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**SUSTAINABLE PRACTICES AND DEVELOPMENT FOR
DEPOPULATING AND PERIPHERAL LOCALITIES IN THE EUROPEAN
NORTH - STUDY OF CROSS-BORDER AREAS: ÖDESHÖG-TRANÅS**

Report

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Introduction

About half of Sweden's municipalities are shrinking (Grundell & Magnusson, 2023). Smaller municipalities are negatively affected by a shrinking population since less people means less income through taxes, while still having to provide the same services with less budget. Many municipalities have chosen to focus on growth, instead of smart shrinkage and trying to shrink in a sustainable way. One strategy shrinking municipalities have for dealing with their responsibilities is by co-operating with other municipalities (Grundell & Magnusson, 2023).

However, co-operation might be challenging if a municipality is located on a border to a different region. Sweden is divided into 21 regions, and while the municipalities hold most of the power when it comes to physical planning the regions are still responsible for some services like public transport and dealing with some strategic planning. It might therefore be a challenge to plan across regional borders. This study examines two bordering municipalities that are located in different regions.

The area for research was the regional and municipal cross-border area between Ödeshög and Tranås municipalities. The aim of the course was to identify and describe the characteristic features of cross-border areas, including their physical, ecological, and social qualities, to examine what visions municipalities hold for cross-border areas and what activities they are planning to understand how these areas are prioritized and positioned in long-term spatial development.

The research included different activities on and off-site. The on-site research was conducted from 16th until 20th of April 2026 in Ödeshög and Tranås municipalities. The final report consists of the following chapters: introduction to the areas, conceptual and topical framing, methodologies used, results from used methodologies, and finally discussion and suggestions about conducted methods and results. Recommendations for future research concerning sustainable development in cross-border and depopulating rural and peripheral areas are given.

The study of Ödeshög and Tranås municipalities and their cross-border areas was conducted as a part of the Nordplus course of University of Eastern Finland called “Sustainable practices and development for depopulating and peripheral localities in the European north” which took place at Linköping University in April 2026. The study was conducted by 6 students, one

student from each of the following universities: University of Tartu, University of Eastern Finland, Linköping University, University of Latvia, Vilnius University, the University Center of Westfjords.

1. Introduction to areas

1.1 Ödeshög background

Ödeshög is a municipality located within Östergötland Region. Its area is 431 km². The population size of the whole municipality is roughly 5300 people of whom around 2600 live in the town of Ödeshög, the largest town in the municipality. This means that about half of the population of the municipality lives in rural areas.

The capital of the municipality is Ödeshög. Other important settlements are: Hästholmen - a village located next to Lake Vättern, Boet - a village on the way between Ödeshög and Tranås, and Rök, located in the northern part of the municipality. The main natural attractions in the municipality are lake Vättern, lake Takern and Omberg nature reserve.

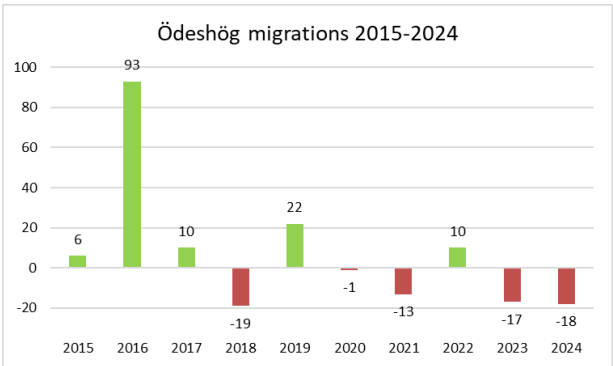
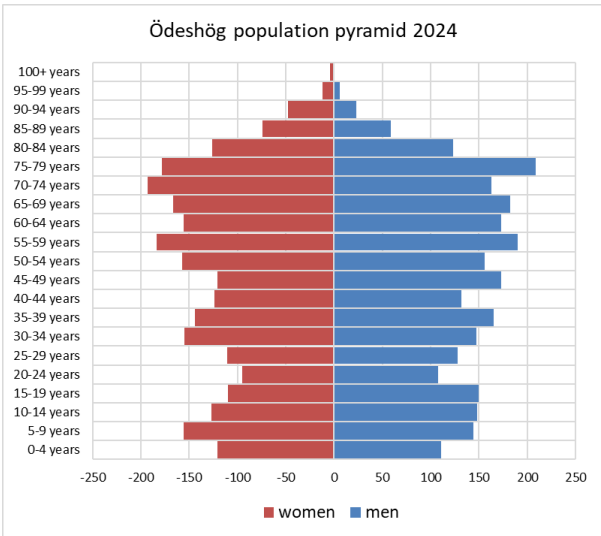


Figure 1. Ödeshög population pyramid 2024. (Statistics Sweden, 2026)

Figure 2: Migration trends in Ödeshög municipality from 2015-2024. (Statistics Sweden 2, 2026)

As can be seen on the population pyramid (figure 1), the least represented age group is 20-30 year olds, as this is the age where people usually go to universities or to see the world. The higher concentration of elderly, compared to other age groups, is a sign of an ageing population. The proportion of elderly is 8% higher than in the overall average in the whole country,

compensated by a lower proportion of working age people. The proportion of children is similar to the whole country (table 1).

Table 1. Age distribution in Sweden and the municipalities of Ödeshög and Tranås in 2024: percentage and number of people in different age groups (children, youth, adults, pensioners). (Statistics Sweden, 2024).

Location	Children (0-9 years)	Youth (10-19 years)	Adults (20-69 years)	Pensioners (70+ years)
Sweden	10.84% (1 147 328)	11.85% (1254 171)	61.66% (6 528 129)	15.66% (1 658 082)
Ödeshög municipality	10.13% (532)	10.18% (535)	56.50% (2968)	23.19% (1218)
Tranås municipality	10.56% (1968)	11.80% (2200)	57.54% (10727)	20.10% (3747)

The overall population of the municipality has been decreasing in recent years. According to NordRegio 2026) the population has decreased by 11.94% in the past 34 years (1990 to 2024). The migration has had a negative trend in recent years, as seen in figure 2. Since 2010, the main changes have been an increase in elderly population and decrease among younger age groups (figure 3).

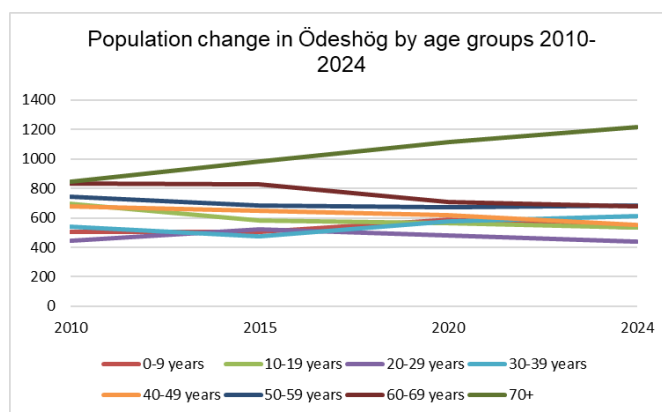


Figure 3. Population changes in Ödeshög municipality by age groups, 2010-2024. (Statistics Sweden, 2024)

In 2021 53.22% of people worked in their home municipality of Ödeshög, 31.8% worked in neighboring municipalities, and the rest 15.97% worked in further away municipalities (Statistics Sweden 2, 2022).

1.2 Tranås background

Tranås is a municipality located within Jönköping Region in southern Sweden. Its area is 437.74 km². The population size of the whole municipality is roughly 19 000 people of whom around 14 000 live in Tranås city, the capital of the municipality. In addition, about 800 people live in Sommen, a town near the border between the municipalities of Tranås and Ödeshög, and 300 people live in Gripenberg locality. Overall, about 27% of people live in the rural areas of the municipality, which is a much smaller proportion than in neighboring Ödeshög.

The population pyramid (figure 4) has a more even structure than Ödeshög. The proportion of elderly is more balanced out by the number of young people. The age structure is similar to the country-wide average of Sweden, the main difference being a higher proportion of elderly and smaller proportion of working age people when compared to Sweden as a whole (table 1).

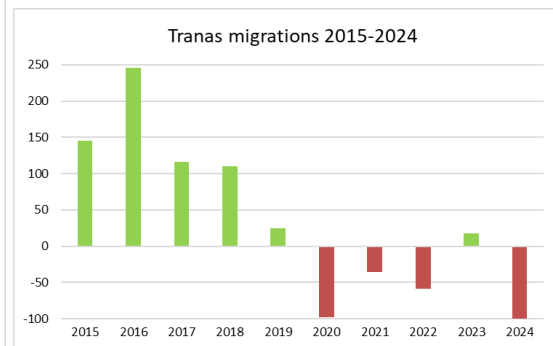
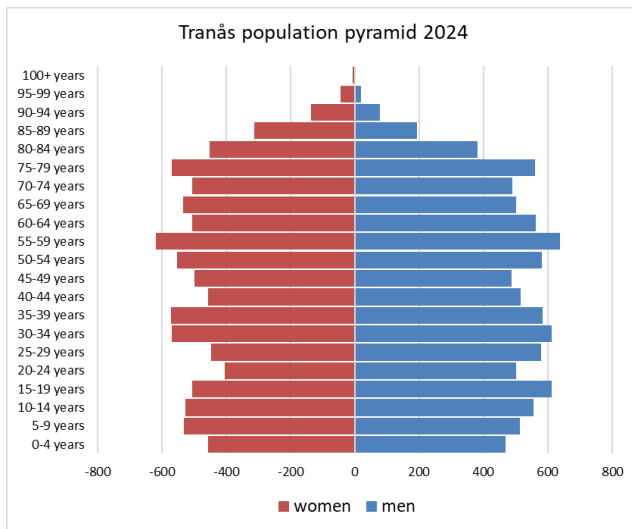


Figure 4. Tranås population pyramid 2024.
(Statistics Sweden, 2026)

Figure 5: Migration trends in Tranås municipality from 2015-2024. (Statistics Sweden 2, 2026)

According to NordRegio (2026), the population has increased by 4.36% in the past 34 years (1990 to 2024). However, the municipality has seen a decline in migration in recent years as seen in figure 5. Similarly to Ödeshög, the main change has been the increase of elderly, however, changes in other age groups have been minimal (figure 6).

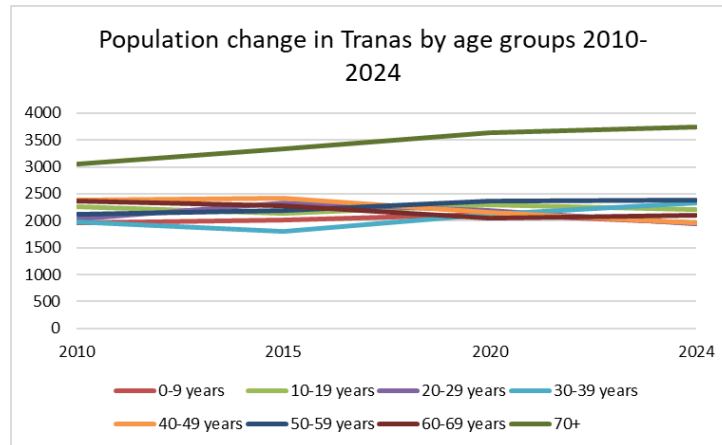


Figure 6. Population changes in Tranås municipality by age groups, 2010-2024. (Statistics Sweden, 2024)

In 2020, the main employment sectors were mining, quarrying, manufacturing, trade, education, healthcare, social work, and construction. A total of 84% of all employed residents worked in one of these sectors. (Statistics Sweden, 2022) In 2021 76.75% of people worked in their home municipality of Tranås, 9.7% worked in neighboring municipalities, and the rest 13.59% worked in further away municipalities (Statistics Sweden 2, 2022).

1.3 Natural landscape structure and physical environment in Ödeshög and Tranås

This section aims to discuss natural conditions only to the extent that they directly affect the characteristics of human activities in the area, where the natural environment provides favorable conditions, residents engage in agriculture, and where conditions are less favorable, they engage in forestry or other relevant activities. Historically, this has a direct impact on the region’s economic growth and people’s financial well-being for long time term.

Ödeshög municipality exhibits a highly differentiated relief structure, shaped by the geomorphology of the Lake Vättern shoreline. The area forms part of the Fennoscandian Shield, where ancient crystalline bedrock underlies the current landscape. Subsequent tectonic and glacial processes have contributed to the terrain's diversity (Öhrling et al., 2020). In the northern part of the municipality, more favorable soils have developed. This region is characterized by fertile, less stony terrain with a lower density of boulders and minimal surface deformation. These features make the area suitable for intensive agriculture, resulting in a landscape dominated by large arable fields and agrarian structures (Ödeshög municipal council, 2024).

Further south, the relief becomes increasingly complex, transitioning into hillier, moraine-covered, and sandy terrain formed during glacial retreat. These areas are characterized by lower soil fertility. As a result, agricultural activity decreases, and the landscape becomes more forested and fragmented (figure 7). Coniferous forests predominate, as in the Tranås territory, but the greater variability of the relief leads to more frequent occurrences of mixed forest complexes. Lake Vättern is fundamental in shaping the local hydrological system, microclimate, and landscape structure, serving as a regional ecological and recreational center (Naturvårdsverket, 2024).

The municipal planning strategy emphasizes both a polycentric development approach and the need to align territorial expansion with natural conditions, particularly regarding the protection of agricultural land and natural resources (Ödeshög municipal council, 2024).



Figure 7. Natural landscape structure in Ödeshög (from authors' archive, 2026). Agricultural elements. Hilly, moraine – covered terrain. Lake Vätter shoreline.

