Abstract: Dispersed settlement is a unique settlement type which appears in Slovakia. Dispersed settlement was created by one of the newest waves of settlement in 15th and 16th century in marginal and houseless parts of our country. This settlement was just seasonal at first, but it became permanent later. This kind of settlement appears in the village Terchová which belongs to area called “Javornicko-beskydská kopaničiarska oblasť” and Žilina subarea.

We studied the development of dispersed settlement in Terchová from 1949 up to the present time. We studied current possibilities and tried to propose another development opportunities for dispersed settlement. The use of dispersed settlement transformed several times since its creation. It was mainly functional or physiognomic changes. Dispersed settlement was used for living and husbandry at first. Later the residents started to migrate from hamlets to village centre and some hamlets became abandoned. In past several decades these abandoned hamlets have begun to be used by cottagers. Nowadays hamlets in our area of interest are used either for living or for recreation. During our research we were curious about how will dispersed settlement develop in the area that is a centre of tourism in Malá Fatra National Park and how increased number of visitors will effect it.

Key Words: hamlet, Terchová, landscape potential, land use, “Javornicko-beskydská kopaničiarska oblasť”

INTRODUCTION

Dispersed settlement is according Sitar (1967) a settlement type, which is spatially limited and fixed on husbandry. Its beginning is linked to a period of social need, which led to reclaiming unused mountain land. According Veresik (1974) dispersed settlement consists of individual settlement units or groups of houses which include 2–10 or more houses. Dispersed settlement according Horvath (1980) consists of dispersed settlement units which were originated outside the village centres and have unique names.

Dispersed settlement at Slovakia is divided into 5 areas and each area has several subareas (Huba 1990). Terchová belongs to area called “Javornicko-beskydská kopaničiarska oblasť” and Žilina subarea. In Slovak republic there are used several different regional names for dispersed settlement, for example: “rále, role, štále, kopanice, lazy, pľace or osady”. In Terchová there is used name hamlet.

Terchová can be found in the north of Slovak republic, in Žilina county and Žilina district (see Figure 1). This village belongs to micro region “Terchovská dolina” valley and there are the most hamlets of all villages which are included in these micro region. There are 74 hamlets in Terchová (see Figure 2). Beside the fact that Terchová is the village with dispersed settlement, it is also the centre of tourism of international interest (Mariot 2002). Terchová is the start point for hiking in Malá Fatra National Park. House fund in some hamlets is used as accommodation for tourists. Accommodation facilities are situated by main roads near to the village centre. These accommodation facilities are in form of lodgings and pensions. Characteristic traits, mainly authentic architecture, are substituted by unoriginal elements.

The main aim of this research was to evaluate present state of dispersed settlement in Terchová and to suggest arrangements in the field of recreation, agriculture and house fund development. These
suggestion was made on the ground of acquired information about our area which should lead to preservation of valuable elements in the country and prevent them from destruction.

We decided to study development and changes in Terchová because we think that land with dispersed settlement deserves preservation. The results of these study could be used by creating new spatial plan of Terchová and as information source for National Park Malá Fatra.

*Figure 1 Placement of the village Terchová within Slovak republic*

*Figure 2 Dispersed settlement in the village Terchová in 2016*
MATERIAL AND METHODS

Field research (identification of hamlets in the selected area, road types that lead to the hamlet, civic amenities, hamlet function, land use)

Main part of our study was field research, by which we identified 74 hamlets and noted down their co-ordinates by using GPS. We used co-ordinates in coordinate system WGS 84, which we transformed into coordinate system S-JTSK Ferro/Krovak in programme QGIS 2.2.0 later.

During our research we evaluated road types that lead to the hamlets and we divided it into two categories – metalled road (asphalt or concrete surface) and earth road (gravel or clay surface). This indicator is important because of availability aspect.

Another indicator, which was evaluated, was civic amenities. We used Sitar's (1967) methodology. In his study he selects several objects which should be in the hamlets that are important crossroads or they are creating certain centre. These objects are school, policlinic, groceries and bus stop.

We determined hamlet's function on the ground of field research and according information about houses and inhabitants which we obtained at municipal office in Terchová. We divided hamlets with housing function, housing and recreational function and recreational function. In the hamlets with housing function there were houses used by village inhabitants and not by recreants. In the hamlets with housing and recreational function there were houses tenanted by residents and by recreants. In the hamlets with recreational function there were houses used only by recreants and there were no residents. In few cases there lived less than 5 residents and they lived there for their whole life.

When we were evaluating land use, we focused on husbandry and we evaluated how residents and recreants are taking care of their properties (presence of orchards, meadows, pasture land, arable land and succession). We used information about house fund development plans form spatial plan of Terchová. There were also information about landscape, civic amenities, demographic information, infrastructure and development information, but we focused mainly on house fund development information.

