ЕКОНОМІЧНА ТА СОЦІАЛЬНА ГЕОГРАФІЯ І ТУРИЗМ

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N.V. Zablotovska¹, PhD (Geography), Assoc. Prof.
V.D. Zablotovskyi², PhD student
M.S. Vanziak, student
Yuriy Fedkovych Chernivtsi National University,
Department of Geography of Ukraine and Regional Studies,
2 Kotsiubynskoho St, Chernivtsi, Ukraine.
¹n.zablotovskaja@chnu.edu.ua, https://orcid.org/0000-0002-7669-6118
²https://orcid.org/0009-0008-0984-7992

SOCIO-GEOGRAPHICAL ASPECT OF TERRITORIAL PLANNING OF TRANSPORT NETWORK DEVELOPMENT AT THE LOCAL LEVEL (ON THE EXAMPLE OF VERENCHANY TERRITORIAL COMMUNITY OF CHERNIVTSI REGION)

Transport network planning constitutes a pivotal component in the realm of contemporary regional development. This is of particular significance at the level of territorial communities. The formation and development of communities is accompanied by the development of a transport network that ensures economic and territorial unity at the very beginning of community design. Indeed, the transport accessibility of settlements to the administrative centre of the community is one of the prerequisites for the formation of a territorial community. Therefore, the study was conducted using three types of data. Firstly, the primary statistical information and reference materials of the Verenchanska community were analysed. Secondly, the results of field research were considered. The analysis of the transport network at the level of territorial communities is a successful praxis from a pragmatic standpoint, as this is precisely the niche that necessitates scientifically based recommendations. The analysis of the transport network in the Verenchanska community has revealed a number of significant issues that demand immediate attention and resolution. In view of the prevailing issues concerning road surface quality, network integrity and the logical combination of transport, the problem of transport accessibility remains an urgent one for the settlements. In order to resolve these issues, it is imperative to implement a series of measures designed to enhance the transport infrastructure and ensure optimal accessibility, safety and efficiency in transportation for all community residents. This encompasses the repair and maintenance of roads, the optimisation of public transport routes, collaboration with road carriers, and the attraction of additional sources of funding to implement these measures. The successful overcoming of these challenges will be a key step in developing and improving the quality of life of the population of the Verenchanska territorial community, and will contribute to the overall economic and social development of the community. It is important to note that the successful development of the transport network can have far-reaching positive effects. The facilitation of access to labour markets, educational and medical facilities, as well as cultural and entertainment venues, has been identified as a strategy that would be conducive to attracting investment and promoting small business development, with a resultant knock-on effect on attracting migrants. Consequently, the investment in transport infrastructure will not only enhance the quality of life of residents but will also contribute to the sustainable economic growth and development of the Verenchany community as a whole.

Keywords: territorial planning, transport network, territorial community, transport accessibility, socio-economic development, decentralisation.

INTRODUCTION

At the current stage of development, we cannot imagine life without the means to transport goods or services, move passengers, or even transmit information. However, not all administrative units have equal transport opportunities. This is particularly true of territorial communities. This is why they pay great attention to developing a community strategy, particularly with regard to transport network planning.

The study is also relevant because citizens want high-quality transport conditions and to be able to travel by road. Therefore, it is urgent to analyze how accessible social institutions are to community residents, in order to assess the population's ability to reach their destinations quickly and independently of the state of the transport network.

MATERIALS AND METHODS

The formation and development of hromadas is accompanied by the development of a transport network that ensures economic and territorial unity at the outset of hromada design. After all, transport accessibility of settlements to the administrative centre of the community is one of the conditions for the formation of a territorial community (Following the ratification, 2021). Along with a high-quality road network, an equally important argument for transport accessibility is the implementation of the decentralisation reform. This applies to the organisation of power, as well as to the medical and educational sectors (Following the endorsement, 2016; Leiberiuk, 2017). This is why many scientists are conducting research into transport network planning at regional, district and community levels. This is also described in detail in the monograph 'Territorial Communities in the Context of Decentralisation: Risks and Mechanisms of Development' (Kravtsiv & Storonianska, 2020).). The importance of comprehensive socio-geographical justification in territory planning is revealed in the works of K. Mezentsev, H. Holub and T. Pohrebskyi (Mezentsev, 2005; Holub and Pohrebskyi, 2024).