The natural landscape of Tranås municipality is a mosaic of forested areas, lakes, and fragmented agricultural land. The terrain is predominantly gently undulating, shaped by the last Scandinavian glaciation, during which glacial processes formed moraine surfaces and meltwater deposited fluvioglacial accumulations of sand and gravel. In the southern part of the municipality, especially south of the Boet, the relief becomes more complex, featuring hilly, boulder-strewn, and sandy terrain, reflecting the widespread distribution of these sediments (Peterson et al., 2017). According to the Swedish University of Agricultural Sciences (2025), these areas are characterized by light soils and limited agricultural potential and are therefore more frequently used for forestry or extensive land uses such as agroforestry (figure 8). Soil properties in this context influence not only land use patterns but also broader socio-spatial structures, as variations in soil fertility lead to an uneven distribution of economic activities and shape the spatial organization of the resident population (Swedish University of Agricultural Sciences, 2025).

Hydrologically, Tranås is notable for Lake Sommen, a glacially formed basin that serves as the region's primary ecological and landscape nucleus. The forests are dominated by conifers such as spruces and pines, although mixed and deciduous woodlands are also widespread. This mixed forest structure forms a key ecological system, linking water bodies and protected areas throughout the territory (Naturvårdsverket, 2024).

The municipality's comprehensive planning documents state that territorial development follows a clearly defined spatial structure, concentrating most population growth in the main urban center while reinforcing smaller settlements as local nodes (Tranås municipal council, 2011). These documents further emphasize that land and water use must be balanced with conservation of the natural environment, making geological composition, topography, and soil characteristics fundamental determinants in shaping the municipality's territorial structure.



Figure 8. Natural landscape structure in Tranås (from authors' archive, 2026). Featuring hilly, boulder-strewn, and sandy terrain. Forested landscape.

Based on the land-use structure (figure 9), cultivated fields are in the northern part of the territory, which is related to the area's natural features. This has a direct impact on people's living conditions, as agriculture provides a significant income compared to other economic activities. The central part of the territory is covered by forests and infertile soil.

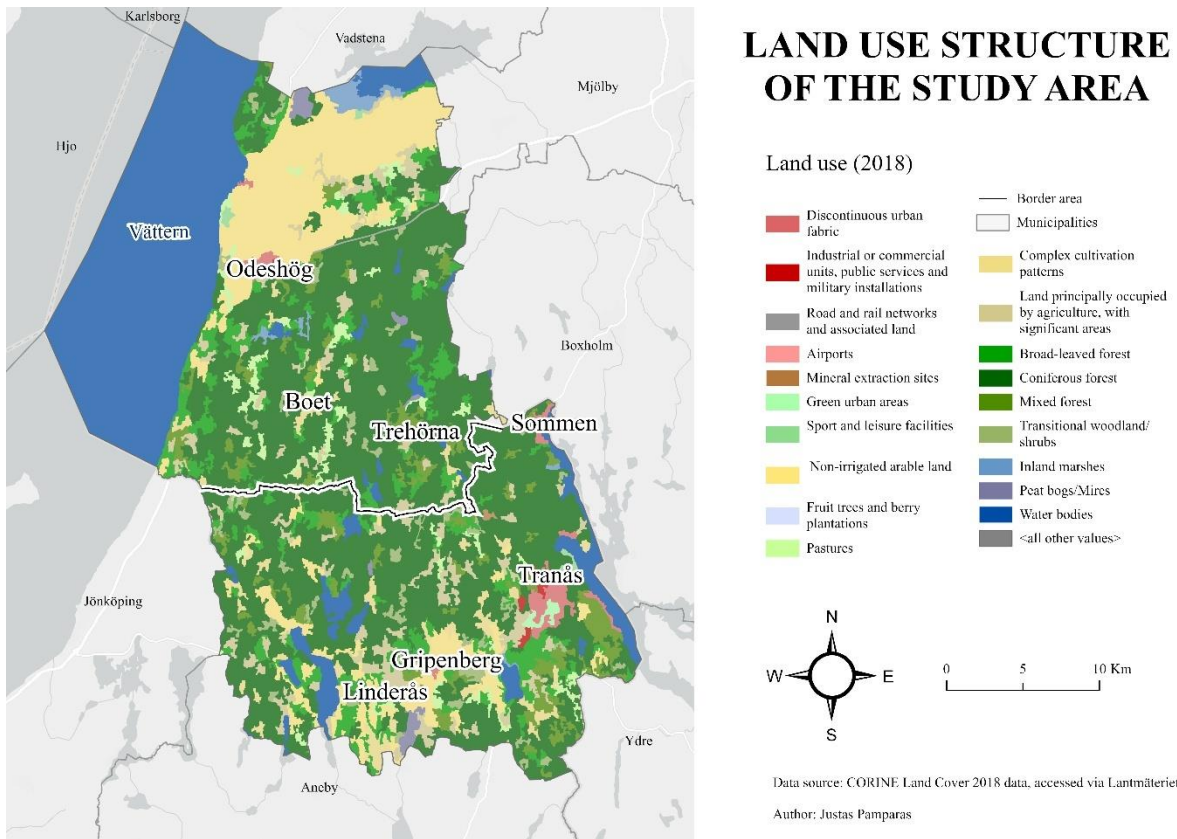


Figure 9. Land use structure of the study area (Corrine Land cover data, 2018)

1.4 Educational facilities in the research area

In the research area, educational institutions are not distributed equally, as shown in figure 10. Overall, there are six preschools in Ödeshög municipality, four of which are municipality-owned (two of which are in Ödeshög, and the remaining ones are in smaller villages). Two of them are independent: one in Ödeshög town and one in the rural village Boet, which is also in the border area of Ödeshög and Tranås municipality (Ödeshög Kommun, 2026).

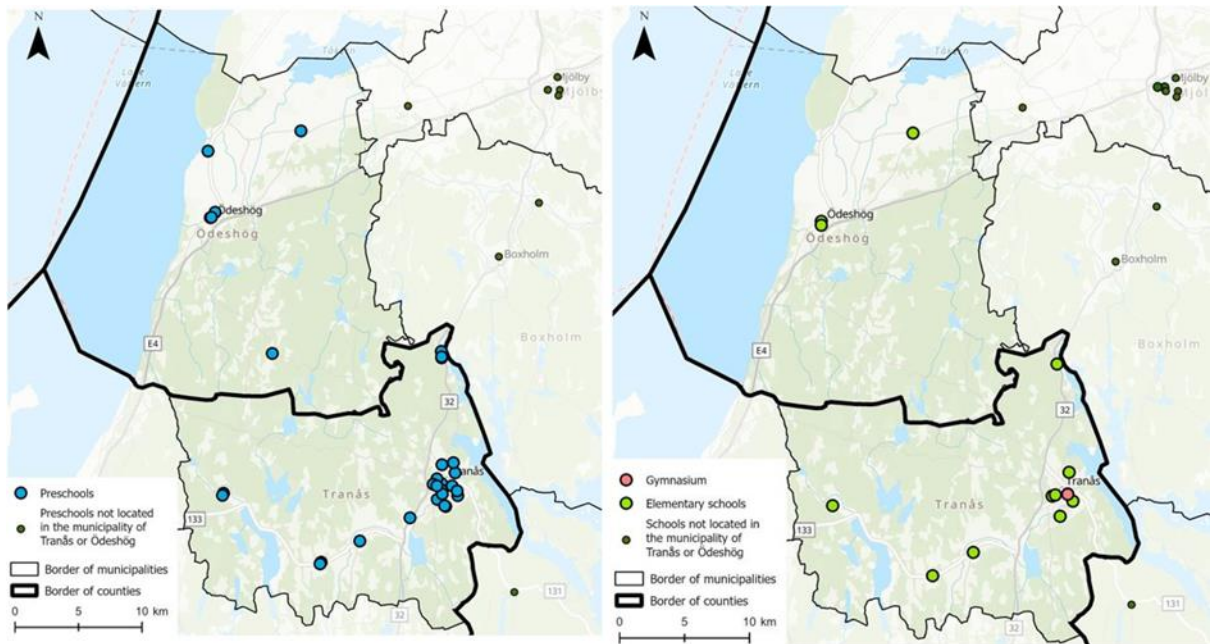


Figure 10. Preschools (on the left side) and elementary schools and gymnasium (on the right side) in research area of Ödeshög and Tranås municipalities (made by authors using spatial data from Swedish National Agency for Education, 2025)

The situation regarding preschool distribution in Tranås municipality is more equal – there are preschools in villages along County Road 133 that runs between Tranås and Gränna – Enebacken, Gripenberg, Linderås, and Adelöv. In addition, there are various preschools in Tranås and Sommen (Tranås Kommun, 2025), which are also important educational hubs in the municipality and border area.

As schools require more staff and are more expensive to operate than preschools (Carlbaum & Rönnberg 2024), there are fewer of them in the research area. In Ödeshög municipality, elementary schools are only in Ödeshög and Rök, both settlements are in the northern part of the municipality (Ödeshög kommun, 2025b), so there are no schools in the Ödeshög municipality border area. In the Tranås municipality, elementary schools are in the same villages (figure 11) as preschools (except Enebacken), so the need to commute after finishing preschool is smaller.



Figure 11. Some school buildings in the research area. Starting from the upper left corner clockwise: Gripensbergs skola, Lysingskolan in Ödeshög, Adelövs friskola, and Linderås skola (from the authors' archive).

In the research area, there is only one high school institution, Holavedsgymnasiet in Tranås, so pupils from Ödeshög's municipality must go to Tranås or other nearby towns (for example, Mjölby) for higher education. Overall, this may not be a problem for students who wish to go to a bigger city for education. However, Tranås town in some areas of Ödeshög's municipality is closer than other towns, the issue is that Tranås is in another county (Jönköping County), so students living in Östergötland will only be admitted secondarily if there is room at the school (Ödeshög kommun, 2025a). In addition, the connection to Tranås from Ödeshög is not frequent, so young people might face issues in getting higher education.

1.5 Border area

The border area between the municipalities of Ödeshög and Tranås is scarcely populated (figure 12). In Ödeshög, the population is concentrated in the northern part of the municipality, where larger lakes and nature reserves are located. In Tranås, the population is concentrated more around the capital of the municipality and Lake Sommen. The border between the municipalities is also the border between region Östergötland and region Jönköping.

The main roads cross the border either in the eastern (railway and Linköping- Tranås - Jönköping highway) or western end (E4 highway). There are not many good roads in the central region of the border. This enhances the seclusion of the border area as the roads are not in the best condition, usually small and narrow, and the public transportation along these roads is sparse. This makes the border area between the municipalities also a peripheral area.

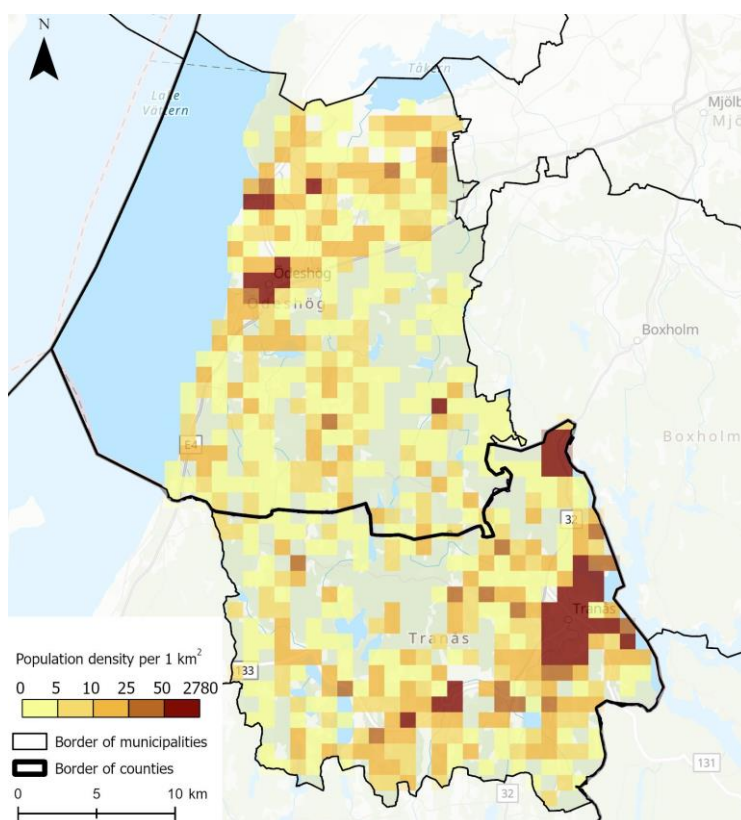


Figure 12. Population density in the municipalities of Ödeshög and Tranås (made by authors using SCB open geodata).

The above defines the border area through geographic and man-made physical features. However, peripheral areas are also defined by other social, political, and economic features, which reveal the difference of these areas when compared to a certain core (Vale et al, 2023). In this particular region, the different definitions of a “border area” overlapped quite well. The area is characterized by being physically far from urban settlements, which makes services hard to reach, enhancing the social peripherality of the area. As not many people live in these areas, they also tend to get less financial help from local governmental bodies, who usually allocate finances to areas where it can influence most people. This in turn deepens the developmental gap between rural and more urban areas, making rural areas even more peripheral in both social and economic contexts.

Based on the above formulation of the border area definition and the findings of our research, we define border areas as a regions located on the outskirts of municipal centers, between larger urban developments, where population density is low, there’s few economic opportunities and transportation connections are scarce. These aspects make the areas secluded in both physical and social contexts and are therefore subject to falling behind in sustainable development trends.

