

**Smart shrinking in Nordic countries —  
Maintaining and improving the quality of life in Finnish and  
Estonian depopulating villages**

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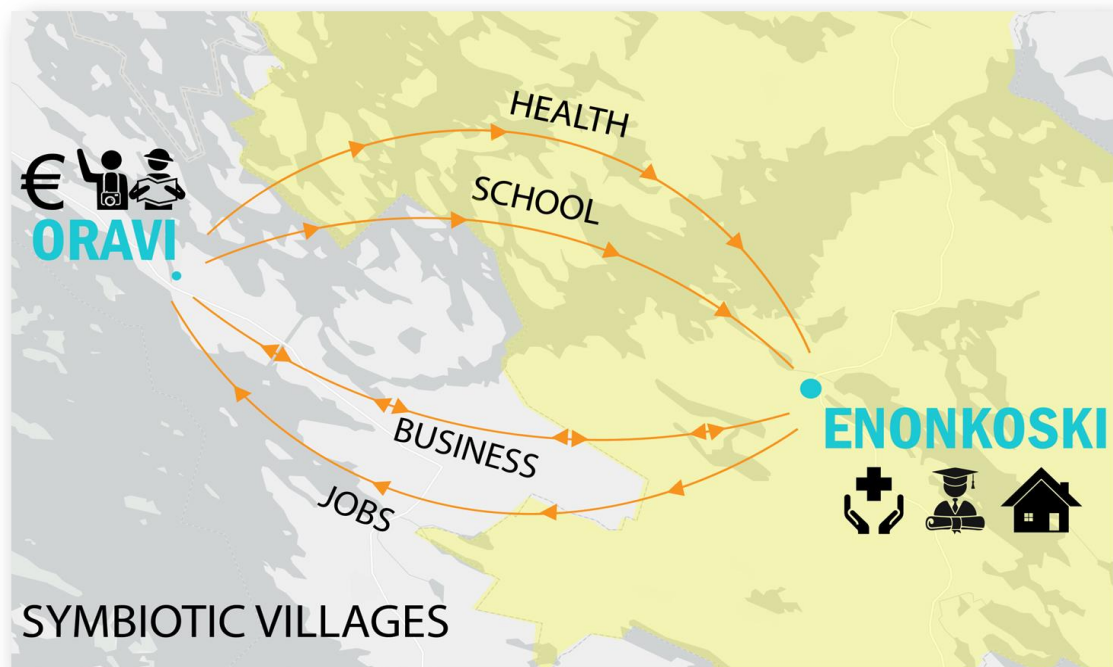
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## 1. Finnish case study: Oravi & Enonkoski

In the first part of our report we examined the depopulating Finnish villages of Oravi and Enonkoski. We used symbiotic villages as our approach. By symbiotic villages we mean a situation where two or more villages benefit from each other instead of competing with each other. We wanted to find out whether Oravi and Enonkoski could help each other by, for example, offering services to each other that the other doesn't have. This way the struggling villages wouldn't have to spend energy on "having it all" when the other village could fill in for support. We concentrate on the idea of quality of life. We believe, in the spirit of smart shrinking, that depopulating areas don't have to aim for growth but instead for good quality of life for its citizens. What makes our case interesting is the fact that Enonkoski is an independent municipality as Oravi is a village that's a part of Savonlinna. We wanted to find out how possible bureaucratic barriers and other traditional ways of thinking could weaken the possibilities of a symbiotic relationship. Our research question goes as follows:

*Can symbiotic villages solve the problem of depopulation in Southern Savonia, Finland?*



