The Characteristics of Village Locations

The interpretation was tried for existing research regarding villages preserved as Korean historical and traditional villages. The main principle of selecting a village location was the traditional theory of 'Feng-shui'((風水思想) and 'Tackrij' (澤里志, 八域卜居志). Feng-shui is a concept of selecting land by avoiding wind and acquiring water. This concept originated in China and was introduced to Korea in ancient times. The term is also translated as 'dwelling in the place with mountains at the back and a river in the front' (背山臨水) based on an ancient belief that things are destroyed by wind but are brought together with water.⁵⁾ The best location of a village is where the issues of soil, water and fuel, the foundation of living, are resolved simultaneously, or places that are safe from flood or damaging winds. This kind of perfect land can be found where mountains and plains meet. Such land is suitable for farming since there is a plentiful supply of water from the river close by and safe shelter since it has mountains at the back. People can easily settle on this land because of its practicality and topographic characteristics.⁶⁾ Tackrij (澤里志, 八域卜居志), a famous geographical reference book, was written by Jung-Hwan LEE of the Chosun Dynasty. He classified the characteristics of village locations into four types of features: geographical features 地理(natural conditions such

Table 3. The present state of village

Dalseung	The present state of village			
	Existence	Extint	The number of village	The number of house
1 dasa	23	11	34	2063
2 Gachang	38	8	46	1983
3 Habin	29	6	35	1765
4 Okpho	22	0	22	3315
5 Hyunpung	15	11	26	1602
6 Guji	43	7	51	1863
7 Yuga	36	4	40	1673
8 Hwawon	7	8	15	958
9 Nongong	14	3	17	1868
Total	227	58	286	17090

Table 4. Time of village formation

	Period	Years	The number of village
1	SAMHAN(三韓)	BC150~4th century	8
2	SAMGUK(三國)	4th century~7th century	45
3	KORYEO(高麗)	918~1392years	40
4	CHOSUN(朝鮮)	1392~1910years	105
5	UNKNOWN	Before 1914	29

as water inlets 水口, types of fields 野勢, shapes of mountains 山形, color of the soil 土色, and irrigation 水利), profit 生利 (economical aspects such as land fertility and the conditions of transport), human intellect 人心 (social aspects such as education and customs), and landscape features 山水 (recreational aspect such as scenery and nature). Therefore, the characteristics of village location can be inferred by studying the natural landscape and cultural and historical features. The natural landscape features are classified as topography, hydrosphere and azimuth. The customs people observe are part of the cultural and historical features.

VI. The Characteristics of Natural Landscape in Villages

There are three areas in the natural landscape: the condition of the village location based on traditional concepts, topography, hydrosphere and azimuth.

1. Topographical Interpretation of Village Location

We analyzed the topographical form of the village locations and the directions of villages surrounding mountains. There are two topographical types in village location: flatland type and mountain type. There are two sub-types in mountain type depending on the shapes of the mountains and the village location: ridge type and valley type. The ridge type and the valley type are divided into four different categories. The location of the mountain type is usually within 5 to 10m from the mountain. The slope angle is also within 5 to 10° (This is