1.6 Key research questions & research gap

Research Question 1:

How does quality of life and contentment with one’s way of life relate to local development, collaboration, and reliance on neighboring municipalities in their respective areas?

Research Question 1 Aims:

- Determine rural lifestyle
- Determine locals' perception of quality of life in respective municipalities

Research Question 2: How are the municipalities of Tranås and Ödeshög working with developing the border areas and is that in compliance with the reality of the situation?

Research Question 2 Aims:

- Assess how the current reality works in compliance with their planning

- Identify challenges, opportunities, and what is currently working
- Construct solutions and suggestions

Research gaps in literature

- How to help rural communities switch to more sustainable means of transportation – what do they need for that?
- Lack of qualitative data about the area's perspectives on locals for sustainable development.

Positionality statement

This report was created by master's students with varying backgrounds relating to sustainable development in rural areas. Our group includes people from six different countries participating in this project: Iceland, Lithuania, Latvia, Estonia, Finland, and Sweden. Our team consists of one person each from Latvia, Sweden, Lithuania, and Canada, and two people from Estonia. These varied cultural and educational backgrounds influence how we approach rural development, sustainability, and community planning. None of us is from either of the municipalities being researched; thus, we provide an outside perspective that may bias or limit our perspective on certain topics, and this should be considered while reading the report.

2. Conceptual and topical framing

2.1 Education and gathering places

Several studies focus on schools in rural areas because they impact the population structure in the area. In earlier studies, for example, a study conducted in Germany (Barakat 2015) states that rural school closure was not the main driver of depopulation, but newer studies (especially those conducted in Northern Europe) prove that there is a population decline after rural school closure (Sørensen et al. 2021; Lehtonen, 2021). Research papers based on qualitative methods might explain some of the reasons for the decrease.

Research conducted in Denmark (Sørensen et al. 2021) found that for new families, it is important to have schools in their village as parents want to have schools close to home so that their children can be more independent and bike from school to home and after-school activities. Another thing which points about schools in rural areas is that they are important for community feeling – especially for kids – there are some cases where children from the same village do not even know each other because they are spending their days in different schools and in local villages there are not many things to do. Similar research conducted in Finland (Autti & Hyry-Beihammer 2014; Lehtonen 2021) emphasizes the importance of schools in the vitality of rural villages and the social capital schools may bring.

In study made by Autti and Hyry-Beihammer, they found that village schools are like a community center, bringing local people together; for example, school events involve all people, even those whose children do not attend that school. The school building itself is a place for gathering, and that feeling does not even disappear after the school's closure; an active community may continue to use the school as a place for activities, for example, meetings or sports training. Although the same research states that a living school is a sign of a living school because that means that there are children in the area, which can be a possible cause for families to move there as well (Autti & Hyry-Beihammer, 2014).

The importance of places where young people can spend time is also described in a study conducted in Estonian rural areas (Trell et al. 2012). This article discusses places (e.g., hamburger kiosks, bus stops, parks) that are important for young people in the area, although they are not

specifically designated for them, but they are a place to meet friends without the interference of their parents. Another important place for community feeling is the culture house, which can also be called a place of continuity between generations. The study also proved that such places play an important role in providing a sense of belonging to the region. This also corresponds to the articles (Sørensen et al. 2021; Autti & Hyry-Beihammer 2014) discussed above, that it is important for rural areas to have some gathering place to feel more connected to the place where you live and have a stronger willingness to stay there.

2.2 Transportation

One potential issue people living in rural areas are facing is a lack of access to public transport (Berg & Ihlström, 2019; Andersson & Hermelin, 2024). Many public transport services are being shut down in rural areas due partially to de-population (Berg & Ihlström, 2019). In Sweden, public transport used to be the responsibility of municipalities but is now controlled on a regional level (Andersson & Hermelin, 2024). All municipalities in Sweden are supposed to be equal, but due to some municipalities smaller sizes they do not get the same access to public transport as bigger municipalities (Andersson & Hermelin, 2024). The fact that the region controls public transport can lead to conflicts and distrust when the regions and the municipalities' vision for public transport do not align (Andersson & Hermelin, 2024). Some municipalities attempt to solve this issue by creating their own bus lines or alternatives to public transport (Andersson & Hermelin, 2024).

According to Berg & Ihlström (2019) this can have many negative consequences, including forcing parents to drive their kids to school, depriving them of potential movement, making people more vulnerable since they can only access services like grocery stores by car and limiting young people's mobility. In many rural areas, access to a car is a must and without one people risk losing their employment (Berg & Ihlström, 2019).

Women, children, young people, people with disabilities, and people with a low income are more likely to use public transport than others (Andersson & Hermelin, 2024). Therefore, a lack of access to public transport could be seen as an equality issue. However, according to a study by Macuchova & Brandt (2025), people of a lower socio-economic status are not more likely to

be affected by poor access to public transport, which could indicate that in Sweden, rural areas not having well expanded public transport is not an equality issue.

There are many reasons people living in rural areas in Sweden struggle to use public transport. The buses leave at odd times when people are already at work or school, the roads to the bus stops are seen as unsafe, the buses leave infrequently, and the costs can be high, especially travelling between regions (Berg & Ihlström, 2019). Since public transport is regulated by regional authorities, travelling across regions can be extra difficult (Berg & Ihlström, 2019). Also, the values of municipalities for planning public transport can vary as is shown in previous studies. Public transportation can be integrated into their strategies as a tool for planning land use in the way facilities are located or to mitigate climate change (Andersson & Hermelin, 2024).

Potential solutions are creating the opportunity for people to order a bus when they need one and creating more opportunities for ride sharing (Berg & Ihlström, 2019). There also needs to be a change in attitude (Berg & Ihlström, 2019).

When switching from using a personal car to public transportation in rural areas is not possible or feasible, other options to make car-based transportation more sustainable need to be considered. Political measures, such as subsidies to help people purchase electric vehicles, or discounts on electricity for charging an electric vehicle, can help people make the switch from fossil-fueled cars. These measures also help to mitigate fuel poverty in rural areas.

From a study of how rural people perceive decarbonization of transportation in Finland (Heiskanen et al, 2024), the main issues rural residents had with purchasing electric vehicles was the price of new cars. Another concern regarding electric vehicles was the scarcity of charging stations, as distances travelled in rural areas tend to be long. Additionally, the problem of charging the vehicle at home was seen as a problem. The people interviewed thought there weren't enough locally produced renewable electricity options, meaning that driving an electric vehicle might still be dependent on fossil fuel-based electricity production, defeating its purpose of sustainability. In this regard, biogas as fuel was more preferred, because it was seen as a locally produced fuel with low life-cycle emissions.

Suggested political solutions to increase decarbonization of transport in rural areas were: lower taxes on renewable fuels, subsidies for purchasing electric vehicles, and converting fossil fueled cars into biogas cars. Adding more local renewable energy production options would also help to advance the feasibility and social, economic and ecological sustainability of electric vehicles usage in rural areas. (Heiskanen et al, 2024).

2.3 Ecological aspects of mitigation of rural depopulation

When talking about sustainable development in rural areas, it is important to find the balance between social, economic, and ecological aspects. It is often the case that socio-economic topics are the main focus of rural planning, leaving ecological sustainability to the background. Then again, when ecological aspects are the main focus, the other two areas tend to not get enough attention. (Lloret et al, 2024)

Lloret et al (2024) identified 5 alternative ways to approach mitigating depopulation in rural areas, with various levels of intervention on ecological planning. They found that the best solution to achieve ecological (biodiversity), social (depopulation reversal) and economic (revenue) goals is to focus on extensive land use in the territory in question. This alternative showed the best results for reversing depopulation as well as having the lowest inequality index (according to the Gini index). While it is focused on ecologic sustainability, it also offers various opportunities for economic activities with low environmental impacts: ecotourism, ecological and regenerative agriculture, outdoor activities related to sustainability and environmental protection. It is a place-based approach, meaning the practices should be tailored to what the locality already has and how to use these values to get economic benefits without exploiting the natural resources of a locality. This helps to maintain the characteristics of an area, enhancing people's connectedness and sense of belonging, therefore reducing the chance that they would want to move away from the area.

Other approaches focusing only on the environment did not have good results for retaining people in rural areas, as these provided little opportunities for economic revenue. Without income opportunities close to home, people must travel to bigger urban areas for work. This can prove

unfeasible in the long term and increase the probability of people moving closer to urban centers, enhancing depopulation in rural areas.

On the contrary, solutions focused only on economic growth, while effective in the short term, for offering people jobs and income opportunities, were not seen as sustainable in the long term. Economic growth might entail bringing factories, mines and powerplants (solar parks, wind turbines) to rural areas, which can lead to pollution and have damaging effects on the landscape. These effects might have long term consequences, especially after businesses eventually shut down, leaving local communities to deal with the aftermath.

Overall, Lloret et al (2024) find that implementing conservation measures should be done slowly and the opinions and needs of locals need to be considered. As different activities show results in different temporal and spatial scales, precise planning is needed to optimize cost-benefit balance.

2.4 Energy transitions

Rural areas play an important role in renewable energy transitions. Solar panels, wind turbines and other sitting energy infrastructures require large areas of land, which can be found abundantly and for cheaper prices in rural areas (Naumann & Rudolph, 2020). While renewable energy is important for reaching various climate and sustainable development goals, it can also come with negative aspects. When rural areas are seen as a resource for renewable energy production, they are in danger of being exploited, without giving value back to the local communities.

Renewable energy production can bring economic revenue to rural areas, while also providing ecological revenue, a so-called eco-economy (Kitchen & Marsden 2009). Renewables can strengthen the rural economy by helping diversify land use and farmers' income sources (Naumann & Rudolph, 2020) as well as offer new jobs (Ejdemo & Söderholm, 2015). Renewable energy, in addition to economic benefits, can also offer energy security for rural areas. To achieve just and sustainable energy transitions in rural areas, it is key that the local communities are involved in the processes and benefits from the energy production are shared fairly.

Community initiatives and cooperatives regarding renewable energy projects and ownership are highlighted as an opportunity to bring more connection to local communities and to help make sure, that the local communities also benefit from the new infrastructures (Magnani et al, 2017). This can, for example, entail the ownership of the infrastructure or getting a percentage of the revenue of energy production into community funds.

Ownership of the local energy production can have various forms: cooperatives, locals, buying shares to finance the project, full or partial ownership of the infrastructure, where, for example the community owns one of the wind turbines put up in their locality (Walker, 2008).

Some additional benefits to local communities are directly consuming the produced energy locally for a cheaper price, which also provides energy security for the community (Walker, 2008), new jobs from the construction and maintenance of the infrastructure and lease payments to landowners (Brown, 2012).

Including local communities into the planning, ownership and benefits of renewable energy infrastructure also helps to mitigate the resistance of locals against the planned infrastructures, making them feel more in charge of their surrounding landscape and that they are being fairly compensated for the harm done to the landscape, noise (in the case of wind turbines) and visual disturbances that come with building such infrastructures (Munday, 2009).

2.5 Theoretical framework of human – space interaction

A comprehensive understanding of human behavior within the study area requires a precise delineation of the scope of geographical inquiry. This study centers on human geography, which, as Hartshorne (1959) notes, examines how spatial arrangements influence social processes. Spatial relationships and interactions are therefore fundamental, as they shape societal behaviors, preferences, and the development of community bonds (Burneika, 2025). The primary objective is to clarify two interrelated phenomena: the social actor, defined as individuals and their behaviors, and the social structure, which refers to the constraints shaping human actions.

A thorough analysis of a territory and its ongoing processes requires consideration of three key dimensions: individual desires and actions; the social and physical environments that influence decision-making; and the ways in which spatial change arises from the interaction between human preferences and the environment. At the micro level, analysis focuses on residents' choices, experiences, and perceptions, as reflected in mobility patterns, place attachment, and sense of belonging. At the macro level, attention is directed toward structural elements such as transport networks, service distribution, and accessibility. Integrating these perspectives demonstrates that spatial processes are dynamic outcomes produced by the interplay between individual preferences and structural constraints (Burneika, 2025). In this way, space becomes a meaningful place through personal experience, memory, and emotional ties. The longer someone lives locally or the stronger their social bonds, the deeper their emotional connection, which may motivate them to stay even when rural areas are far from service centers (Buffel et al., 2014). This emotional attachment reduces push factors for out-migration. Taei et al. (2024) study exemplifies this, showing that a strong emotional bond helps residents accept difficult situations and remain despite hardships. Human experience — movement, perception, memory, and emotion — transforms abstract space into a meaningful place (Buffel et al., 2014).

This perspective is further supported by the concept of the urban paradox, which notes that residents of smaller communities often maintain positive perceptions of their hometowns. The central argument is that economic opportunities do not always outweigh the advantages provided by natural environments, superior air quality, safety, and social cohesion. Taei et al. (2024) report that residents of rural and peripheral regions in Northern and Western Europe frequently

experience higher subjective well-being than their urban counterparts, despite lower economic indicators. Collectively, these findings suggest that rural areas offer distinct benefits, such as access to ecosystem services and a quality of life that is increasingly rare in urban areas. Consequently, the decision to remain in rural areas is often motivated by life satisfaction and values that enhance well-being, rather than by economic gain.

3. Methodology

3.1 Temporal and spatial background of fieldwork

The field work for this data was collected from April 16 – 20, 2026. Data was collected in the municipalities of Ödeshög and Tranås. Prior to field work, some background research was completed on both municipalities such as demographics, trends, and reading the comprehensive plans. Through the research, we identified relevant stakeholders to contact for interviews.