A team of researchers led by Volodymyr Falovych (Falovych, Shevchuk, Falovych, Navolska & Zakharchuk, 2024) carried out a detailed assessment of the development of the transport sector of the Ternopil community, taking into account

the social and demographic factors of its development. N. Lysiak and M. Gabrel (2022) used the example of the Hrabovetsko-Dulibivska territorial community to reveal the peculiarities of transport network planning in the context of planning the Lviv region, taking into account the development of transport corridors of international and regional importance. N. Zablotovska and V. Zablotovskyi analysed the spatial features of the transport network of a typical peripheral community on the example of the Starosyniavska community of the Khmelnytskyi Region (Zablotovska & Zablotovskyi, 2023).

It is worth noting that conducting research at the level of territorial communities requires considerable effort, given the limitations of available statistical information and the need for exploratory research in order to obtain reliable, practical results that will be useful for the further development of the study area. Consequently, this study employed primary statistical data and reference materials from the Verenchak community, along with the outcomes of field research.

RESULTS

We selected a typical territorial community located on the border of the Chernivtsi, Ternopil, and Ivano-Frankivsk regions as the area for our research. The Verenchanska territorial community is located in the northwestern part of the Chernivtsi district, 38 kilometers from the regional center. The study area comprises seven settlements (the villages of Babyn, Borivtsi, Verenchanka, Vymushiv, Kyseliv, Rudka & Yablunivka), which differ in terms of population size, level of socioeconomic development, and function. The conditions for the functioning of the territorial community should ensure equal access to a basic set of social services for the population and equal conditions for the socio-economic development of settlements (Poltorak, 2022). The implementation of the decentralisation reform and the administrative-territorial reform opened up opportunities for community development as well as new challenges in managing and planning for their future development. This requires scientific substantiation by experts in order to take their recommendations into account when developing Plans and Strategies for Community Development (Kornus, 2023). We have already drawn attention to accessibility issues in Chernivtsi Oblast communities (Zablotovska, Stankovska & Babushchak, 2023). As for the territorial community we have chosen, the difficulty in ensuring residents have access to the community centre by transport is also due to the fact that the community itself was formed from parts of two different administrative districts in the Chernivtsi region (Resolution, 2020). The transport network of the newly formed Verenchanska community therefore combines the polar parts of the transport networks of the two former districts, as can be seen in the reformatting of the structure of local settlement systems (Kostashchuk, Klepikovskyi & Yachniuk, 2022). For a long time, residents of these settlements had administrative, social and household ties with neighbouring urban settlements such as Zastavna and Kitsman. Following the ATC reform, changes were made not only to the community's transport

network, but also to the formation of a new local settlement system. Consequently, residents of these settlements do not have equal access to the community centre in Verenchanka village.

The current transport network of the Verenchanska Hromada is based on communal and regional roads, namely 24 kilometres of paved roads. However, only 3 kilometres of the roadway comply with the norms of the current Ukrainian legislation (Law of Ukraine, 2024). As for the municipal transport network, the total length of municipal roads is 93 kilometres of street roads, of which 35 kilometres comply with the legal standards and 58 kilometres require repair.

As accessibility to services for all segments of the population is essential for the community to function, we considered providing bus transport to the settlements. Although there are four bus routes within the community, none of them are part of a single transport network. This makes it difficult for citizens to move around the community and prevents people from remote settlements from accessing the district centre (Chernivtsi) (Fig. 1). However, there is an alternative for settlements such as Babyn and Rudka, as a bus runs twice a day on the Chernivtsi-Babyn route. However, Vymushiv remains absolutely inaccessible, as to reach the district centre, 3 kilometres must be travelled to reach the nearest village of Babyn, where the bus to Chernivtsi departs from. Although 89 people live here, most of the population is elderly.

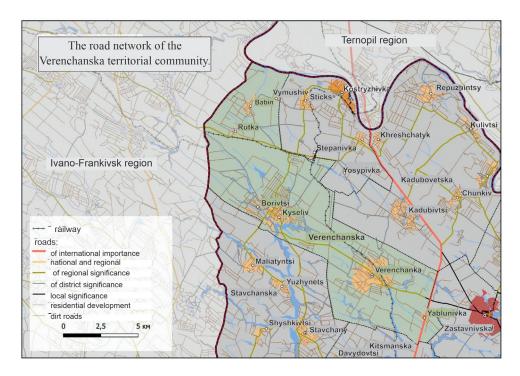


Figure 1. The road network of the Verenchanska territorial community

The bus service from the villages: Borivtsi, Verenchanka and Kyseliv run at shorter intervals due to their large populations and the need for special transport for the Kitsman hospital's medical staff.