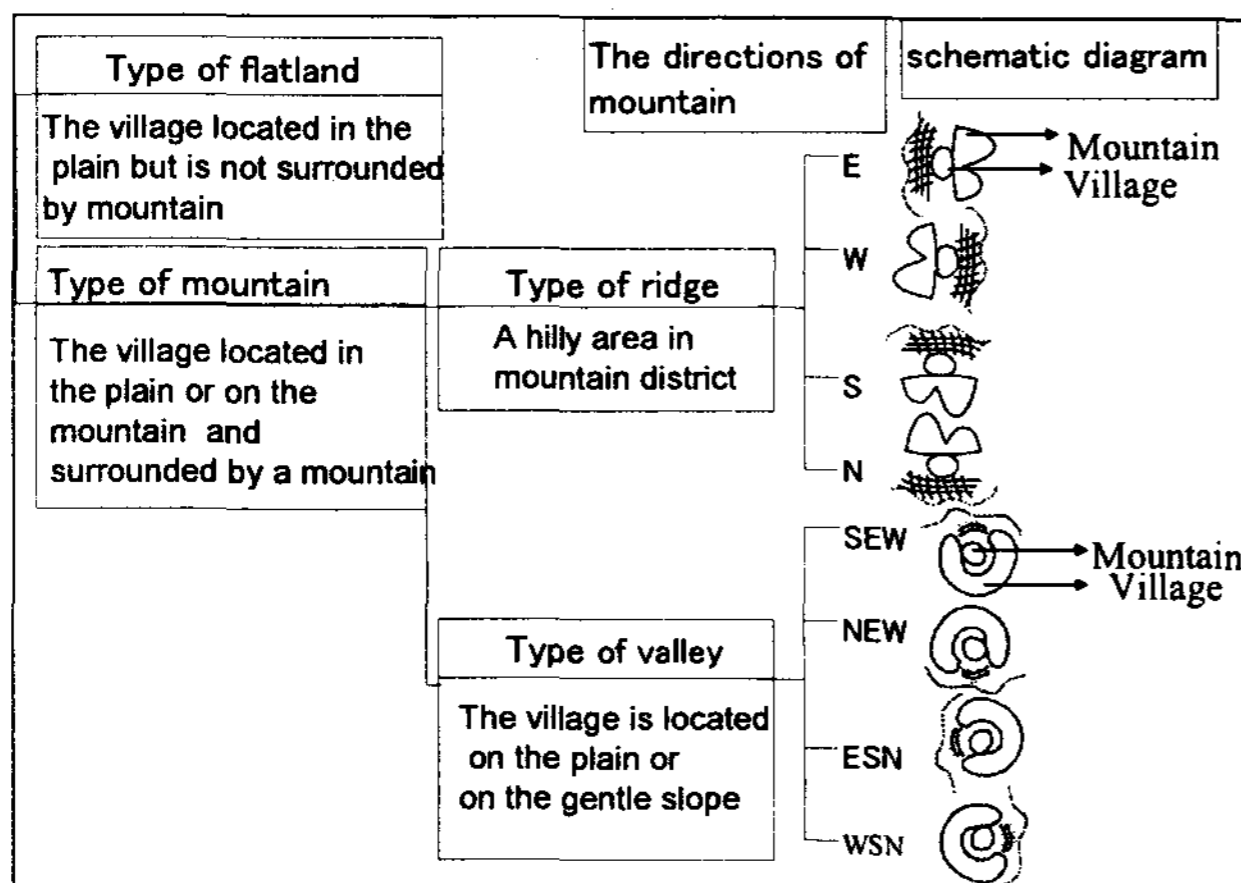


Figure 2. The classification diagram by topographical type and the direction of mountains

Table 5. Topographical classification of village

Dalseung	Topography										
	Type of Flatland	Type of mountain									
		Type of ridge					Type of valley				
	E	W	S	N	Total	SEW	NEW	ESN	WSN	Total	
1 dasa	1	3	2	3	9	17	0	5	0	0	5
2 Gachang	2	2	7	1	3	13	9	3	7	4	23
3 Habin	2	3	2	1	5	11	4	6	3	3	16
4 Okpho	7	0	0	2	3	5	8		1	1	10
5 Hyunpung	4		1	1	4	6	2	1	1	1	5
6 Guji	12	4	5	1	6	16	1	11	3	0	15
7 Yuga	11	1	0	0	9	10	1	9	5	0	15
8 Hwawon	0	0	2	1	1	4	3	0	0	0	3
9 Nongong	3	0	0	1	4	5	2	1	3	0	6
Total	42	13	19	11	44	87	30	36	23	9	98

the analysis based on GIS, ArcView 3.2). Dalseong County topography is comprised of 81% mountain type, of which 43% is valley type. This indicates that the county is mainly surrounded by mountain. In addition, 44% of the ridge types are facing north and 35% of the valley types are facing northwest. This indicates that most mountains face north and that selection of these locations is influenced by the notion of 'dwelling in the place with mountains at the back and a river in the front (背山臨水)'.

2. Hydrosphere Interpretation of Village Location

We analyzed the relationship between the village location and hydrosphere using a numerical map. We classified four different types of hydrosphere locations based on waterways:

Table 6. Hydrosphere classification of village

Dalseung	Water system				
	River			Canal	Total
	Front	Behind	Side		
1 dasa	13	1	1	8	23
2 Gachang	33	2	3	0	38
3 Habin	19	0	6	4	29
4 Okpho	7	0	15	0	22
5 Hyunpung	10	1	1	3	15
6 Guji	15	2	8	18	44
7 Yuga	17	5	9	5	36
8 Hwawon	3	1	3	0	7
9 Nongong	9	3	0	2	14
Total	126	15	46	40	227