In addition to that, various resources (for example available map services made by Ödeshög and Tranås and municipalities webpages) were used for deciding the places which should be visited during the field works and events happening in the area to reach potential target audience for survey and interviews to answer research questions and reach the aim.

3.2 Semi-structured Interview

The semi-structured interviews were pre-arranged with identified stakeholders, with a specific date and time agreed upon in advance. We contacted 17 stakeholders and conducted 7 interviews. Table 2 provides an overview of the stakeholders contacted and the interviews completed. We contacted a wide variety of stakeholders in various regions to try to create a balanced narrative.

The interviews were recorded using mobile phones and subsequently uploaded to Microsoft Teams to ensure secure storage and compliance with the General Data Protection Regulation (GDPR) requirements. Prior to each interview, verbal consent was obtained from participants for both the use of the information provided and permission to record the conversation.

Each interview was conducted using a prepared list of guiding questions to ensure consistency across interviews while still allowing for open discussion (Adams, 2015). If interviewees raised particularly relevant or interesting points, they were given space to guide the direction of the conversation (Adams, 2015). At the end of each interview, participants were also asked whether there were any additional important topics they felt had not been discussed.

Table 2. List of stakeholders contacted for interviews and how many interviews were had.

Stakeholders Contacted	Interviews Held
Sommens Hembygdsförening	Yes
Ödeshögs Hembygdsförening	Yes
Leader project Folkrörelser i Ödeshögs kommun	Yes
Tranås Municipality	Yes
Ödeshög Municipality	Yes
Leader projekt Boets framtid/Leader projekt Kompetensutveckling dator, smartphone, Facebook	Yes
Leader project Bredstorp Bike Arena	Yes
Vindkraft Ödeshög	No
Aktion Rädda Vättern: Activist group for Lake Vättern	No
Trehörna byalag	No
Boets byalag	No
Framtidsgruppen Adelöv	No
Trehörna Wårdshus	No
Adelövs friskola.	No
Bäckalyckans preschool	No
Gripenberg School	No
Linderas school	No

3.3 Unstructured interviews

The unstructured interviews were conducted spontaneously in various public places and took place in an informal, conversational manner (Swain & King, 2022). These places include rural areas in both municipalities, libraries, grocery stores, gas stations, hiking trails, and street markets. We approached local residents and asked open-ended questions about their experiences of living in the municipalities, their views on local development, and their general perceptions of the area. Follow-up questions were then shaped naturally based on their responses, allowing the conversations to develop more freely and reflect the perspectives that were most important to the interviewees (Swain & King, 2022).

Before beginning each conversation, we informed participants about the purpose of our research, our institutional affiliation, and how the information would be used. Verbal consent was obtained before, including their responses in the study; no recordings were taken for the sake of time and practicality.

To protect anonymity, specific details regarding the interviewees' location and personal positions are excluded from this report (Swain & King, 2022). In rural areas, individuals may be more easily identifiable due to smaller populations and close community connections, making confidentiality especially important.

3.4 Interview coding

The semi-structured interviews were audio-recorded and coded using an inductive approach, meaning that no predetermined codes or themes were established before analysis. We chose the inductive method because we did not want to restrict any ideas since there is little research on these rural communities (Bingham, 2023). Instead, codes and themes were developed during the process of listening to and reviewing interview recordings. The coding process followed a thematic analysis approach, allowing recurring patterns and key themes to emerge from the data (Bingham, 2023). Descriptive coding was also used to summarize the main topics and ideas discussed by participants (Saldaña, 2021).

The interviews were divided and coded by two individuals; we ensured that the people's coding attended the interviews that they were coding. Some interviews were in Swedish and

translated by our Swedish student. The coding was done individually, then the coders checked common terms for themes to increase inter-coder reliability (O'Connor & Joffe, 2020). Similar codes were then grouped into broader thematic categories to identify common trends across interviews.

3.5 Survey

A survey method was employed to gather quantitative data, providing a detailed understanding of the area. The empirical data offers insights into the territory from the residents' perspectives and highlights local issues encountered in daily life. These findings illuminate residents' views on quality of life, accessibility, services, sense of belonging, and future development within the cross-border region (Guščinskienė, 2002).

The survey included both open-ended and closed-ended questions, as well as guiding and clarifying queries, to assess how residents perceive their home and which locations evoke positive or negative emotions. The instrument comprised 35 questions, including 10 optional items, with varying depth across multiple topics (Luobikienė, 2000).

The survey addressed categories such as respondent background, mobility, quality of life and services, cross-border features, sense of belonging, development and planning, and future outlooks. Administered from April 16 to April 21, the survey was promoted through municipal group channels, bulletin board postings in towns and villages, and multiple community Facebook groups. The survey was created using the ArcGIS Online Survey123 tool to facilitate result interpretation and was available in both English and Swedish.

3.6 Observations

The observation was collected using the participant observation method and adapted from Kumar & Sharma (2023). Since the researchers are all from different countries and cultures, we took separate observations and compared them afterwards, and if we all had a common observation, this shows its importance. In addition to that, authors used ArcGIS Field Maps to make comments and add multimedia content (photos, voice recordings) to reflect on places. This tool is suitable for observations because it records the places where observations were made, and it is meant for sharing with the group and using it outside and indoors (ArcGIS Field Maps s.a.).

3.6 Data analysis

Maps were generated using ArcGIS Pro, incorporating data sets from the Living Atlas. Changes in land cover and landscape characteristics were analyzed using freely available Copernicus data, which adheres to the principles of comprehensive and open access as outlined in the Copernicus Data and Information Policy Regulation of July 12, 2013 (EU). Multiple ArcGIS Pro functions facilitated the qualitative assessment of these data.

3.7 Limitation of methods

As previously stated, our methodological approach was limited by our lack of connection to the area, which made it difficult to assess the most effective methods for data collection. Due to our limited knowledge of the area and time constraints, this may have impacted our results. For instance, the survey received a low response rate. This was likely due to several reasons. First, our survey was repeatedly removed from community Facebook groups, which limited how many people were able to see and access it. We also observed that there was a large elderly population in both municipalities, in both rural and urban areas. Using posters with QR codes may have created a barrier for older participants, as this demographic may be less likely to access surveys digitally. Another age-based limitation was that we did not include youth under the age of 18 in the data collection, as they are considered vulnerable participants.

With such low response rates from both the survey and unstructured interviews, the data does not provide a fully representative view of the population's perspectives. Another limitation was that we used the survey as a gateway to start conversations with locals and gather their perspectives, which meant we first had to explain our purpose. In doing so, we mentioned that the data collected would be used and presented to the region. This may have influenced interviewees' responses for various reasons, such as fear of authority or concerns about how the information would be used. Another factor that may have influenced responses was that most of us conducting interviews are not from Sweden and do not speak Swedish. This created a language barrier and may have affected how people answered questions. It could have led them to give simplified responses or present their area more positively from an outsider's perspective.

The final limitation we identified was that we mainly spoke with people who currently live in the municipalities and are actively engaged in their communities. Since they have chosen to stay and are often involved locally, their perspectives may be more positive or biased. We did not survey people who had moved away, meaning we are missing perspectives on why people chose to leave, which may have skewed the data.

4. Results

4.1 Document analysis

One part of the research of the area included the study of the planning strategies or comprehensive plans of the municipalities. For learning more about Ödeshög, “Planeringsstrategi för översiktlig planering - mandatperioden 2022-2026” or “Planning Strategy for Comprehensive Planning – Electoral Term 2022–2026” was studied. This, instead of the comprehensive plan was chosen, because it was more recently developed and was expected to contain mainly the same information. For Tranås, the “Översiktsplan för Tranås kommun” or “Comprehensive Plan for Tranås Municipality” was studied. These were used as preparation for interviews with municipality leaders.

4.1.1 Ödeshög planning strategy

The Ödeshög planning strategy stated that an important part of the comprehensive plan is to prepare for a community of 6000 inhabitants and to describe the municipality’s relationship to two regions: Östergötland and Jönköping. It stated that, in the municipality, 55% of residents live in the urban areas of Ödeshög and Hästholmen, while the remaining 45% live in rural areas. This is a large proportion of people living across different rural communities, and development is important in all parts of the municipality. Strengthened attractiveness and services in the main town benefit the entire municipality, while the rural areas—with their attractive living environments, nature, and cultural landscapes—can attract more people to move to Ödeshög Municipality (Ödeshög municipal council, 2024).

In Ödeshög, it is important to strengthen the main town, the neighboring village Hästholmen and other local nodes to create better conditions for public transport and services to reach their residents. A node does not have to only be a settlement node; it can also be a node for tourism, business or culture (Ödeshög municipal council, 2024). For the municipality it is also important to manage unexpected events in a sustainable manner. Sustainable development, safety, and security are important aspects, and the municipality may be affected by national and global changes that they must be able to handle effectively (Ödeshög municipal council, 2024).

Other important themes found in the Ödeshög planning strategy were land preparation and development for both residential and business areas, town center development of Ödeshög and Hästholmen, anchoring and continuous dialogue, environmental quality standards, noise, soil contamination, digitalization, climate risks etc. (Ödeshög municipal council, 2024).

Specifically, about the border areas, some topics are mentioned in the planning strategy which highlight the necessary changes and improvements deemed important for Ödeshög. Among the previously mentioned topics, another one was brought out titled “function and development of rural nodes”. The meaning is the desire to aim work at developing the local nodes in the municipality, for example through service points, commuter parking, local transport, building principles etc., and dialogue with residents must be an integral part of this work (Ödeshög municipal council, 2024).

4.1.2 Tranås comprehensive plan

An important part of this research was also taking notice of sustainability definitions and what exactly they mean to different people and stakeholders. The Tranås comprehensive plan begins with the following sustainability definition: “A sustainable development is one that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The plan claims to work with all three sustainability perspectives, the social, economic, and ecological one to integrate them into the planning process (Tranås municipal council, 2022).

Tranås Municipality has a relatively concentrated settlement structure, with nearly 80% of the population living in the Tranås urban area and 20% in rural areas and the smaller settlements of Sommen and Gripenberg (Tranås municipal council, 2022). In total, more than 90% of the population lives in the eastern parts of the municipality (Tranås municipal council, 2022).

The economic plan of Tranås states that the municipality is working towards 25 000 inhabitants by 2040, while ensuring that their economic growth is sustainable. Social sustainability highlights many different aspects to work on: early life (all children have safe conditions for growing up), importance in education and working, housing and local environment, healthy lifestyle promotion, equal and equitable conditions (compassion and diversity), safety, influence

and participation. Ecological sustainability has focused on themes about climate, energy, waste, and other topics of this area (Tranås municipal council, 2022).

By 2030, Tranås Municipality aims to become a fossil free municipality with sustainable transport solutions and blur the boundaries between the town, the countryside, and the surrounding region. (Tranås municipal council, 2022). Another statement says that Tranås Municipality will have sustainable urban and rural development that grows in balance with natural resources, creating places where people want to live, work, and thrive (Tranås municipal council, 2022). These are noted as an important aspect for the future of the border areas.

The comprehensive plan mentions smaller areas of Tranås municipality multiple times, including descriptions and overall suggestions for future developments in more rural areas. One example of this is the mention on Adelöv, Linderås, Gripenberg, and Sommen as local centres that should be strengthened in the long term as service hubs (Tranås municipal council, 2022). Increasing the basis for services and public transport in these locations should be actively pursued (Tranås municipal council, 2022). For rural areas and smaller settlements not served by regular bus routes, on-demand transport services are available in the municipality (Tranås municipal council, 2022). There is a growing demand for strengthened public transport as well as expanded pedestrian and cycling routes between the town and the surrounding countryside (Tranås municipal council, 2022).

4.2 Interviews

Semi-structured and unstructured interviews were coded, and relevant themes were identified to answer research questions. The main topics of narratives that appeared during interviews are summarized below, with relevant quotes extracted for analysis. The questions asked in structured interviews are listed in Appendix 1.

4.2.1 Transportation

Transportation to central areas in and out of the municipalities became a recurring topic among the stakeholders. However, reliance on personal vehicles became a very evident topic in rural areas of both municipalities. The reliance on personal vehicles was due to a lack of or poor

public transport. A hesitancy to switch to electric vehicles due to costs was also expressed. This illustrates that there is a lack of funding to help support transportation in rural areas. This creates a barrier to people living in these areas because it suggests that they need to be able to drive to live in rural areas or rely on someone who does. It was also stated in multiple interviews that elderly people need to move to central areas when they are no longer able to drive. Moves like this may alter the quality of life of these individuals and may move them farther from family and support systems.

The road system that was commented on most was the road that connected Ödeshög and Tranås. It was highlighted as a dangerous road due to it being narrow and surrounded by forest, and the risk of hitting wildlife, particularly moose. This is important because there are numerous daily commuters who take this road to commute to work. There was no mention of maintenance to keep the road safe, which shows this road is not a priority, despite it being a crucial road for travel to Tranås.

Several people interviewed from both Tranås and Ödeshög expressed that they had to travel because there are no services close by. There are few stores, healthcare centers or workplaces in the border area, so people have no choice but to drive or use public transport in their everyday life. This could cause potential problems. One person in central Ödeshög said

“We have no trains here, but we got the buses. And communication, our regular hospital is in Motala. [...] the most things happened in Motala and if you have no car, you have to travel first by bus to Mjölby and then take a train to Motala and then take the bus to the hospital. That's not good”.

Other people interviewed living in rural Ödeshög and Tranås expressed that the travel isn't a problem because they can do it with their cars and they know it's something they signed up for when moving to the countryside.