**Map 1.** Concept of symbiotic village

## 1.1 Oravi

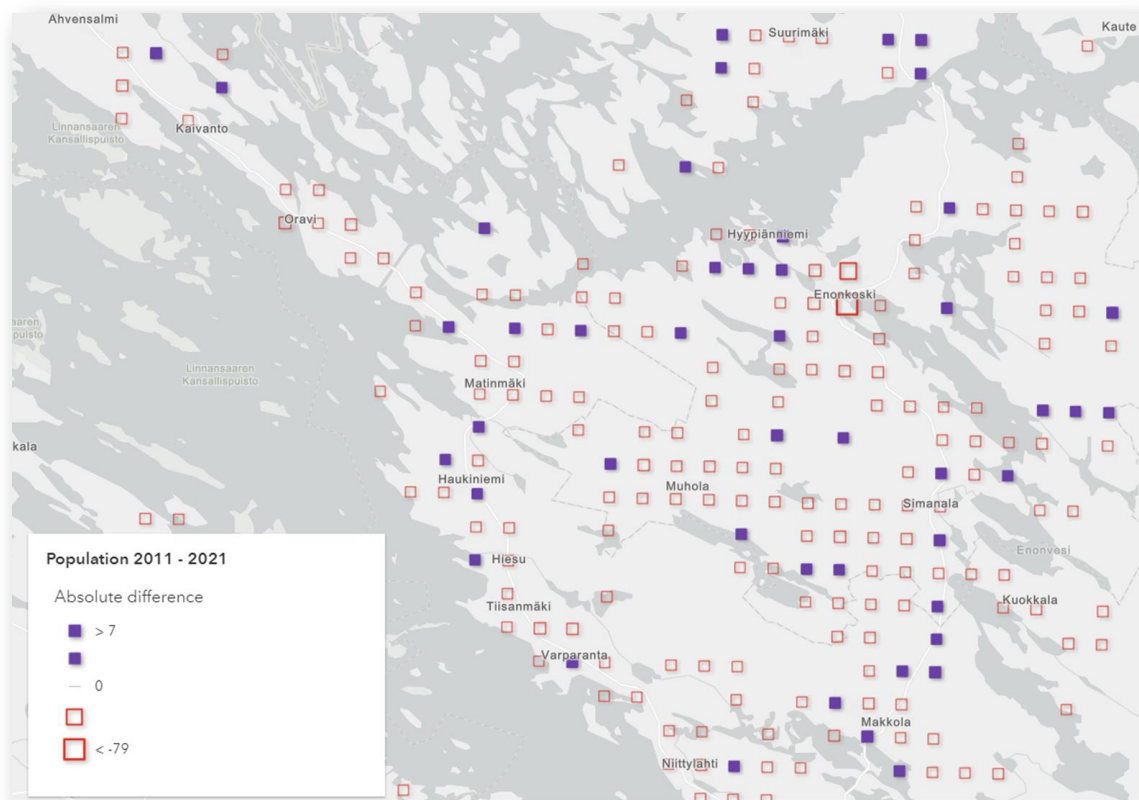
The village of Oravi is located in Southern Savonia, Finland. It's situated in the northmost point of the municipality of Savonlinna, in the border of Enonkoski municipality. The municipality center city of Savonlinna is 40 kilometers to the South, and the center of Enonkoski 20 kilometers to the East. The Oravi village (*Oravi bruk*) was founded in the middle of the 19th century to satisfy the Russian Empire's need for iron. The bog iron was mined from the lake Saimaa to be transferred to Pietari by boat where the iron was transformed into railroad tracks for the Siberian railroad. One can say that iron mining and ironworks created the village of Oravi. Although this joy was short lived because in 1901 the ironworks was shut down, being active only for 33 years. From that day on the Oravi village has been slowly and steadily declining and depopulating. (Oravin seutu 2022) Today there are approximately 145 000 people living in the county of Southern Savonia. In Savonlinna there are 30 000 inhabitants and the Oravi village has approximately 100 inhabitants (Anna 2020 & Wikipedia 2022) Oravi is not only experiencing a decline in its population (see Map 2) but also the population is aging (see Map 3). However, due to the job opportunities offered by Oravi's tourism enterprises the population doubles during the summer months. (Anna 2020)