As can be seen from the figure, the transport network in the study area is widely used for passenger transport. Fig. 2 shows that all routes converge in Kitsman. There are three routes to community settlements that follow the same route, except for the Borivtsi–Kitsman bus route, which differs only in that it goes to Kitsman. It should be noted that none of the routes passes through the community centre of Verenchanka village, which violates the social security conditions for the population.

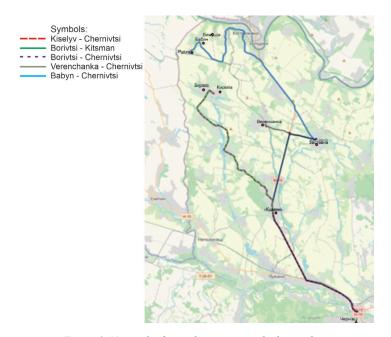


Figure 2. Network of main bus routes in the hromada

As can be seen from the figure, the transport network in the study area is widely used for passenger transport. Fig. 2 shows that all routes converge in Kitsman. There are three routes to community settlements that follow almost the same path. The Borivtsi–Kitsman bus route is the only one that differs, as it goes to Kitsman. Notably, none of the routes passes through the community centre of Verenchanka village, which violates the social security conditions for the population. At the same time, the assessment of the community's transport provision reflects the extent to which the transport network is suitable for driving on the road network, including road quality. Expeditionary research showed that settlements such as Verenchanka, Kyseliv, Borivtsi and Yablunivka have the longest paved road networks. The main problem with the hromada's transport network is that a large proportion of roads do not meet legislative requirements. This is the first obstacle to ensuring residents

have access to a typical set of administrative and social services in the community. This leads to another important problem: transport accessibility to the centre of the territorial community. Ultimately, it is impossible to reach Verenchanka village directly from remote settlements. This results in the use of transit carriers, which in turn leads to a decrease in tax revenues from private entrepreneurs to the settlement community budget.

As the biggest problem with transport provision is in the village of Babyn, we studied this section of the network in more detail (see Figure 3). As a result of this study, we recommend restoring the section of roadway near Babyn village that connects the Chernivtsi and Ivano-Frankivsk regions, as this section could become an important transit route (a similar project should also be implemented by the Horodenka urban community). At the same time, the Kostryzhivska territorial community needs to partially repair the roadway and lay a small section of new asphalt near the villages of Zvenyachyn, Yosypivka, and Stepanivka to ensure continued access to the city of Zalishchyky in the Ternopil Oblast. In the future, the community could implement a plan to integrate the transport network into a single system and combine all passenger transport to reduce costs. A bus station of local importance should also be created in the village of Kyseliv, as it is the geographical centre of the community.

The prospects for developing the transport network in the community under study are quite promising. There are several inactive enterprises within the community that could be restored in the future, and there is potential for tourism and transit transport. When planning the transport network, it is equally important to ensure the operation of emergency services and access to social services for residents.

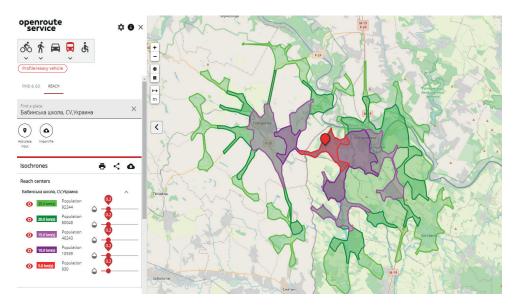


Figure 3. Transport accessibility in Babyn village

With this in mind, we conducted a SWOT analysis of the further development of the community's transport network. The results showed that the community has sufficient potential for development, particularly in agriculture and alternative energy, due to favourable natural conditions and the availability of resources. However, these advantages are offset by high unemployment, low population solvency and depressive demographic trends, which create significant challenges for economic growth. Therefore, it is crucial to actively seek investment opportunities and support small and medium-sized enterprises. At the same time, the community must pay attention to effective resource management and strategic planning to achieve sustainable development and improve its residents' quality of life. According to the results of the PEST analysis, successfully developing transport infrastructure can have a positive impact on economic and social development. Providing access to labour markets and other institutions, and developing tourism, will help to attract investment, foster small businesses, and preserve cultural heritage.

Therefore, investing in transport infrastructure is essential for the further development of the Verenchany territorial community. This will improve the quality of life for residents and contribute to sustainable economic growth, promoting the community as a whole.

Implementing comprehensive measures to improve the community's transport infrastructure will solve existing problems and create the preconditions for the community's sustainable socio-economic development. Transport companies can be involved in sustainable community development through various activities and programmes.