Something some people expressed in the interviews was that they don't feel like politicians on the national level understand their needs connected to transportation. One person in central Ödeshög said:

“So the way our government says you should travel in buses, trains, as much to save the nature and things like that. Bullshit. They live in Stockholm and big cities. There's no way. Because if you, I worked for 1 1/2 years in Jönköping, there's no way you can go there unless you have a car.”

Another person from the border area in Ödeshög said that politicians in big cities don't understand that people in rural areas need cars.

The connection to Tranås was brought up as difficult in interviews with people from Ödeshög. One person interviewed from central Ödeshög said “so there is one bus in the morning to Tranås and one bus back home. Otherwise, they mean there are trains from Tranås to Mjölby, and then you can take the bus home”. Another person from central Ödeshög said that traveling via public transport to Tranås was difficult because there's only one bus that doesn't leave frequently. Ödeshög municipality bought and operated the bus line between Tranås and Ödeshög in collaboration with Tranås municipality. Traveling to Tranås by car was also brought up as difficult by people living in central Ödeshög because the road is narrow and there are several animals crossing it, making it feel unsafe.

4.2.2 Housing

Affordable housing in rural areas was a frequent code in most interviews. It was described as an option for young people to come to buy a first home, as it is cheaper than in the central areas of Tranås. An interviewee from central Tranås saw the aging demographic as an opportunity for the young generation to buy housing in central Tranås. The code affordable housing occurred more for Ödeshög than it did for Tranås even in the central areas of Ödeshög. An interviewee from rural Ödeshög stated “every time there is a house empty, there is someone moving in”. There was conflicting information, as some stakeholders viewed it that young people are moving to rural areas for the lifestyle while other stakeholders stated that young people were leaving rural areas.

The code of choice was often paired with housing. In both municipalities, from stakeholders of various degrees, living in rural areas was a choice. An interviewee from a rural area in Ödeshög stated “It's what you choose when you live here”. It is important to note a very similar quote was stated by an individual in central Tranås about choosing to live in rural areas.

4.2.3 Engagement

Something that several people interviewed brought up as important in both Tranås and Ödeshög was that there is a strong sense of community. One person living in Sommen said “I think it's because all who live here, we say hello to each other when we meet” about why it is a good place to live. Another person from central Ödeshög said “we have a good community. That's a good thing when it's a small community. Everybody knows everybody, good or bad”. People in Boet expressed that they felt like they had a strong sense of community and that it made Boet a good place to live.

People living in the border area help each other out and support each other. One person in Ödeshög explained that if their organization needs help with something, like racking leaves, they can get help from the community. Another person in Boet explained that their organization is run on volunteer work and that people in their community help each other out.

However, some people expressed that the connection between different communities is poor. One person from central Ödeshög said “No, we are separate.” when asked if they felt a sense of belonging with other organizations and small communities. Other people interviewed living in border areas in both Tranås and Ödeshög expressed a bigger sense of community with other places, since they have to travel. One person running an organization for young people in Tranås explained that they had kids from many different places coming to their facilities and they all belonged together.

One trend was that it was mainly old people who were engaged in the community. One person from central Ödeshög said “Unfortunately, it's mostly elderly people who come to see it” about a local event their organization organizes yearly. Most of the people interviewed representing local groups and organizations were retirees. One person from Boet said that young people are too busy to be involved in local organizations. These interviews did, however, also bring up the fact that younger people and children did attend certain events, so it seems like young people are involved in some aspects of the community.

4.2.4 Education

In both regions, there were threats of school closures in rural areas, which were mainly due to a lack of students and teachers. While it was interesting to hear that Tranås was also under pressure because they needed to compete with other larger areas to get students from rural areas to come to their school, as stated by an individual from central Tranås. This then brought up the vitality of transportation to schools, even for central areas like Tranås. It shows that they also rely on rural areas.

A common theme for both municipalities was the lack of teachers. “You can build a new school, but if you don't have teachers, if you don't have assistance, personal assistance to those who need that, it looks pretty, but it doesn't work.”, said an individual from central Ödeshög. A similar problem was highlighted in Tranås, and noted that without the train services, the schools would need to shut down due to lack of teachers.

4.2.5 Tourism

Some of the people interviewed were tourists, visiting the area. In Ödeshög, two tourists explained that they were only passing through. They were on a biking trip, biking along Vättern. The fact that people use Ödeshög as a stop for passing through along the E4 highway was reflected in other interviews. One person working at a hostel in Ödeshög said that they get several visitors on their way to places like Copenhagen who need somewhere to sleep for the night.

Besides passing through, a major reason given for visiting Ödeshög was nature. There are several hiking trails in the area. The person running the hostel said, “Then it comes a lot of people who are walking, wandering”. They get visitors who are hiking, biking, and pilgrims on their way to Vadstena. At Omberg several tourists were interviewed who were there to hike and experience nature. Some people in Boet, a small village in the border area in Ödeshög expressed that they have been working on maps for biking and hiking to bring more tourists to the area. Hiking trails seem to be the main drawing point pointed out for tourism in the border area, but most of the tourism spots mentioned during interviews in Ödeshög are in the north of the municipality, not in the border area.

The main tourism attractions in Tranås were related to lake Sommen and various hiking and camping options. Tourism did not come out as a focal topic for the municipality leaders or locals.

4.2.6 Youth

There were two main issues highlighted for youth in rural areas: lack of activities and job opportunities for youth in rural areas. “There are not enough trainers”, said a person from rural Ödeshög, stating it as a reason why there weren’t sports activities in smaller villages. Therefore, youth have to go to central areas, which places more pressure on parents to drive their kids to activities due to poor transportation in rural areas. However, this does not seem to be an old problem as stated by numerous stakeholders that it had been decades since the removal of activities. The dance and music school in Ödeshög offers many activities to kids. The principal of the school stated that the classes are at full capacity, and they can’t accept all kids as there are not enough teachers and finances. They also offer home lessons for kids living in more rural areas, who cannot travel to the town due to lack of transportation options, health issues or other reasons. This is a good initiative to balance the deficiency on activities and public transportation option to go to activities, enhancing the quality of life for kids living in more remote areas.

The second issue for youth was limited job opportunities. The McDonald's and MAX Burgers restaurants that opened on the E4 Highway to Ödeshög were identified as a great first job opportunity for local youth in Ödeshög, stated in an interview in central Ödeshög. The same interviewee stated that there were not enough youth from Ödeshög so they started busing youth from Mjölby to work. This highlights that rural areas may be difficult for youth to live in, especially with poor public transportation.

In Tranås the activities for children and youth were plenty. There were football training for all age groups, options to play ice hockey, tennis, badminton, mountain biking and other sports. A local football trainer said that the sports clubs in the city of Tranås are at full capacity with the kids attending. This, however, in his words, is not the case for more rural areas, where there are some trainings, but many age groups have to play together and the shortage of trainers has forced places to stop offering training to local kids. The scarcity of options for sports training in rural areas and

lack of public transportation to take part in activities further peripheralizes these communities and lowers the quality of life.

4.2.7 Nature

Nature was brought up in many different interviews in many different ways. It was commonly spoken in the context of water bodies such as Lake Sommen in Tranås and Vättern in Ödeshög. They were brought up as important for the drinking water supply, tourism, mining, fishing, recreation, and a source of identity. An interviewee in central Tranås stated, “We consider Lake Sommen our own, despite it belonging to 3 municipalities”. This sense of pride was created because the lakes are seen as a point of tranquility and connection to nature, thus making it highly valued by both municipalities.

The code of opposition to mining was brought up in the context of being harmful to nature and sources of drinking water. It was also more of a concern for Ödeshög; while still discussed in Tranås, it was not as important a topic.

Nature was also described as escaping urban areas, thus attracting people to live there. An immigrant in rural Tranås, who had lived in the area for 13 years, when asked why they lived there, stated, “I mean look at it”, meaning that the area was peaceful and surrounded by nature. Nature was also typically contrasted with urban life as stated by an individual from central Ödeshög, “we are far from urban hectic life”. This shows that even in central Ödeshög, they consider themselves rural and see being in nature as a positive aspect of living rurally. This shows that nature plays an important role in shaping border area identity, as shared landscapes, forests, and rural environment creates a sense of belonging that extends municipal and regional boundaries.

4.2.8 Work

One recurring theme in the interviews was a lack of work opportunities in rural areas. One person from central Ödeshög stated “we used to have a lot of big companies, so we had a lot of works, and since the end of 90s, 2000, beginning of 2000, they have put down a lot of and sell it and moved away. So, we have a lot of people now who's travelling to the work”. They also said, “we don't have businesses”. Workplaces shutting down in recent years were brought up by multiple people in both Tranås and Ödeshög. Several people talked about old employers like factories or

sawmills that are no longer around. One person from central Ödeshög said “They had three or four or five factories for furniture before. And then the IKEA took over”.

The lack of work opportunities means that people have to commute to work. People work in places like Tranås central town, Mjölby, Motala, Jönköping and Linköping. One person interviewed living in central Ödeshög claimed that “a lot of people travel to their works in Mjölby” and that Mjölby was the municipality with the strongest connection to Ödeshög because they have a lot of factories and better opportunities to travel via public transport than to other nearby municipalities. The lack of good public transport connections means that many people have to travel by car to their work.

The lack of work opportunities have meant that people have moved. One person from central Ödeshög said “if you are family and both parents are travelling; you choose to move”. There are, however, several interviewed people who have expressed that they don’t feel the need to move even if they don’t work in their home municipality. According to one interviewed person from rural Tranås, commuting to work with a car was not a major issue.

4.2.9 Collaboration between municipalities, the region, and citizens

Municipal perspective

A common theme among both municipalities was that they had “good collaboration” with each other. The main areas of collaboration highlighted were education, wind parks, transportation, and regional development. An individual from central Tranås stated that the main challenge of working with Ödeshög was that “it is two different geographies,” meaning the areas are far apart and the forest between them is seen as a barrier to access. The municipalities also have time banks for each other, allowing them to provide support and complete work for one another when needed. One of the most influential projects they have done in recent years is buying the bus line that went between the two capital cities, after it was shut down by the Regions. The bus is the main transportation for how youth can attend high school in Tranås , as there is no high school in Ödeshög municipality.

Both municipalities also shared that they felt they had a good personal relationship with the region, but that it was sometimes difficult to work together on a formal administrative level. Tranås is located on the outskirts of Jönköping County and sees this as one reason for not being prioritized for funding. Because of this, they work closely with Östergötland instead. As one individual from central Tranås stated, “we have to be the active front... and also to get the two regions connected on common issues.” This shows that municipalities want greater involvement and stronger support from the regional level.

Local perspective

Some interview subjects representing local groups and organisations in both Tranås and Ödeshög expressed discontent with the municipality. One person from central Ödeshög said “They really want to support, but they don't want to work. So, we get money.” about the sort of support their organisation received from the municipality. According to them, the municipality was willing to give them support in the form of money, but they were not willing to put in work to help them organise different events. That same person also said that different organizations should band together because “the politicians would be more interested in our works and how we work and what we do. Because together you get strong”. Another person representing a different organisation stated that they wished for more financial support from the municipality. Outside of support for organizations, individuals also expressed some discontent. One man from Sommen said “Yeah, we pay, we pay taxes for the kommun, but we don't get so much back”. On the other hand, the Ödeshög library and Dance and Music School expressed that they are happy with their cooperation with the municipality and that they feel they are valued. They wished that they could have more financial resources to renovate facilities or build new ones, for example a theater house for hosting concerts and plays, but otherwise they were content.

Some people reported that they noticed a lack of collaboration between the municipalities and regions. One person from central Ödeshög said “That's one mile down to the border to Småland. And there's no way they work together. Our 2 regions is not working together”. Several people from Ödeshög stated that the only way they saw Ödeshög and Tranås working together was in connections to school. They perceived that since Ödeshög doesn't have a gymnasium, some students travel to Tranås and the municipality has helped facilitate that.

4.2.10 Quality of life in rural area

Several people discussed positive aspects of living in the rural border areas both in Tranås and in Ödeshög. A recurring theme was that people chose to live in rural areas, knowing what the limitations of life in the countryside are and therefore they didn't perceive those limitations as a problem. Some people in both rural Tranås and rural Ödeshög said that they didn't need anything in their smaller village because they could just drive to the town center to visit shops and access services. Another recurring theme was that people appreciated the access to nature and space that the countryside offered them. One person in rural Tranås said they always wanted animals, and in order to keep animals, like chickens, they needed to live in the countryside. The strong connections and sense of community was also highlighted as something that improved the quality of life for many people interviewed living in rural areas. This was exemplified by many people stating that they grew up in the area, moved away when they were young, but came back to raising families and that they are happy with their choice to come back. Many described it as a feeling of "coming back home".

There were also negative aspects about the quality of life in rural areas in Ödeshög and Tranås that emerged during the interviews. Some people in Ödeshög and Tranås expressed that they felt like they couldn't access the services they needed, like grocery stores or schools. One person in rural Tranås said "It is difficult to have good shops here because we are not so many." The services available are also diminishing. For example, there used to be a library bus in Tranås driving to smaller villages, but it ended its services in 2004. Now both municipalities' libraries deliver books to smaller schools and rural residents by car, based on online based orders.

The lack of accessible public transport was also highlighted as a problem. Some people stated that they could no longer live in their village if they couldn't drive. The lack of work opportunities forcing people to travel long distances was also a problem some interview subjects discussed.

4.2.11 Border Area

Both municipalities described the border area as small and rural. A representative from Tranås municipality said, "The border area is not existing". Representatives from Ödeshögs

municipality described that they did not have plans to develop the border area further, instead focusing on maintaining what is already there. In general, in interviews from Tranås the border area was described as empty, while in Ödeshög the border area was described as small and rural, but with villages and an engaged community. They claimed that engagement was high in the rural areas because there wasn't many other things to do.