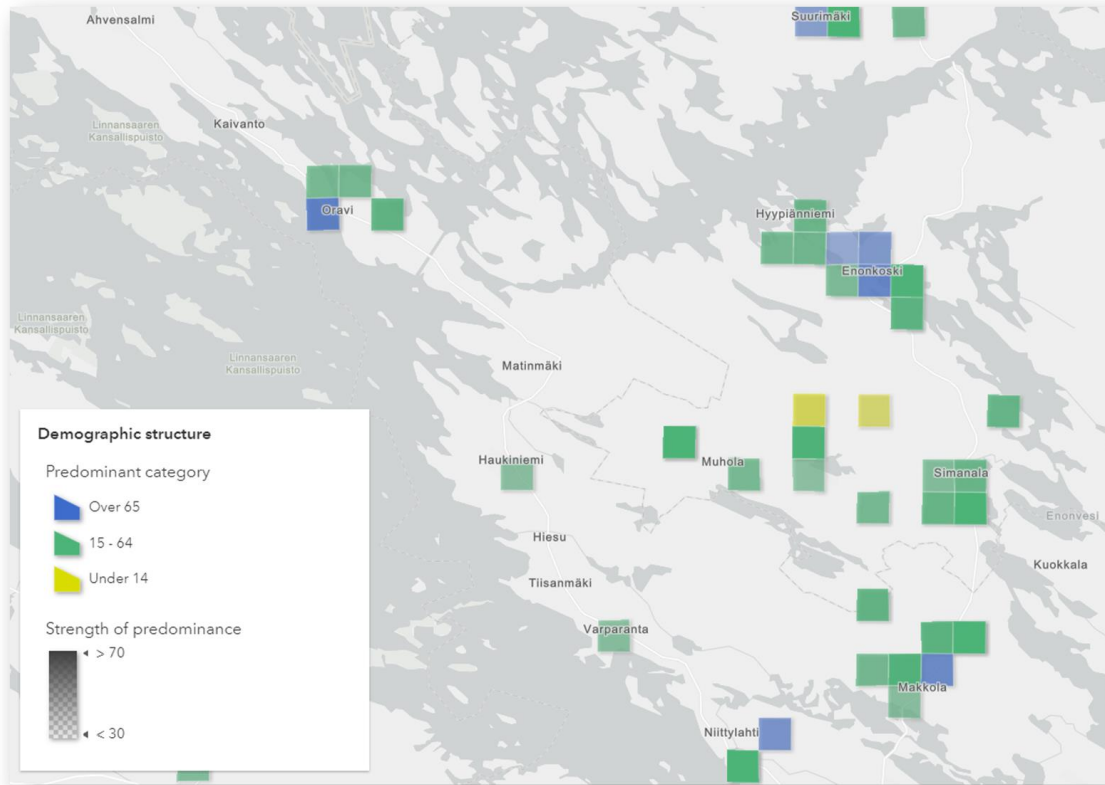
**Picture 1.** Southern Savonia is also home of Finland's only endemic species, Saimaa ringed seal. The Saimaa seal population is strongest in the Southern Savonia region. (Metsähallitus 2022) This picture was taken in Oravi where the Saimaa seal related activities are one of the most important tourist attractions.

## 1.2 Enonkoski

Enonkoski municipality is a part of Southern Savonia county, Finland. It's surrounded by the municipality of Savonlinna. Savonlinna citycenter is 30 kilometers away to the South and the center of Northern Carelia county, Joensuu, is 100 kilometers to the North East. (Wikipedia?) The municipality of Enonkoski was founded in 1882 although the area has been populated ever since the Stone Age times. In the very beginning saw mills and a glass factory were the main modes of trade (Mikkeli library 2022). Enonkoski is called an archipelago municipality due to its big share of water areas. Of its total area of app. 452 km<sup>2</sup>, 129 km<sup>2</sup> is water. With 1361 inhabitants (year 2020) Enonkoski is the smallest municipality in Southern Savonia. (Enonkoski 2022a). In recent years the population is declining (see Map 1) and the proportion of elderly people is increasing (see Map 2). For clarity issues we refer to Enonkoski also as a village even though in reality it's a municipality because it has the same small village characteristics as Oravi.



**Map 2.** Population change 2011 - 2021 (Statistics Finland, 2021)



**Map 3.** Demographic structure in 2021 (Statistics Finland, 2021)

## 2 Methods

Our first touch to the villages was via presentations. In Enonkoski the municipality mayor and Korpi brewery entrepreneur spoke to us about the trends and progress in Enonkoski. In Oravi we heard presentations by an active village association member and a local tourism entrepreneur. We presented questions and had conversations with the speakers and took notes in the process.

Our main methods were observing and statistics. We spent a lot of time touring around the villages by car and on foot. We toured the village centers and in Enonkoski also the harbor. In addition we toured the areas around and between the villages. We observed people as we ate lunch in the restaurant, as we visited the grocery store and all in all every time we wandered around the village. What comes to the statistics, we examined multiple different statistics from different themes: for example about employment and housing. For backup we formed our own map illustrations and resident profiles.

### 3 Analysis

With the help of the methods described above, we formed seven different research themes: health service, education, social environment, employment, business, housing and infrastructure. Through these themes we searched for answers to our question of:

*Can symbiotic villages solve the problem of depopulation in Southern Savonia, Finland?*

#### 3.1 Health services

Enonkoski has the Enonkoski Health Center which takes public medical services. The services of the Enonkoski health center include a laboratory, a dental clinic and doctor's and nurse's offices, also services for pregnant women and children. Oravi is too small to have a hospital. Looking at Finland's health and social service reform we understood that citizens from one municipality can use hospital service in other municipality's medical centers (Sote-uudistus, 2022). So, residents of Oravi can drive to Enonkoski Health Center and have access to medical services or they can use a municipality medical center - The East Savo Hospital District's A&E department which is located in Savonlinna Central Hospital (it can also be used by the residents of Enonkoski). The A&E department is an outpatient clinic, and a fee is charged for each appointment. Patients under the age of 18 are treated free of charge (Sosteri, 2016). Enonkoski and Oravi people have every health service that they need in this clinic. Doctor's appointments are for non-emergency treatment here. The East Savo Hospital District Consortium (Sosteri) is responsible for providing the services for all people (Wikipedi, 2022). The people of Oravi also benefit from Enonkoski because Enonkoski has its own rehabilitation center. Center offers a wide range of comprehensive physiotherapy services, from physiotherapy research to reflexology, gym instruction and relaxing classical professional massages. Their services include Kela's demanding medical rehabilitation. There citizens can also arrive for their treatments without a referral (Fysiotervaranta, 2022). For the treatment of oncological diseases, people can choose the closest cancer clinic in Savonlinna clinic Helena which is in practice about breast cancer care.