CONCLUSIONS

Therefore, investing in transport infrastructure is essential for the further development of the Verenchany territorial community. This will improve the quality of life for residents and contribute to sustainable economic growth, promoting the community as a whole. Implementing comprehensive measures to improve the community's transport infrastructure will solve existing problems and create the preconditions for the community's sustainable socio-economic development. Transport companies can be involved in sustainable community development through various activities and programmes. Studying the transport network at the level of territorial communities is successful from a practical point of view, as this niche requires scientifically sound recommendations. Analysing the transport network in the Verenchanska community revealed several serious issues requiring attention and immediate solutions. Given the existing issues with road surface quality, network integrity, and the logical combination of transport, transport accessibility remains an urgent issue for the settlements. To solve these problems, measures must be taken to improve transport infrastructure and ensure maximum accessibility, safety, and efficiency of transportation for all community residents. This involves road repairs, optimising public transport routes, cooperating with road carriers, and attracting additional sources of funding to implement these measures. Overcoming these challenges will be a key step in developing the Verenchanska territorial community and improving the quality of life of its population, thereby contributing to the community's overall economic and social development. It is important to note that successfully developing the transport network can have far-reaching positive effects. Providing access to labour markets, educational and medical facilities, and cultural and entertainment venues will attract investment, encourage small business development and draw in migrants. Investing in transport infrastructure will improve the quality of life for residents and contribute to the sustainable economic growth and development of the Verenchany community as a whole.

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Н.В. Заблотовська, канд. геогр. наук, доцент **В.Д. Заблотовський**, магістр географії, аспірант **М.С. Ванзяк**, бакалавр географії Чернівецький національний університет імені Юрія Федьковича, кафедра географії України та регіоналістики, вул. Коцюбинського, 2, м.Чернівці, Україна n.zablotovskaja@chnu.edu.ua

СУСПІЛЬНО-ГЕОГРАФІЧНИЙ АСПЕКТ ТЕРИТОРІАЛЬНОГО ПЛАНУВАННЯ РОЗВИТКУ ТРАНСПОРТНОЇ МЕРЕЖІ НА ЛОКАЛЬНОМУ РІВНІ (НА ПРИКЛАДІ ВЕРЕНЧАНСЬКОЇ ТЕРИТОРІАЛЬНОЇ ГРОМАДИ ЧЕРНІВЕЦЬКОЇ ОБЛАСТІ)

Планування транспортної мережі є важливим завданням при сучасному регіональному розвитку. Особливо це важливо на рівні територіальних громад. Становлення й розвиток громад супроводжується розвитком транспортної мережі, який забезпечував господарську й територіальну єдність ще на почату проектування громад. Адже однією із умов формування територіальної громади ϵ якраз транспортна доступність поселень до адміністративного центру громади. Тому проведене дослідження було проведене із використанням первинної статистичної інформації та довідкових матеріалів Веренчанської громади, результатів польових досліджень. Дослідження транспортної мережі на рівні територіальних громад ϵ вдалим із практичної точки зору, адже це саме та ніша яка потребує науково-обгрунтованих рекомендацій. Аналіз транспортної мережі на території Веренчанської громади виявив ряд серйозних проблем, які потребують уваги та негайного вирішення. При наявних проблемах у якості та дорожнього покриття, цілісності мережі та логічного поєднання транспортування, для поселень нагальною залишається проблема транспортної доступності. Для розв'язання цих проблем необхідно вжити комплекс заходів, спрямованих на вдосконалення транспортної інфраструктури та забезпечення максимальної доступності, безпеки та ефективності перевезень для всіх мешканців громади. Це передбачає ремонт доріг, оптимізацію маршрутів громадського транспорту, співпрацю з автоперевізниками та залучення додаткових джерел фінансування для реалізації цих заходів. Подолання цих викликів стане ключовим кроком для розвитку та підвищення якості життя населення Веренчанської територіальної громади, сприяючи загальному економічному та соціальному розвитку громади. Важливо врахувати, що успішний розвиток транспортної мережі може мати далекосяжні позитивні ефекти. Забезпечення доступу до ринків праці, освітніх та медичних установ, а також до культурних та розважальних закладів сприятиме залученню інвестицій та розвитку малого бізнесу, та приваблюватиме мігрантів. Отже, інвестування у транспортну інфраструктуру не лише поліпшить якість життя мешканців, а й сприятиме стійкому економічному зростанню та розвитку Веренчанської територіальної громади в цілому.

Ключові слова: територіальне планування, транспортна мережа, територіальна громада, транспортна доступність, соціально-економічний розвиток, децентралізація.