The hamlets distance from the village centre

We evaluated hamlets in terms of their distance from the village centre. We measured these distance from the village centre to each hamlet in kilometres measured on road. We used Nahalka et al. (1966) methodology who selected 4 distance categories: 0–2 km, 2.1–5 km, 5.1–10 km and more than 10 km.

House fund and the hamlet's residents

We evaluated house fund by Nahalka et al. (1966) methodology. We were working only with lived-in houses, so we had to change the first category on 1–5 houses (initial category was 2–5 houses) the second category was 6–9 houses, the third category was 10–20 houses, the fourth category was 20 and more houses and we added the last category – without lived-in houses.

There were 5 categories while we were evaluated residents. There were hamlets with 1–10, 11–50, 51–100, 100 and more residents and hamlets without residents.

Area changes of the hamlets

Based on historical ortophotographs from the year 1949 and current ortophotographs from the year 2015 we created in QGIS 2.2.0 two polygon shapefiles which we used for calculating of real area by script Realna_rozloha. Sh (Sevcik and Jakab, 2015). It is a tool that counts area on the grounds of slope which helps us to integrate digital elevation model and not only its 2D representation. According calculated values we could compare build-up area changes. These values tell us which hamlets have tendency for development and which will perish.

Central hamlets

Following information about civic amenities, road type, hamlet's distance from village centre, number of residents and houses we suggested several hamlets that could create centre and in which should concentrate civic amenities and which should constitute initial point for surrounding hamlets.
RESULTS AND DISCUSSION

Road type and the hamlet's distance from the village centre

During our field research, we discovered that in 55.4% there are metalled roads mainly with asphalt surface. There were 44.6% hamlets with earth roads and these hamlets were mainly more distant from village centre than hamlets with metalled roads. Earth roads are one of the reasons why these hamlets are used mainly by recreants.

While we were measuring hamlet's distance we recognized that 8.1% of hamlets are 0–2 km distant from the village centre, 55.4% of hamlets are 2.1–5 km distant and 36.5% of hamlets were distant 5.1–10 km. In the last category – 10 and more km there were no hamlets. The furthest hamlet was 9.7 km distant from the village centre. The nearest hamlet was only 0.9 km distant from the village centre.

The distance influences hamlets function and influences presence of the residents or cottagers in the hamlets.

The house fund and hamlet's residents

We evaluated only lived-in houses during our research and we found out that there are 45.9% of hamlets with 1–5 houses. In these category, there are the most hamlets and we can see that the majority of hamlets has quite small lived-in house fund. In the category 6–9 houses there were 10.8% of hamlets, in the category 10–19 houses there were 8.1% of hamlets, in the category 20 and more houses there were 16.2% of hamlets and without lived-in houses there were 18.9% of hamlets.

There were 18.9% of hamlets without residents in Terchová. The majority of hamlets (36.5%) was in the first category (1–10 residents). In the second category (11–50 residents) there were 21.6 % of hamlets, in the third category (51–100 residents) there were 8.1% of hamlets and in the fourth category (more than 100 residents) there were 4% of hamlets. In 10.8% of hamlets there was no information about houses at municipal office in Terchová.

House fund and number of residents in hamlets showed us hamlets which are used most and which are used least by residents. Thereafter we could establish those hamlets that have potential to grow and hamlets that are on their way to stagnation or destruction.

Civic amenities

Bus stop occurs at 20.3 % of hamlets. Bus transportation connects hamlets with the village centre, another villages and the town Žilina. Scholl occurs in one hamlet and the groceries is in two hamlets. Policlinic is in no hamlet. Current amenities are deficient and that’s why we suggested placing smaller shop in few hamlets with strategic location, in hamlets on crossroad or surrounded by other hamlets so they are creating certain centre. Deficient civic amenities could be the reason of depopulation of hamlets.

Hamlet's function

27% of hamlets had housing function and housing and recreational function. The most of the hamlets (46.6%) had recreational function. These hamlets could have also few houses with residents, but if there were residents, there were mostly only 1 or 2 of them in post productive age. We could claim that in several years these hamlets will be with no residents.

The area progress

We recognized area growth by 86.5% of hamlets while we were comparing area from the year 1949 and the year 2015. The most area growth there was in one hamlet–its area in 1949 was 0.33 ha and in 2015 is was 8.49 ha. There is a school, bus stop, its distance from the village centre is only 2.7 km and there are no natural limits to stop its development. Area reduction was in 5.4% of hamlets. There was no hamlet with area reduction more than 1 ha. Without area changes was 8.1% of hamlets.

Central hamlets

We selected 11 hamlets of 74 hamlets which should be the central hamlets. These hamlets are creating the start point for surrounding hamlets and that is why there should be more civic amenities that could satisfy needs of residents of the central hamlet and surrounding hamlets. If there are insufficient civic amenities we suggested its completion. There are 52 hamlets that belonged to 11
central hamlets. There are 11 hamlets without central hamlets. These hamlets are too distant or they are using civic amenities of another villages.