#### 3.2 Education

There is a pre and basic school in Enonkoski (classes from 1st to 9th). There is also a kindergarten and they are also offering childcare for weekends and evenings depending on parents' needs. You have to send the application for kindergarten 4 months before you want to put your kids there. (Enonkoski, 2022)

Enonkoski has a youth center for 13-21 year olds to spend their free time there. There are many games, TV, PlayStation, computer. The youth center also supports youngsters with school work and other problems that might be in teenagers life. (Enonkoski, 2022)

Enonkoski library (see Picture 2) is open for everyone and they are also offering digital materials (Enonkoski, 2022). Oravi and Enonkoski both have a book reading club. (Oravin seutu, 2022)



**Picture 2.** Enonkoski's library.

There used to be a school in Oravi but it closed in 1993. Now there is a school in a nearby village where there are 1-6 classes and for upper secondary school many kids from Oravi are coming to school in Enonkoski. Oravi has a daycare center for children.



### 3.3 Social environment

#### 3.3.1 *Community and social inclusion*

Small communities can be more close to each other in small towns or villages than in cities. So, Enonkoski and Oravi have small communities where everybody knows each other and have familiar interests, problems.

Community of Enonkoski has a lot of social activities like folklore groups which involve society in common activities that foster a sense of community. Lutheran Monastic Community of Enonkoski is preparing activities for those who are christians. There are a lot of activities like stand up paddleboarding and kayaking which is provided by the institution of Lakeland wellness and keeps people active in the summertime (Lakeland wellness, 2022). Also, there are many sporting possibilities. Any of the villages don't have swimming pool but Enonkoski municipality offers people discounts to go to swim near Savonlinna. They also offer free water aerobic lessons once a month (Enonkoski, 2022). Enonkoski offers more sports activities for kids. There is a gym and a sporthall. There are sport clubs for elderly and youngsters. There are also many outdoor activities to choose from in Enonkoski (see Picture 3) - football, tennis, fitness stairs frisby and beach volleyball (Enonkoski, 2022). In both villages are hiking roats, skiing and skating possibilities in winter.



**Picture 3.** Enonkoski offers lots of possibilities to spend time outside.

### 3.3.2 Public participation

The residents of Enonkoski Municipality have had a high and stable voting turnout in both parliamentary and municipal elections (just below the 70 percent threshold), demonstrating a high level of civic engagement. However, the municipal elections in 2021 stand out with a sudden 13 percent drop in the voting turnout. ("Results table - Sotkanet.fi Statistics and Indicator Bank", 2022) On the one hand, it could be a sign of voter apathy, e.g., caused by alienation, and having a negative overall effect on people's engagement in community life. On the other hand, this sudden apathy could be caused by such a phenomenon as the voter fatigue or the simple fact that voters are satisfied with the current affairs and feel confident that the status quo is not threatened, i.e., their trust in the current leaders is so high and homogenous that the importance of voting may have become minimized.

**Tabel 2.** Voting activity.

	2004	2007	2008	2011	2012	2015	2017	2019	2021
Voting turnout in municipal elections, %	66.0		68.7		69.2		67.5		59.0
	(-3%)		(+4%)		(+1%)		(-2%)		(-13%)
Voting turnout in parliamentary elections, %		68.8		69.7		66.4		68.7	
		(+4%)		(+1%)		(-5%)		(+3%)	

### 3.3.3 Safety

When gauging the sense of security, sparsely populated areas are considered a safer environment than cities as a whole. Being close to nature offers meaningful activities, while the familiar village community provides safety.

Finland is one of the safest countries to live in. Crime rates are very low (Numbeo, 2022). The small town of Enonkoski is a safe place to live for everybody since there aren't many crime cases or irresponsible drivers. Tables of road traffic accidents in Enonkoski in 2012 to 2022 show that there are almost no people injured or killed in road traffic accidents (Tilastokeskus, 2022). Listening to the mayor of Enonkoski we made a conclusion that there are no incidents of violence or robbery. Also, statistics do not show any incidents of domestic violence or

robbery. The sense of security is also determined by the small but close and reliable community, environmental surveillance cameras and security services. The closest police office is in Savonlinna.