4.3 Observation

The observation method was used in 2 different tactics. Tactic number one involved creating a table of different social, environmental, and economic aspects that could be assessed while traveling in the research area for 5 days in April. This table was filled out by the students conducting the research, and most important and overlapping notices were written in the report. The second tactic used is ArcGIS Field Map with the help of which more than 130 observation points were obtained (figure 13), and each of them contains small comment and picture or other material (voice recording, video). Material collected is used as a tool for better reflection on observation and many of pictures taken is also part of the report's visual material.

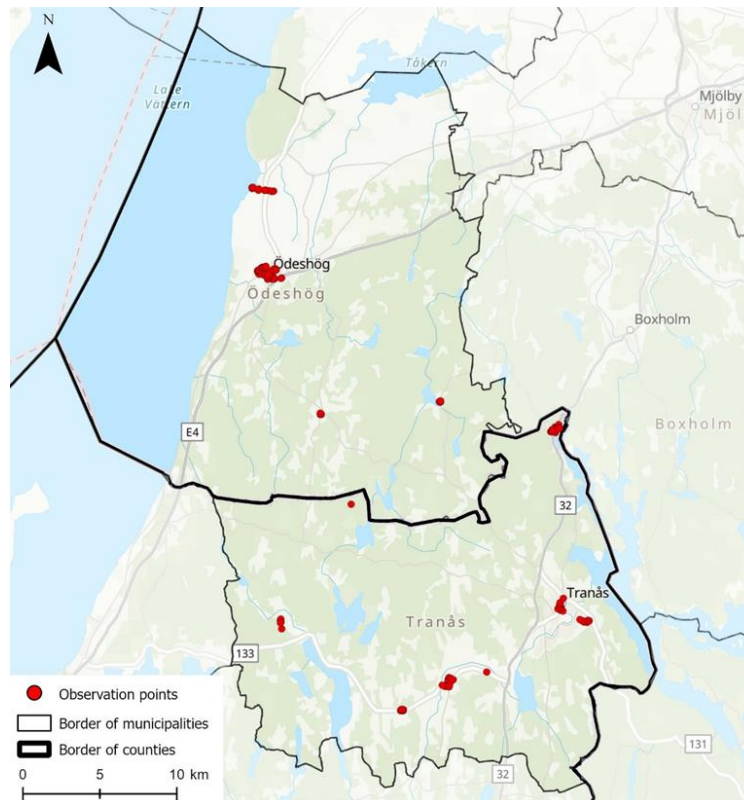


Figure 13. Map of observation points in research area (made by authors).

Table for analysis included topics with titles like: vibe of the area, road conditions, pedestrian path conditions, demographical notices, state of buildings, derelict housing, accessibility to vitally important services, public transport usability, new construction, safety while travelling between municipalities and tourism aspects in area. This table was divided into two to differentiate between the municipality centers and cross-border areas.

Most notable observations done in the municipality centers and cross-border areas:

- Vibe of area and demographical notices: the team agreed that Ödeshög is a nice small town with mostly children and elderly people around. Although it was noticed that there might not be many people around different demographics, it seemed that there is still some activity. In Tranås it was noticed that there was way more activity, more cars, more shops open and different sorts of people around. This makes sense because Tranås is many times bigger than Ödeshög. About the cross-border areas, the team thought that the area was rural, quaint; the villages seem to be spread out with no clear centers. It was also mentioned that the villages are “ghost towns” with not many people around.
- State of buildings and derelict housing: the team overall agreed that the state of buildings was good to excellent and in cross-border areas it was noted that the buildings looked slightly even better than in municipality centers. There was not much derelict housing, except for a few examples - Motell Nattviol on the eastern part of Ödeshög town and closed café at Linderås village, Tranås municipality, where there is a sign that it is for sale (figure 14).



Figure 14. Some businesses closed or abandoned in the research area. On the left side is abandoned accommodation in Ödeshög, on the right side – café at Linderås village where the sign “Till salu” (in Swedish “For sale”) is noticeable (from authors' archive).

That also took attention while doing desktop analysis before field works, that there are many local businesses closed although they were working last year – already mentioned café at Linderås (Linderås Café 2025) and clothes store LillaHus Collection near the Boet village which had closed in the beginning of 2026 after working for 11 years (LillaHus collection 2026). Also, there are many places where it is noticeable that they are a little bit neglected as there are moss growing on the paths, for example as in the tunnel under the highway and railway in Sommen town in Tranås municipality or more rural villages which were visited during the field works.

- Accessibility to vitally important services: in the cross-border areas and in smaller municipality towns and villages people need to have a car to travel to important services. Another thing noticed about this topic was that “there are more schools than stores”.
- Public transport usability: since not all team members used public transport, the ideas are a bit differentiated. Some think that the public transport is nice, clean, and easy to use - mainly in municipality centers - but at least one bus seems to pass different villages as well. Other members think that the usability of public transport is bad and that there are not enough buses and bus stops and that buses were frequently seen empty. The bus ticket to Tranås from Ödeshög was more expensive than a bus ticket traveling within Ödeshög.

- New construction: Some new construction noted in Ödeshög and Tranås, one of them being a new school. In cross-border areas, nothing was noted except there were signs of road construction works, but it seemed that there was no activity there.
- Safety (travelling) between municipalities: The team agreed that the roads were narrow and dangerous, one of the biggest dangers being wildlife. One of the teammates wrote: “Local roads are in poorer condition than regional ones, much narrower, and in forested areas it is dangerous to drive due to animals running onto the road; there are cases of animals being hit.”
- Tourism in area: The main thing that stuck out about tourism was the existence of nature trails and beautiful nature overall (lakes, forests). It was noted that neither Ödeshög or Tranås seemed to have any interesting tourist attractions (mainly meant here are restaurants, cafes and hotels in the centers) and that Ödeshög is a place where people drive through. One member, however, did mention that in Ödeshög center there is a very nice bakery that might even deserve a visit on its own, something that was not noticed in Tranås.

During the observations, another thing to note was the appearance of languages in the environment. Mostly the signs were only Swedish, although English and German appeared quite often – mostly in places related to tourism, but also on some notices about invasive plants or attentions. There was one place – Sommen’s town pier – where a language from Balkan peninsula appears – Croatian (figure 15).



Figure 15. Signs in Sommen. The left side has a warning about rashes from waterfleas at the swimming spot in three languages (Swedish, English, German), but on the left is a sign prohibiting fishing from the boardwalk in four languages – Swedish, English, German and Croatian (from authors' archive).

The used languages correspond to what was said in interviews. For example that there are many tourists from German-speaking countries, which could explain why in many places there was also a German translation of information on signs. The croatian information on signs can be explained by the fact that there are many persons who immigrated to Sweden in the 90s, when the Yugoslav war took place, and many of them still do not speak Swedish.

4.4 Survey

Before interpreting the study's results, it is important to acknowledge that only 10 survey responses were collected. This represents a very small sample size for research encompassing the municipalities of Tranås and Ödeshög, which together have a population of approximately 24 000. With 10 respondents only, the sample accounts for less than 0.05% of the total population, which is substantially below the threshold necessary for statistically reliable generalization. Due to that, the survey results will only be discussed. However, for a more in-depth analysis and to identify existing correlations, the survey should be repeated, and a representative sample of respondents should be collected. To sum up, the results should therefore be understood as a pilot quantitative study that identifies thematic priorities and confirms the relevance of the research questions but does not reflect the actual situation in the study areas.

Respondents were mostly employed women (80%) aged 18 to 64, with 70% living in the area for over 10 years. The most common reason for living there was the natural environment (40%), followed by family ties (30%). No respondent cited work opportunities as their primary reason (figure 16).

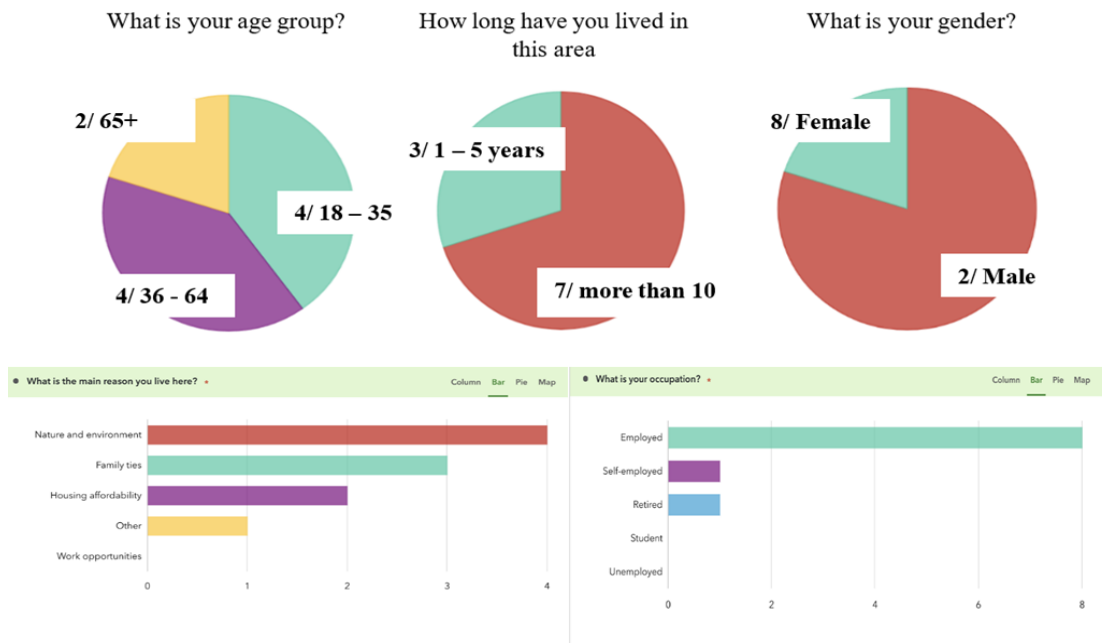


Figure 16. Survey background information.

The survey results support the hypothesis that residents in rural areas depend on private cars to access service centers. Car dependency was nearly universal, with 90% of respondents relying exclusively on private vehicles and none reporting the use of public transport. Cross-border travel between Ödeshög and Tranås was infrequent. These findings may indicate that the two municipalities function largely as distinct daily life areas with minimal practical integration (figure 17).

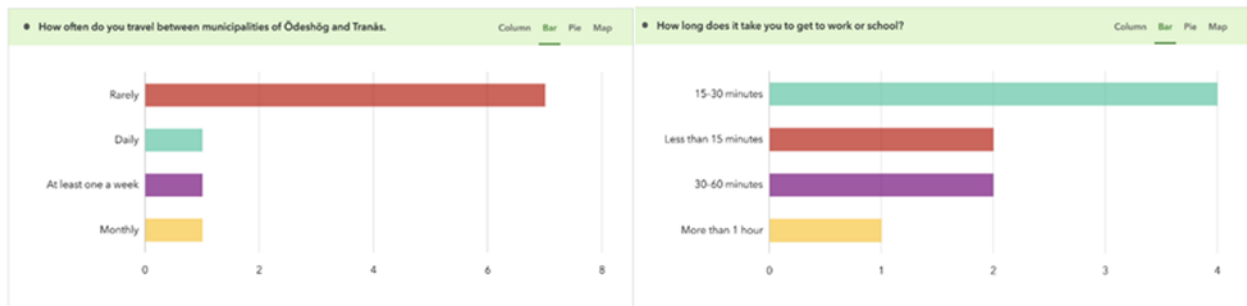


Figure 17. Mobility patterns.

This part of the survey asked respondents if they felt these services were accessible in their region. In all respondents provided positive ratings for grocery access and internet connectivity. Assessments of healthcare and education were mixed. Notably, 60% rated car-free accessibility poorly, indicating a significant barrier for non-drivers and older residents in accessing services of adequate quality (figure 18).

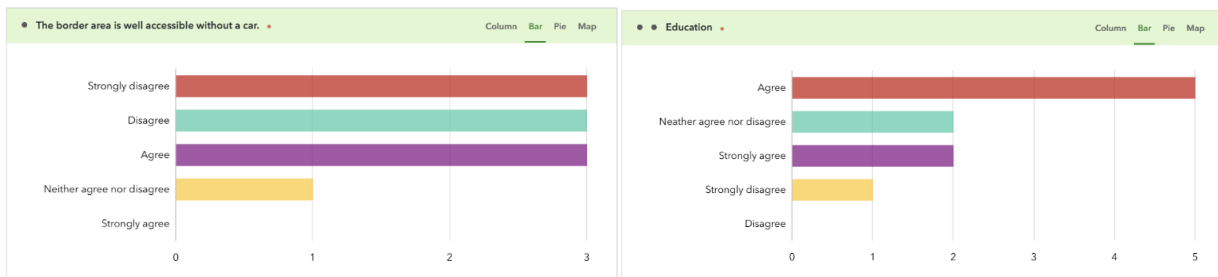


Figure 18. Quality of Life and services.

The third section of the survey required respondents to assess key characteristics of the Tranås–Ödeshög cross-border area. The natural environment and local community received overwhelmingly positive evaluations, with nearly all respondents agreeing or strongly agreeing, which indicates these are the most consistently valued attributes of the territory. Cultural heritage

was also rated positively, although two respondents disagreed, suggesting that this asset is not uniformly experienced across the population.