On the base on required information we suggested concrete arrangements for hamlets in the area of house fund that involve proposal of new build-up and reconstruction of old wooden houses and farm buildings. We partly used information from ground plan of the village Terchová. In our proposal, we also used information about area changes of hamlets, number of residents and live-in houses. We suggested new build-up by 35.2% of hamlets that are near to the village centre and their infrastructure is developed and so they are more attractive for residents. Reconstructions were proposed at 31.1% of hamlets that are used mainly by cottagers and their architecture is quite well-preserved. We suggested to keep in natural state 33.7% of the hamlets. Development of these hamlets is limited by conditions of the land. Dispersed settlement is a kind of settlement where is quite massive depopulation (Huba 1989). Negative conditions in combination with great distance are causing downfall of dispersed settlement (Huba 1990). Today there are the most distant hamlets without residents. But if there are favourable conditions like good roads, valley position and civic amenities, not even great distance should be a barrier to another development. If the hamlet is not efficiently connected with village centre, it is probable that this hamlet will perish.

Next field that involved suggestions was tourist traffic. We don’t recommend to channel massive tourist traffic into the area with dispersed settlement because of preservation characteristic traits of the landscape that will with high probability be destroyed or changed as it happened in several hamlets nearby the village centre which house fund is used as accommodation for tourists. There are new recreational centres in these hamlets that are constructed in a new architectural style and they don’t fit into the current landscape. The future of using some hamlets is agrotourism. This way the visitors could learn about dispersed settlement history and about authentic agricultural use of the land. It could help to preserve characteristic traits of the land with dispersed settlement. There are 58.1% of hamlets that cross cycloroutes, tourist routes or cross-country skiing routes. In hamlets that are positioned in valleys there are restaurants and pubs, but there are no such facilities in higher areas. The solution could be that there will be 2 or 3 small pubs or restaurants that will be open only during weekends. These facilities should be on the most frequented routes and they will serve local meals and drinks. The last option for recreational use of hamlets is their using by cottagers, mainly during weekends. The last option is used the most frequently.

Husbandry in Terchová is limited by lower soil quality and climate conditions. There are typical sheep and beef raising in Terchová. Arable soil was in the past obtained by deforestation and in the present days these areas are used as meadows and pasture land. Almost in all hamlets we can find old and newly founded plum orchards. It is necessary to keep agriculture in Terchová alive and to produce local products and sell them to tourists. Barnes and Robinson (1940) and Stone (1991) were focusing on agriculture, but in their areas were farms with high soil quality.

Omasta (2011) sees the future of dispersed settlement in intersection of current functions and he claims that by use of local sources, cultural traditions and handicraft we can fully utilize potential that is not economic and social, but it is cultural, historical, aesthetic and environmental and thus ensure its sustainable development. We think that Terchová has potential for sustainable development, but nowadays the village Terchová prefers the massive tourist traffic instead of protecting historical value of the land with dispersed settlement. The only hamlets that are protected are those that are distant enough from the village centre. The hamlets pass through functional and physiognomic transformations (Omasta 2011) and in our research area it is visible mainly by building material choices and vegetation choices. Hansen (1964) saw high potential of dispersed settlement in Scandinavia in their historical values.

Norling (1960), Petrovic (2006) and Petrovic and Muchova (2013) sees the preservation of dispersed settlement in its using for recreation. We agree with these claims only partly, because not only in Terchová there are hamlets that are nearby the village centre, and they are used especially for living not recreation. Hamlets used by cottagers and for agro tourism are more distant from the village centre.
CONCLUSION

We can see the landscape changes in the village Terchová where fields, meadows, orchards and woods with dispersed settlement are changing into land with dominating recreational centres with unfitting vegetation, that are decreasing landscape value. In terms of tourist traffic, it would be advisable to focus on renewal of handicraft, traditions and husbandry that are related to dispersed settlement. Parish council shouldn’t focus only on propagation of famous Juraj Jánošík and Malá Fatra National park, although is important part of the history and nature beauties of the village.

The hamlets in the village Terchová are heterogeneous and it’s visible that the hamlets in the valleys differ from the hamlets on the hills and that’s why we couldn’t set a certain tending of all hamlets.

The valley hamlets have better conditions to keep their housing function. It happens at the expense of destroying characteristic land lines. The hamlets on the top of the hills are mostly used by cottagers and they are fit for recreation. New construction shouldn’t be realized in here. These hamlets are more preserved because cottagers are trying to preserve house fund and characteristic architecture.

It is necessary to consider characteristic elements in the landscape during projecting spatial plan. Obtained information is valuable for designing spatial plan and for Malá Fatra National Park in which protective zone the hamlets are situated.

REFERENCES