Looking at the situation of safety in Oravi. We saw that it is a small village with a small but strong community. There are not many different migrants from abroad who live or work here. It is a safe place for all social groups who live in.

To conclude, both of these areas are safe and people can live calmly here.

**Table 3.** Injured in road traffic accidents in Enonkoski from 2012 to 2022.

	Injured (incl. seriously injured)										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Enonkoski	2	2	1	5	0	3	0	1	0	0	0

**Table 4.** Killed in road traffic accidents in Enonkoski from 2012 to 2022.

	Killed										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Enonkoski	0	0	1	0	0	1	1	0	0	0	0

**Table 5.** Injured in road traffic accidents in Savonlinna from 2012 to 2022.

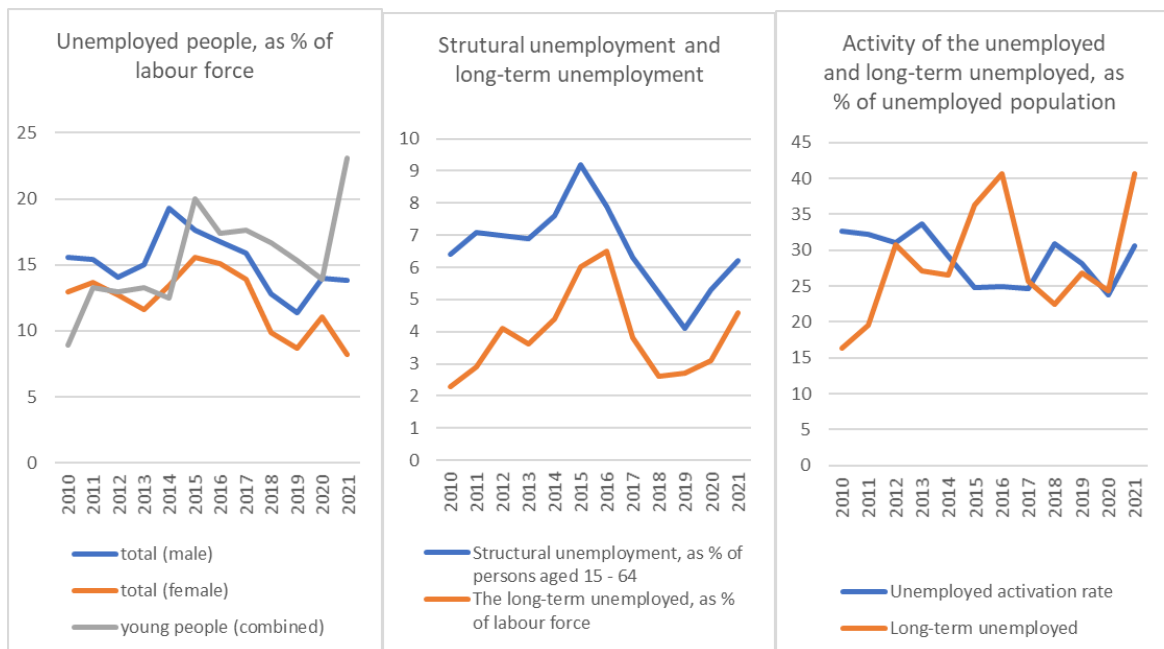
	Injured (incl. seriously injured)										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Savonlinna	51	45	52	53	51	38	45	39	17	23	6

**Table 6.** Killed in road traffic accidents in Savonlinna from 2012 to 2022.

	Killed										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Savonlinna	1	1	2	4	3	1	3	0	3	0	0

### 3.4 Employment

In 2021, unemployment rates in Enonkoski Municipality were 8.2 percent for females, 13.8 percent for males and 23.1 percent for youth. Additionally, 4.6 percent of the labor force was unemployed long-term, mainly due to structural unemployment. We can see a relatively low activity of the unemployed in the job market (30.6 percent in 2021), corresponding to the high long-term unemployment trend. ("Results table - Sotkanet.fi Statistics and Indicator Bank", 2022)



**Figure 1.** Unemployment situation in Enonkoski

In total, there are around 360 job vacancies in Enonkoski Municipality and a labor force of around 470 people. (Laurio, 2022) The table below shows the employment structure as percent of the total active labor force in Enonkoski Municipality in 2010 and 2019. ("Results table - Sotkanet.fi Statistics and Indicator Bank", 2022) Almost 1/3 of the active labor force is employed in public administration, education, health and social services, with the proportion having slightly decreased during the last decade. At the same time, wholesale and retail trade, transportation and storage and accommodation and food services have experienced a significant increase of 17 percent, while agriculture, forestry and fishing have shrunken by 20 percent in the last decade.