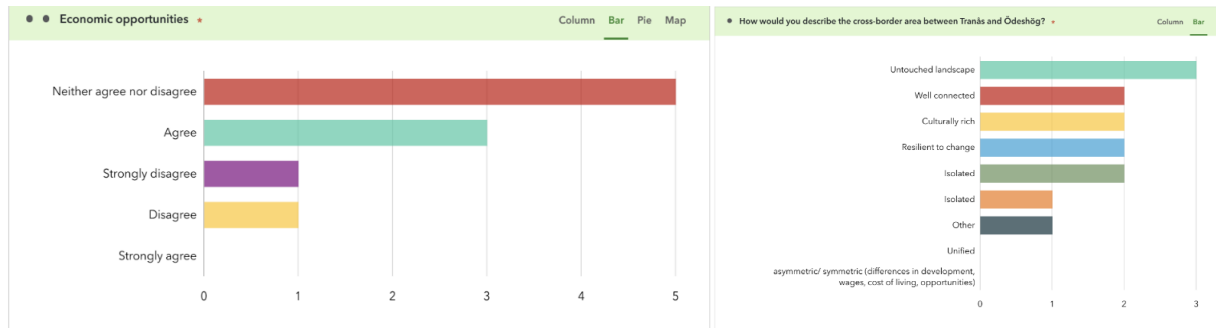


Figure 19. Cross – bordered area characteristics.

When prompted to describe the cross-border area, respondents most frequently selected "untouched landscape", which underscores the importance of the natural environment in shaping perceptions of the territory (figure 19). Notably, no respondent chose "unified", indicating that, despite geographic proximity, a shared cross-border identity between Tranås and Ödeshög has not yet developed among residents.

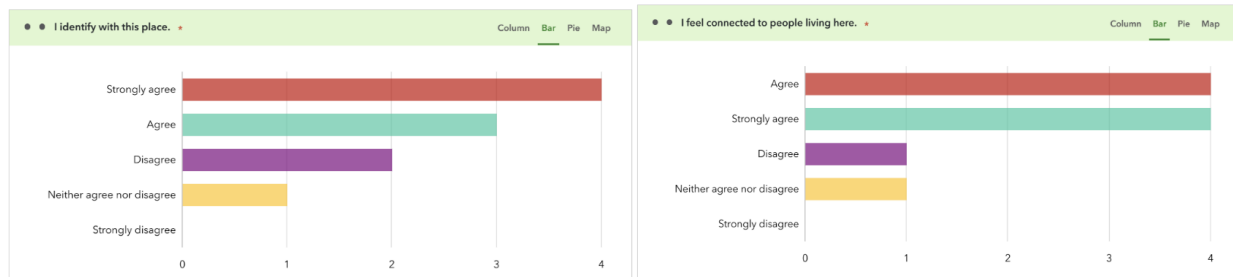


Figure 20. Sense of belonging to territory.

Findings regarding sense of belonging to territory were mixed. While 60% did not feel a strong connection to their immediate area, 80% reported feeling close to residents and identified with the broader region. These results indicate that interpersonal relationships may be stronger than attachments to specific locations or institutions (figure 20). All the organized and summarized survey data is presented in Table 3.

Table 3. Summary of survey results.

Theme	Key finding	Confidence level
Car dependency	90% car-dependent, 0% public transport	Indicative only
Cross-border integration	50% rarely travel between municipalities	Indicative only
Service satisfaction	High for groceries and internet; mixed for healthcare and education	Indicative only
Car-free accessibility	60% rate it negatively	Indicative only
Place belonging	Weak formal attachment; strong social bonds	Indicative only
Planning participation	80% uninvolved or unsure	Indicative only
Future outlook	Cautiously positive; 100% would recommend area	Indicative only

4.5 Spatial structure of research area

The study area is structured around two main regional centers, Tranås and Ödeshög, while the territory between them functions as a rural border area with weaker local integration (figure 21). Interview-based findings indicate that this intermediate zone is characterized by limited-service accessibility, strong dependence on private cars, and restricted public transport, particularly along the Ödeshög–Tranås corridor. Despite these challenges, the area has development potential due to strong local communities, appealing natural landscapes, and connections to larger centers such as Motala, Mjölby, Linköping, and Jönköping. This region highlights a contrast between peripheral challenges and valued rural living conditions.

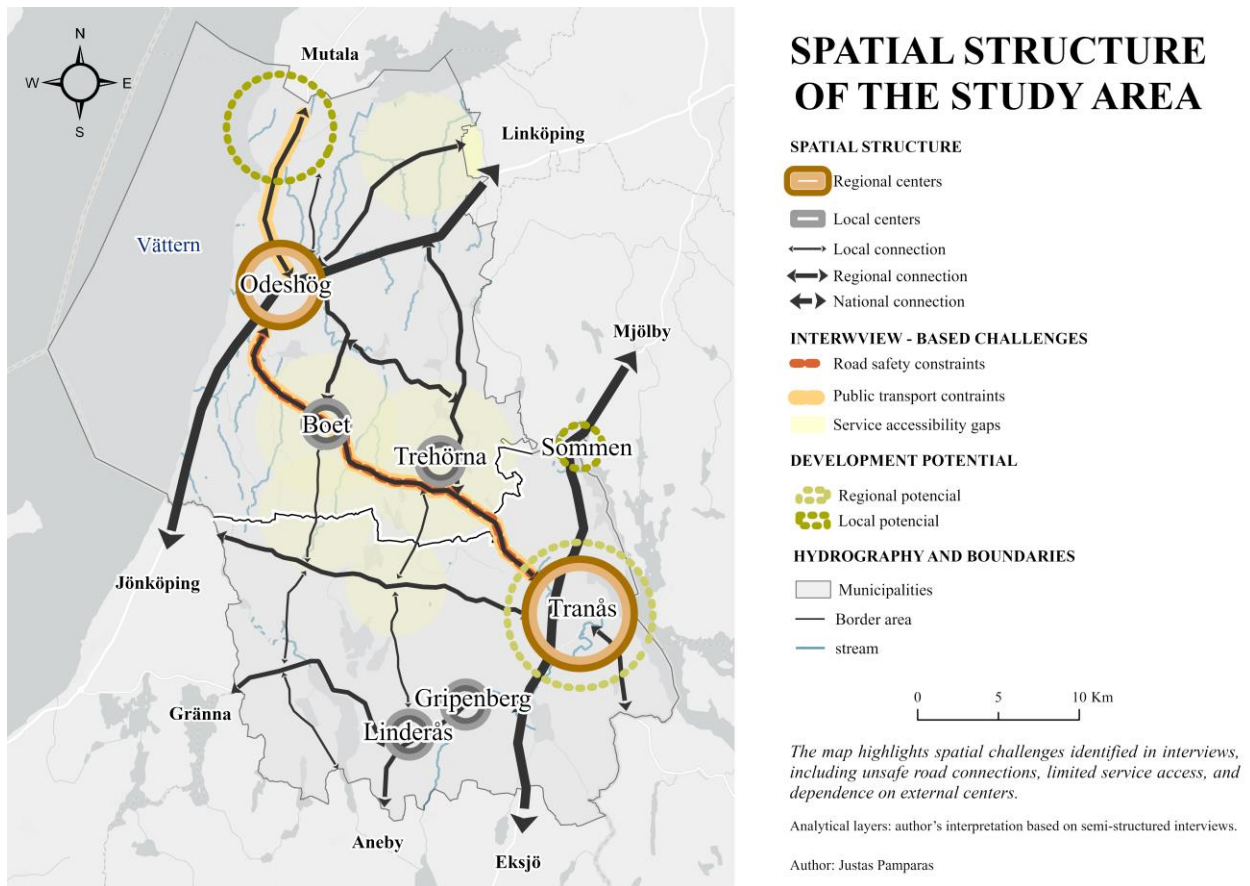


Figure 21. spatial structure of the study area (made by authors)

5. Discussion

5.1 Contentment

One of the results found was that several people expressed contentment with living in rural areas. People appreciated nature, the free space, and they said that they knew what the limitations of living in rural areas were when they moved there. This aligns with Morén et al. (2025) findings that people in rural areas in the Nordics often experience higher subjective happiness and that rural life gives them access to a higher quality of life. Several people interviewed discussed how access to nature and the close-knit community made life in a rural area worth it. This also reflects Granbom (2024) findings that strong emotional bonds help people accept hardships. People in rural areas in Tranås and Ödeshög seem to accept the downsides of living in those areas because the benefits outweigh the bad. This implies that people in rural areas don't see the need for development since they are already content.

These findings could indicate that things that many would consider important to having a high quality of life, like access to shops, schools and culture matters less to people living in rural Tranås and Ödeshög than things like access to nature, open spaces and a good community.

However, this study only contains data from people who still live in these rural areas. People who have chosen to move are not included. Rural areas in Sweden are, in general, shrinking. The two municipalities focused on this study are quite stable in that sense. However, interviews did bring up the fact that some people were leaving, and some were moving in. The main age group moving in was said to be young families, as the housing in rural areas is cheaper. The reasons for why people are moving away remained vague, with one group being young adults leaving for studies, and another being elderly, who move to cities to live in closer proximity to services. These trends are also reflected in national statistics of demographical changes in municipalities (figures 3 and 6). The fact that we could not contact the people who moved away means that we do not get the full picture.

5.2 Transportation

One recurring issue found was problems related to transportation. Several of the people interviewed in Ödeshög mentioned that there are not enough buses and that it is difficult to travel between municipalities. One specific route that was brought up as difficult is the route between Ödeshög and Tranås. This reflects Berg & Ihlström (2019) study that shows that travel between regions can be extra difficult for travelers using public transport. One thing that makes public transport over regional borders harder is that it often costs more, according to Berg & Ihlström (2019). This was also observed to be the case when travelling between Ödeshög and Tranås via bus.

Public transport planning is done at a regional level in Sweden (Andersson & Hermelin, 2024). This might be why coordinating public transport between municipalities that are in different regions is extra difficult. Ödeshögs municipality said that the public transport company wanted to shut down the bus between Ödeshög and Tranås and that they, in collaboration with Tranås, had to buy the bus line back to keep it running. Andersson & Hermelin (2024) discuss that municipalities that used to oversee public transport now sometimes feel underprioritized and distrustful towards the region, leading to them sometimes creating their own alternatives. This could be seen as an example of that.

However, this new bus line does not appear to be enough. Several interviews with people in Ödeshög revealed that people felt like the bus line was insufficient. The observations showed that the bus did not depart frequently, only on weekdays, and often appeared to be empty. The bus line between Tranås and Ödeshög was not the only one that was brought up as problematic. Connections to other municipalities and within the municipality were also seen as insufficient. This aligns with Berg & Ihlström (2019) findings that access to buses is often insufficient in rural areas in Sweden. This is a problem as many people work outside of their home municipality. There aren't many job opportunities, especially in rural areas, so people are forced to travel. The same goes for children in school and after-school activities. Especially older children do not have access to school in the rural areas. There aren't many stores or services in rural areas. The fact that people have to travel in their everyday life means that a lack of access to public transport could exclude some people.

It is important to note that the main complaints about access to public transport came from people living in central Ödeshög. People living in the border area in rural Tranås and Ödeshög generally expressed contentment with their access to public transport. Many people said in interviews that they did not need public transport, because they had private cars. This reflects Morén et al. (2025) findings that people living in rural areas often are content with life. This is also in line with the trend found in the interviews that people in rural areas were generally content with life and therefore don't feel the need for development.

It is also important to note that people in Tranås did not express the same needs for transport to Ödeshög as people in Ödeshög did to Tranås. People in Tranås are seemingly content with what can be found in Tranås, and that affects their relationship to Ödeshög. They have stores, schools and services, so they do not seem to experience the same feeling of connection to Ödeshög as Ödeshög does to Tranås. The people living in Ödeshög are less content with the services they have access to and therefore see the relationship to Tranås as more important.

However, all of the people interviewed were adults. Children cannot drive and might therefore need to rely on public transport to get to school and work. One problem that emerged during interviews was a lack of access to schools, especially for older children. This study does not include those older children's point of view. While adults might feel content with life in a rural area because they can just drive, a child might not feel the same. Children are one of the groups who often have to rely more on public transport than others (Andersson & Hermelin, 2024). It is therefore relevant to know how they feel about the lack of access to public transport.

One theme that was found in the interviews was that mainly older people were engaged in the local community. Families with children would come to events but were less likely to be engaged long term in an organisation. One person living in rural Ödeshög said that this was because young people are "too busy". One potential explanation for why younger people are busier is because parents with young children not only have to drive themselves to work, they also have to drive their children to school and activities. The population is ageing in both Ödeshög and Tranås. This could be a sign that while older people who only have to drive themselves around are content with the lack of public transport, younger people with children under the age of 18 might be leaving because of the lacking public transport.

5.3 Education

The results show that education is a potential issue in the border area in Ödeshög and Tranås. Several schools have shut down, and some kids must travel a long way to get to school, especially students going to gymnasium Tranås or other towns, since the municipality doesn't have a gymnasium of its own. This could potentially lead to families with older kids moving away especially when students of other municipalities have a chance to learn if there are free spaces in gymnasiums or other higher education institutions.

Many rural villages in the border are in both Tranås and Ödeshög had their own schools. At least some of these schools acted as community hubs and meeting places for everyone living in the village. This reflects Autti & Hyry-Beihammers (2014) study that found that rural schools bring social capital and act as community centers. In several cases, the schools were bought by the local community after the municipality wanted to shut them down. This shows that the community finds the school important. The local community chose to spend their time and money on maintaining the schools. This also shows that the community's values do not align with the municipality. The municipalities think some schools are too small to keep open while the people living in the border area think that schools provide enough value that they should remain.