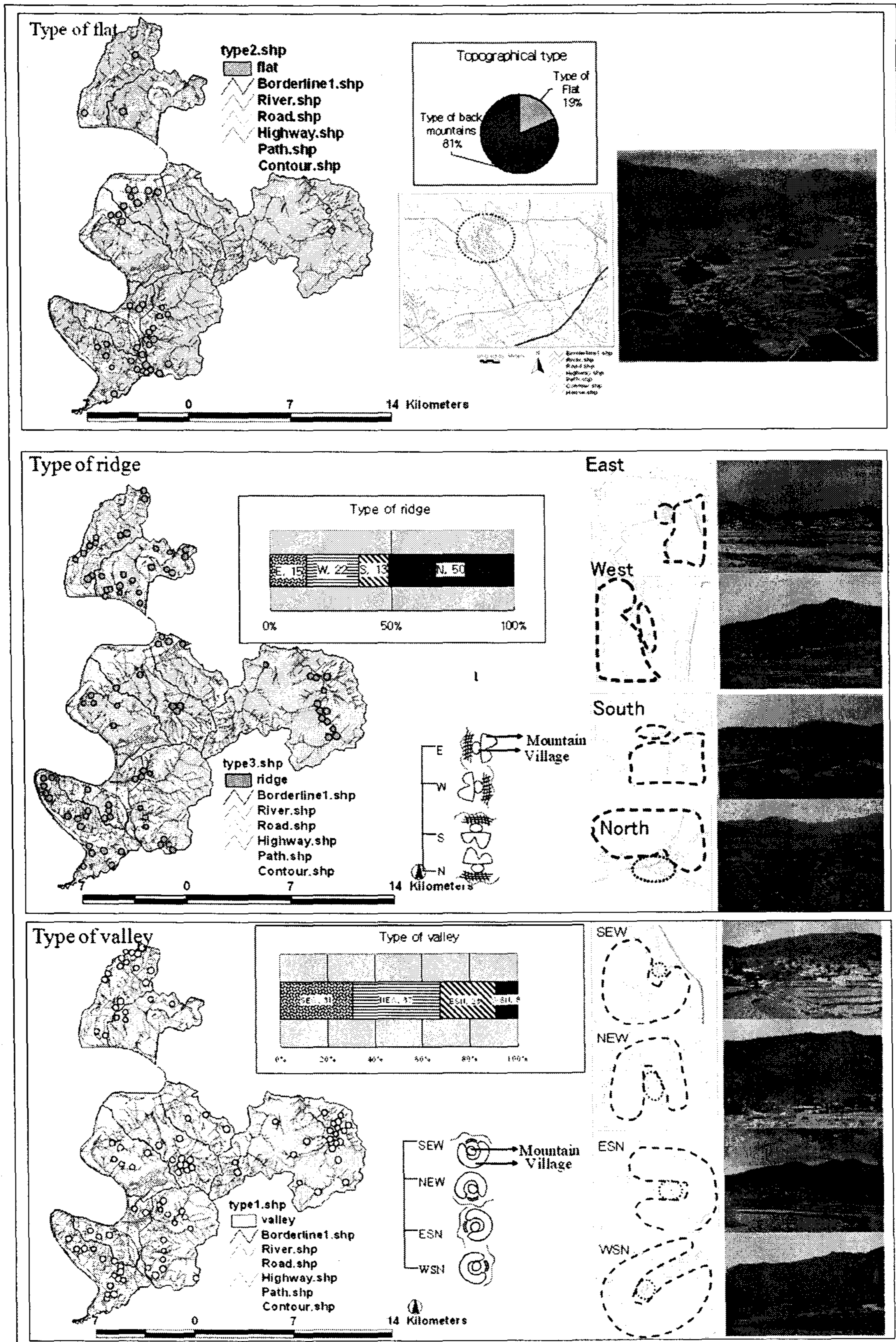


Figure 3. Distribution diagram by topographical type

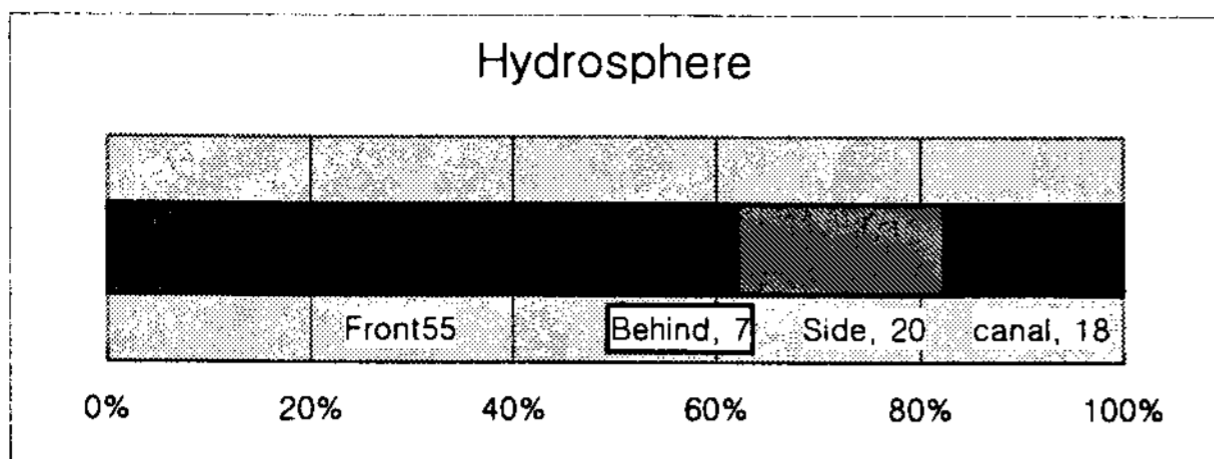


Figure 4 The ratio of village by hydrosphere type

front, behind, side and water way. The distance between the village location and the river was 50 to 100m(This is the analysis based on GIS, ArcView 3.2).

As a result, it was determined that there is a close relationship between the village location and hydrosphere, with 82% of villages located close to rivers and 54% with rivers actually traversing the village.

3. The House Direction Interpretation of Village Location

The direction of the village was decided by the direction of the houses in the village. The slope of the back mountain type, excluding the flat type was 90 to 225° and these villages were located on the south side of the mountain(This was an analysis based on GIS, ArcView 3.2). It was found that 47% of the houses in the villages were facing south. This indicates that most villages are located in plains which have mountains at the back.

VII. Conclusion

This is the conclusion after we classified the elements of rural landscape conservation based on the analysis of traditional values and the characteristics of three elements(topography, hydrosphere and azimuth) of natural landscape of village location. The characteristics of village locations in Dalseong County are mainly valley types on mountainous land and the direction