**Tabel 1.** Employment structure in Enonkoski municipality 2010 - 2019.

	2010 (%)	2019 (%)	Change (%)
Public administration and defense; compulsory social security, Education, Human health and social work activities	31.8	30.6	-4
Wholesale and retail trade; Transportation and storage; Accommodation and food service activities	18.3	21.4	+17
Agriculture, forestry and fishing	22.0	17.7	-20
Professional, scientific and technical activities, Administrative and support service activities	5.3	9.0	+70
Construction	9.0	7.0	-22
Manufacturing	4.9	5.5	+12
Students	5.4	4.3	-20
Other service activities	3.9	3.7	-5
Information and communication	1.2	1.1	-8
Financial and insurance activities	1.1	0.7	-36
Real estate activities	0.2	0.7	+250
Mining and quarrying, Electricity, gas, steam and air conditioning supply, Water supply; sewerage, waste management and remediation activities	0.7	0.4	-43

### 3.5 Business environment and tourism

In this theme we will take a look at Oravi's and Enonkoski's tourism business sector and its possibilities from the viewpoint of symbiotic villages. In our report we will focus only on tourism because the service sector is a dominant business sector in Oravi and Enonkoski. From our point of view it has the most potential from the perspective of symbiotic villages. Also, tourism can directly or indirectly boost other businesses such as food services, entertainment, construction, health services, etc.

In the business sector of Oravi and Enonkoski and surrounding areas, there are a lot of promising trends. In Oravi there is a flourishing tourist business. Oravi has created a cooperation pact with another Savonlinna municipality village Rantasalmi and together these villages form the tourist business cluster called SaimaaHoliday. SaimaaHoliday Oravi has five different enterprises that are all located in the Oravi village center. Almost all the enterprises work in tourism, housing and restaurant business. (Oravivillage, 2022) Overall there's over 20 different enterprises in the village. A big portion of the Oravi's tourists are foreigners, Russians being the biggest and most important group (Anna, 2020).

Enonkoski also has a decently strong tourism business sector. One of the most visible business successes is the establishment of the Korpi brewery. By visible we mean that the Korpi company, which started as just a brewery in Enonkoski, has now transformed three different old businesses in the center of Enonkoski into something new and profitable (see Picture 4). What is even more important, the Korpi brewery entrepreneur has ambition. He told us about his wishes on making Enonkoski an *“international player in beer brewing”*. In the spirit of symbiotic villages this ambitious thought could be taken even further. In Heinävesi, about 80 kilometers to the North, there is a Valamo convent distillery *“Valamon Viinitila ja Tislaamo Oy”*. Not to mention that there's also two breweries in Savonlinna, Waahto Brewhouse and OlafBrewfing. From the symbiotic villages point of view, the cities and villages should take advantage of this niche business cluster.



**Picture 4.** Korpi brewery’s owned “Maitolaituri cafe and shop” used to be an abandoned gas station. Now it can be called as the heart of the Enonkoski village. It serves lunch, pizza and cafeteria products. As can be seen in the picture, there are also a lot of local products for sale, one good example of symbiotic cooperation between different local actors. You can order cafeteria products for your own party and if you want, reserve a space for your party in Maitolaituri. The fathers day lunch is one of the most famous events at Maitolaituri. (Maitolaituri, 2022)

As said earlier, in Enonkoski the Korpi brewery has transformed multiple spaces into booming businesses that cater to both locals and tourists. This idea of transforming infrastructure’s function as the time passes rose to our mind as an important smart shrinking idea. For example in the case of old people's housing and nursing homes. Korpi Bistro and Korpi Guesthouse, both of them being old nursing homes from different ages, are good examples of what potential there is in change. The old nursing homes from the 1950's and 2010’s have now become a high-class bar & restaurant and a modern hotel. (Korpi Bistro, 2022 & Itä-Savo, 2016)

What comes to the workforce, the founder of the Karvila brewery said that even though Enonkoski is a smaller place, it was easy to get local workers. The brewery owner even highlighted the importance of his hard working and capable local workforce. It didn’t even

pose a problem that the locals hadn't any previous experience of working in a brewery. The locals were taught step by step from scratch. The Karvila brewery owner felt like it is easier to "get things done" in a smaller place like Enonkoski. You have good contacts and arranging everything goes more smoothly. In the case of Oravi, seasonal work plays a significant role in the workforce realm. As told earlier, the population of Oravi doubles every summer because of the seasonal workers. What makes this phenomenon interesting is the fact that the population doubles because of workers. Usually Finnish countryside's population doubles or even triples because of summer house visitors, not workers. Oravi would have work to offer for the people in the area but it has to get Estonians. It all comes down to the Finnish work politics, how to get unemployed to work when it's so easy to stay home and claim benefits. Also the seasonal character of Enonkoski and Oravi work opportunities can affect the interests of locals to apply for the job. After the summer you have to start a bureaucracy process all over again when you first get a job for a short period and then lose it and become jobless again. Would there be a need for policy reform? Maybe, but that isn't the topic of this report.