Closing schools in rural areas can lead to a population decline (Sørensen et al. 2021; Lehtonen, 2021). The population in both Ödeshög and Tranås is quite stable. This goes against the idea that closing schools would lead to a population decline. At the same time, while some schools have closed, in a lot of rural villages, they haven't closed; they have just been converted into private schools run by the local community. If all those schools had closed, there might have been a greater population decline in both Tranås and Ödeshög.

5.4 Ecological sustainability

According to Lloret et al (2024), ecological sustainability is often forgotten in rural areas. This seems to be the case in the border area between Tranås and Ödeshög. Rural areas are often used for solar and wind power (Naumann & Rudolph, 2020). That is not the case in the border area (or at least not fully). Neither Tranås nor Ödeshög has plans to develop wind or solar power in the border area. This is a view shared by people living in the areas.

Tranås has set the goal to be a fossil-free municipality by 2030, with sustainable transportation solutions. However, there weren't many concrete solutions presented in the comprehensive plan to reach this goal. As most of the population in the municipality is concentrated around the municipality capital, there's ample options in terms of land to develop renewable energy infrastructure in the municipality. But in doing so, just revenue sharing to local communities must be guaranteed.

As most of the residents in both municipalities are car dependent in their everyday lives, travelling to bigger urban settlements for work, school or to take the train to bigger cities, vehicles using renewable fuel options should be promoted. This is where renewable energy infrastructures can also help, by providing climate-friendly energy sources for electric vehicles, while also ensuring energy security and reducing fuel-poverty of residents in the face of rising fuel prices.

This is an example of how Tranås goals are not in line with the reality of the situation in the border area. People living in the border area rely on cars to get around. They do not have sufficient access to public transport and have expressed that electric vehicles are expensive, and therefore not a good option for them. For some people in rural areas, becoming fossil free is not seen as a viable option. They feel like politicians do not understand their needs and that sustainability goals aren't set with them in mind. Ödeshög municipality does not have the same goals to be fossil free. They have goals to lessen carbon emissions and to be more sustainable, but their goals are less ambitious and more in line with the reality of people living in rural Ödeshög.

5.5 Development in the border area

Ödeshög has pointed out some areas for development in their comprehensive plan, but when interviewed, they mentioned that there aren't any big plans for development in the border area at the moment. Locals also expressed that not much has changed recently. People living in the border area generally expressed contentment with their lives, mainly wishing for more financial support from the municipality. Ödeshögs municipality's view of development in the border area seems to align with the local views of the area.

The only area Tranås have pointed for development close to the border is Sommen, a bigger community right on the border. People living in the area did not express that they'd noticed any

differences recently. Tranås municipality mentioned that there is nothing in the border area. They do not have a clear definition of the border area. This could say something about Tranås relationship to Ödeshög. They do not seem to view their closeness to Ödeshög as significant enough to be a factor in planning. Even if Sommen, one of the larger towns in Tranås is right on the border, Tranås municipality does not seem to consider Summer's relationship to Ödeshög significant. As the larger municipality, the border represents less of an opportunity for Tranås than for Ödeshög. There are also less towns close to the border in Tranås than in Ödeshög.

The same goes for the people living in Tranås. They have schools and shops within the municipality, so their relationship to Ödeshög becomes less significant. This could indicate that having a higher quality of life, in regard to having access to services like shops and schools, makes your relationships to other municipalities less significant. However, for people living in Ödeshög Tranås was not seen as the most significant neighboring municipality. Mjölby was brought up as more significant since they also have a school for older children, and that's where the buses go. Places like Vadstena, Motala and Linköping were also brought up as significant. This could be a sign that the regional border does make a difference. Motala does not share a border with Ödeshög like Tranås does, but it is still significant, perhaps because it is in the same region.

In addition to that, desktop analysis and observations showed that the rural areas might be shrinking as there some businesses which were closed quite recently and there are many territories places where it is noticeable that they are a little bit neglected as there are moss growing on the paths, for example as in the tunnel under the highway and railway in Sommen town in Tranås municipality or more rural villages which were visited during the field works. However, not everything appears in such negative colors – there are some construction works going on as well, for example new school building in Ödeshög so that means that there are plans for development and future.

Conclusion and suggestions

Conclusion

This study has found that people living in rural areas in Tranås and Ödeshög are generally content. This contentment means that they do not see a need for enhanced development or change in the area. They knew what they signed up for when they moved to a rural area and they think the benefits outweigh the bad aspects. However, some people are still leaving these rural areas, and their perspectives were not included in the study.

Not everyone is content. People pointed out a lack of schools, work opportunities, and access to public transport as problems. In the areas where people are discontented, they want to see change. People in Ödeshög are more discontented with a lack of access to these things and therefore see the relationship to Tranås as more important than people in Tranås see their relationship to Ödeshög.

The municipalities' view of the border area does not always line up with reality. Tranås vision to become fossil-free by 2030 does not align with reality, as, for example, people in rural Tranås feel like they need cars to get by in their everyday lives. In some ways their views do align though, like how Ödeshög municipality says that people in the border area are content, and they expressed similar views.

Suggestions

Based on the findings and results of fieldwork and the background gathered from literature, we propose suggestions to local municipalities and regions on the following topics. First, we discuss what changes could be considered in municipal or regional governmental levels to better reach the goals of sustainable development. Second, we offer ideas to make the roads connecting the two municipalities safer for commuters. Third, we spotlight some topics related to sustainable development that need to be studied further, and finally, which methodologies to use or not use in future research, based on what worked and did not work in this study. We also address opportunities to enhance tourism and local entertainment options.

One of the main issues that came up was the collaboration of different governmental bodies: cooperation between the municipality and region, as well as cooperation between neighboring regions. Municipalities hold most of the power for making decisions at the local level, and the cooperation between neighboring municipalities overall was good. Problems arose when

neighboring municipalities were not situated in the same region. This is where regional level management needs to be enhanced.

The main sector where this problem emerged was transportation. All regions have separate systems for public transportation, making cross-regional transportation management ineffective or non-existent. This in turn makes the goal of sustainable transportation hard to reach. Therefore, we suggest creating an intra-regional platform or organisation, which would help organize and manage cross-border public transportation, without putting all operational tasks and costs on one counterpart. Improved inter-regional transportation has the potential to reduce car dependency and make services more accessible to residents who don't own cars, hence helping reach sustainability goals in social and ecological contexts.

Another thing that needs to be kept in mind is including residents already in the planning processes. This way there's less chance of dissatisfaction with what is being done in the area, reducing the possibility that people might want to move away from the area. This also ensures that finances are allocated in the best possible way, to retain people in the area.

One important aspect highlighted by people who used the road from Ödeshög to Tranås was that the road was considered dangerous. The main reasons mentioned were the narrowness of the road, the surrounding forest, and the high abundance of wildlife, especially the risk of hitting moose. Our recommendation is to improve the maintenance of bushes and tree branches along the road to increase visibility of animals and reduce the risk of accidents for both drivers and wildlife. This has been shown as an effective method for rural areas in comparison to other methods such as guard rails (Lechtenberg et al., 2015). This recommendation could also help create long-term jobs, which may attract young people to the area. In addition, it aims to improve local perceptions of the road connection between Ödeshög and Tranås.

As the majority of people who live in rural parts of these municipalities are car-dependent in their everyday lives, it is important to find ways to make daily commutes less harmful to the environment. Many people interviewed during this study expressed that even if public transportation became more accessible, they would not switch from using a personal car. In light of this, some other options to reduce fossil fuel usage need to be considered, for example,

increasing electric vehicle usage. Buying an electric vehicle can be financially impossible for people, therefore subsidies and discounts to trade a fossil-fueled car for an electric one should be considered. As these kinds of financial subsidies are usually the national governments' domain, the local governments have options to support this transition in other ways, for example by installing charging stations in towns, villages and along main rural roads.

Although renewable energy infrastructure can face resistance from local communities, there are ways to make these give value back to the community. These infrastructures can bring new employment opportunities to rural areas, revenue from sales to the grid, savings from getting a discount on electricity prices, and help reach carbon neutrality when used for charging electric vehicles. In establishing new renewable energy projects, just distribution of the revenues from electricity sales among locals must be kept in mind, to compensate for what was lost in landscape harmony and living environment, while also enhance sustainable development. Local renewable energy production also helps to make rural areas more resilient to unexpected events and reduce fuel poverty in the face of rising or unstable fuel and electricity prices. The local governments can create programs or just inform residents of different options how they can gain from allowing renewable energy infrastructures to be built on their land. As the municipal governments are the link between locals and renewable energy companies, they can make it their goal to ensure that residents are compensated fairly and revenue from electricity sales is also distributed to the municipalities finances.

Based on the interviews with municipalities and local people, as well as the observations done by the student group, some suggestions about improving tourism in the area are made. The main tourist attraction seemed to be nature, for it was mentioned multiple times in interviews that nature is one of locals favorite things about living in the area. This is something the municipalities could take advantage of, advertising based on tourism activities involving nature and improving the information and signage about access to nature trails and lakes. An area of tourism that seems to need more attention, however, is the number of restaurants, cafes and other entertainment opportunities in municipality centers. When asked about tourism, one of the interviewees, who lives in Tranås, mentioned that there are not many restaurants and cafés. This is something that was noted by the student group as well while travelling in the area: in Ödeshög center there was

one bakery which seemed to be a great tourist/local attraction. In Tranås this was not noted, being an area of tourism that could be improved. In addition, locals mentioned in multiple interviews that there aren't many entertainment options in local urban centers and in Ödeshög they felt they missed a place, where to host theatre plays, concerts and other events. By providing the infrastructure and supporting the development of these establishments, the municipality can create more options to attract tourists in the area for longer, thus bringing in more revenue. These actions would also increase the quality of life for locals.

Suggestions for methods in future research

Given the limitations of this study, future researchers exploring peripheral areas should prioritize direct, in-person engagement rather than relying solely on surveys. Rural residents often hesitate to complete surveys, especially when distributed by outsiders, resulting in low and potentially biased response rates. This was evident in the present study, where several potential respondents said they would complete the survey later but never did. Furthermore, surveys provide quantitative data that offer only limited insight into residents' lived experiences, and when municipalities conduct them repeatedly over many years, survey fatigue becomes a genuine concern as people simply stop responding.

When surveys are conducted, they should focus on a single topic such as transportation or housing, rather than attempting to cover multiple broad themes at once and should be promoted by trusted local figures rather than external researchers. Public authorities, who already have established relationships with residents, are better placed to facilitate this than outside researchers. Offering multiple formats of mail-in, online, or in-person can also improve response rates. Participatory methods tend to yield more meaningful qualitative data. Also, public meetings should be scheduled at convenient times. Engagement methods such as guided walks, art workshops, or community mapping can be more inviting than formal meeting formats. Researchers should meet people where they already gather. Additionally, reaching out to former residents who have left the area can provide valuable and candid insights into depopulation that current residents may be less willing or able to articulate.

AI Statement

This report uses AI for grammar editing and translation purposes only. Specifically, for the translation of the survey and poster for promotion. It was used to fix grammar in the report as well. The AI software that was used is as follows: CoPilot, Grammarly, and Paper Pal.

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Appendix 1. Interview questions sent to municipalities before interviews

Interview questions sent to Ödeshög before interview via email:

1. Tell us about the area and what is special for the people in Ödeshög? (tourism object, agricultural product)
2. How do you define border areas?
3. What are the biggest issues that the municipality is facing at the moment regarding the border areas? Are there any conflicts? Do you receive resistance from locals when planning new things?
4. How are you going to attract and retain people to the area to reach your goal of 6000 inhabitants? (in interview: plans other than improving infrastructure and similar)
 - Are there any plans to deal with the potential shrinkage of the population?
5. You have pointed out Trehörna, Boet and Stava/Vida Vättern as areas for development in the border area. Why are these areas specifically pointed out? Are there any current projects working with development in these areas?
6. What is your relationship with the neighboring municipality (Tranås)? In what areas are you collaborating?
 - What do you think you are doing well in collaborating with the neighboring municipality?
 - What could you do to improve collaboration with neighboring municipalities?
7. What is the border area's role in your work towards becoming a sustainable municipality?
8. How are you working towards expanding green energy in the area beyond where it is currently? (Keep hidden in email, ask if not prompted in conversation)
9. What are the municipalities thoughts on the Norra Kärr mining in Lake Vättern?
10. Is the school bus initiative effective? Are a lot of families using the opportunity?
11. Is the VisitOdeshog website effective? Does it attract tourists into the areas, also the rural border areas?
12. Do you feel that the uninhabited housing project in 2022 achieved its goal?

Interview questions sent to Tranås before interview via email:

1. Tell us about the area and what is special for the people in Tranås? (tourism object, agricultural product)
2. How do you define border areas?
3. What are the biggest issues that the municipality is facing at the moment regarding the border areas? Are there any conflicts? Do you receive resistance from locals when planning new things?
4. How are you going to attract and retain people to the area to reach your goal of 6000 new inhabitants?
 - Are there any plans to deal with the potential shrinkage of the population?
5. How do you view tourism as a potential tool for growth? What potential does the border area have in this sector?
6. The only area pointed out in the comprehensive plan is Sommen. Do you see potential for development in other parts of the border area?
7. What is your relationship with the neighboring municipality (Ödeshög)? In what areas are you collaborating?
8. What do you think you are doing well in collaborating with the neighboring municipality?
9. What could you do to improve collaboration with neighboring municipalities?
10. How are you working towards your goal of being fossilfuel-free by 2030?
11. How are you working towards expanding green energy in the area beyond where it is currently? (Keep hidden in email, ask if not prompted in conversation)
12. What are the municipality's thoughts on the Norra Kärr mining in Lake Vättern? Do you see this impacting your municipality?