of the mountains are mainly towards the north in ridge types and towards the northwest in valley types. There is a very close relationship between the river and the village location, and the majority of houses in the villages are facing south. In short, the typical village has a mountain at the back and a river in the front and is located on prime land facing south. This is highly related to the condition of selecting prime land according to the traditional concept of Feng-shui

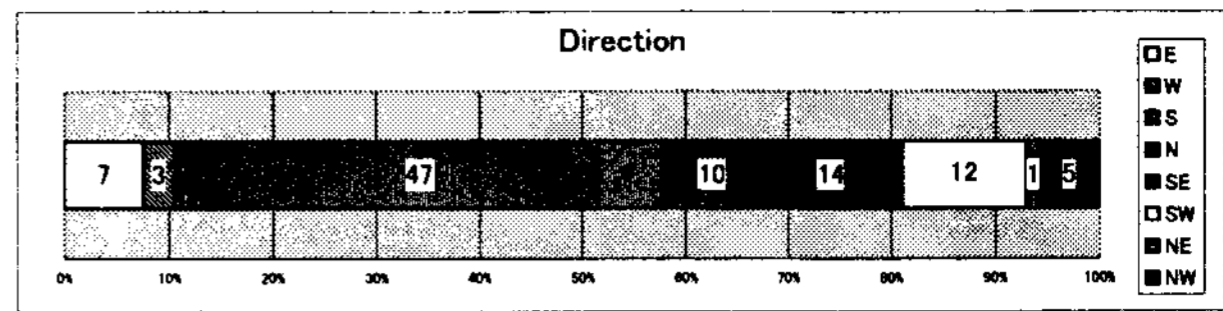


Figure 5. The ratio of village by direction type

Table 7. A village classification by direction of houses

Dalseung	Direction								Total
	E	W	S	N	SE	SW	NE	NW	
1 dasa	2	3	8	0	5	3	1	1	23
2 Gachang	10	2	9	7	2	7	1	0	28
3 Habin	1	1	15	1	7	2	0	2	29
4 Okpho	1	0	9	4	3	0	0	5	22
5 Hyunpung	1	0	6	4	3	0	0	1	15
6 Guji	1	1	25	0	8	4	1	3	44
7 Yuga	0	0	24	1	3	8	0	0	36
8 Hwawon	1	0	4	1	0	0	0	1	7
9 Nongong	0	0	7	4	0	3	0	0	14
Total	17	7	107	22	31	27	3	13	227

(風水思想) and Tackriji(澤里志, 八域卜居志). Afterwards, valuable cultural properties such as traditional auditoriums, historic places and traditional houses, religious services, rice terraces and paddy terraces, etc. based on characteristics of village locations are formed taking into consideration the rural landscape and its unique features of the area. The next step is to classify these areas as rural landscape to be conserved.

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