As being symbiotic villages, Oravi and Enonkoski could support each other's tourism business sectors. Oravi could offer tourism business expertise for Enonkoski. Oravi could offer especially expertise on foreign tourists, because they have a very active foreign tourist clientele. The villages could actively promote each other's tourism businesses and create events and services together. Oravi's Saimaa Holidays could use their boats to bring people to Enonkoski for example in Hyypiänniemi or overall in the village for a day trip? "A day in Enonkoski" boat trip?

One possible problem in the symbiotic tourism cooperation between Oravi and Enonkoski can be Savonlinna. Savonlinna has a major tourist business, does it need to cooperate with a small player like Enonkoski? Can the power imbalance between the municipalities of Savonlinna and Enonkoski undermine the symbiotic cooperation of Oravi and Enonkoski? Oravi also already has a partner via SaimaaHoliday cooperation, Rantasalmi.

Korpi and Saimaa Holiday companies are good examples of how just a couple of companies can really have a big positive impact on a depopulating area. Even if the impact in euros is not big and/or it doesn't get the people to move in the areas, the business activity boosts the region's quality of life by providing jobs, liveliness and a sense of accomplishment in the area.



### 3.6 Housing

At the beginning of May 2022 private house square meters cost around 743€. On the Etuovi website there are only three houses for sale in Enonkoski and in Oravi there are no houses for sale. And also in the last few months there haven't been any places for sale in Oravi. (Etuovi, 2022) People living in Oravi also pointed out that they don't have space for new people to come there. General property tax in the region is 1,43%. On the municipality's page there are 26 places for sale in the Enonkoskis region.

### 3.7 Infrastructure

In this theme we took a look at the infrastructure of the two villages. In addition we examined the transport possibilities in the area.

The distance between the villages by road is approximately 20 km and by water about the same. The road between Oravi and Enonkoski is not in that good shape. The road is narrow, doesn't have sidewalks and the local cars can drive very fast. This combination doesn't necessarily make, for example, electric cycling between the villages not that tempting of an idea. Especially if we talk about foreign tourists who are not used to the Finnish country roads. At the same time the distance is not that long especially for electric biking and the path showcases beautiful Finnish countryside landscape. Oravi's Saimaa Holidays could use their boats to bring people to Enonkoski for example in Hyypiänniemi or overall in the village for a day trip? "A day in Enonkoski" boat trip? We also thought of the idea of a village car. By village car we mean car(s) that Oravi and Enonkoski can share together to offer them for their inhabitants and tourists to use. This would enhance the accessibility between the two villages (see Map 4).

What comes to public transport, there are some possibilities for both villages. There is a bus line from Savonlinna via Enonkoski to Oravi (Savonlinna-Enonkoski-Oravi-(Ahvensalmi)). On workdays the bus leaves from Enonkoski at 15:05 and is in Oravi in 35 minutes at 15:40. From Oravi the bus leaves at 08:05 and arrives after 45 minutes in Enonkoski center at 08:50. So hypothetically you could spend a day, work or leisure, in Enonkoski from Oravi but not in Oravi from Enonkoski. Then there's a bus line going from Juvola (8 km from Oravi) to Savonlinna city center. It leaves from Juvola on weekdays at 6:50 and from Savonlinna to Juvola at 14:10. Needless to say, the car is the easiest and most realistic mode of transport in the Oravi and Enonkoski area. If these two settlements would embrace the idea of exchanging services, business, and tourism and create some sort of cooperation, it might be logical to add

an additional mini-bus route directly from one village to another which would go back and forth at least 2–4 times a day. (Savonlinna, 2022)



**Map 4.** Transportation options between symbiotic villages.

## 4 Conclusions

### 4.1 Challenges

Both Enonkoski and Oravi face a declining and aging population that creates a myriad of problems like oversized infrastructure and declining demand for various social services and public transport, while their residents still require the same level of and access to social security that residents of more densely populated areas receive. Another issue that needs to be highlighted is that despite a declining population there is a housing shortage in both Oravi and Enonkoski.

When investigated more closely, however, we can see certain differences in the risks and challenges that Enonkoski and Oravi face. For example, Enonkoski has an above average unemployment rate and relatively high rates of long-term and structural unemployment. At the same time, Oravi faces labor shortage during its high seasons. Additionally, at the moment, Enonkoski Municipality is able to manage a good quality of social service supply, but this will require adjustments as the population declines. Oravi, on the other hand, needs to outsource social services from its surroundings.

A shared challenge between the two areas is lack of a well-functioning public transport network between the two of them, as well as between them and other urban areas in the region, which is to become even harder to manage as the population keeps shrinking. The residents of these areas are heavily dependent on owning a private car.

Another issue in the area is lack of higher education and job opportunities for young people and professionals, increasing the chance of them leaving the area and not returning. Additionally, as the number of children shrinks, we also have to downsize schools and kindergartens, which can and already has turned into a vicious circle as the number of schools in Enonkoski has decreased from seven to one in the last 70 years.

### 4.2 Recommendations

The age of growth-oriented policies, especially in rural areas, is ending. When villages come to terms with the fact that growth might not be a likely path for them, they often turn their focus to tourists and elderly people. However, we decided to look for other sources of

sustaining a vibrant life in these areas through the concept of symbiotic villages - villages that cooperate by providing each other with the necessities that the other one is missing.

Additionally, we focus on ensuring a good quality of life for all social groups in the area by also proposing the idea of “The Cycle”, so that, as people go through different life-cycles and their needs change, the village is able to adapt to these particular needs. In this way, the main goal is to avoid implementation of enormous projects, the pressure of oversized infrastructure and the necessity to downsize. Some of the practical ideas are summarized below:

- Avoid over-focusing on developing a village with just one group (e.g., tourists or elderly) in mind
- Implement an efficient transportation network between the symbiotic villages and their surroundings (e.g., a fleet of electric village cars)
- Do not implement enormous projects (do not create unrealistic supply before there is realistic demand), instead, offer newcomers land plots for building houses/businesses
- Outsource social services from Enonkoski (in case of Oravi) and business/job opportunities from Oravi (in case of Enonkoski)
- Develop a coworking space in the oversized pharmacy building (promote remote work possibilities) to create a friendly environment for young professionals
- Implement a strong marketing strategy to compete with the surrounding villages (because the area has a lot of strengths such as unique nature, peaceful, safe environment, sense of community, and ideal environment for children and families)

Villages like Oravi and Enonkoski with a declining population face many challenges concerning both their physical and social environment. After a thorough analysis we could not conclude that there is a strong potential for a symbiotic relationship between Oravi and Enonkoski, but some level of cooperation would offer a significant benefit to Oravi and thus should be developed and maintained. Additionally, it would have a positive impact on Enonkoski’s capacity to provide social services. Moreover, if the future development is based on the principle of cycle (in contrast to focusing on growth or a specific group), the villages will remain adaptable to the changing size of its population and needs of its residents.

## 5 Estonian case study: Kamara

In the second part of our report we examined the depopulating Estonian village of Kamara. We aimed to map out the problems and challenges of the former collective farm settlement. We did that by conducting multiple interviews in the area and by letting these interviews and the locals reveal the area's problems themselves. Lastly, we formulated different scenarios on how to make the quality of life in Kamara better. This was done by keeping the theory of smart shrinking in mind. Our research question goes as follows:

*How to revitalize a declining Estonian former collective farm settlement?*

### 5.1 Kamara

The village of Kamara is located four kilometers to the north from the town of Mõisaküla. Kamara was established for the needs of a soviet collective farming in the 1940s (Eesti Entsüklopeedia, 2013). Population is around 150 people, ten years ago it was 350.

Postimees wrote that Kamara was one of the last collective farms in Estonia. They ended it in 1994 because a court decision said so. The agricultural reform law was made in 1992 and it said that all collective farms had to be eliminated and land should be used to form new agricultural businesses. (Postimees, 2022)



**Map 5.** Urban structure of Kamara.

Kamara village differs in a lot of ways from nearby town Mõisaküla which is located in Southern Estonia in the county of Viljandi near the Latvian border. The county center Viljandi is located 49 km to the east, the large coastal city of Pärnu 63 km to the west and the capital city of Tallinn 189 km to the north. In 2018 there were 758 inhabitants in the city of Mõisaküla. (Mõisaküla linn, 2022) The city was established around 100 years ago when a railroad from Pärnu to Viljandi was built in the area. The city's origins are tightly connected to the railroad. For example, the economic structure was highly based on the railway and factories that were connected with the railway. Nowadays the railroad doesn't exist anymore. The city lost its independence approximately five years ago and was connected into Mulgi municipality (Mõisaküla linn, 2022). In the municipality the population has shrunk in the last 20 years by about 29%. In Mõisaküla there are 770 inhabitants and in the beginning of 2000s it used to be 1200 (Maaleht, 2021).

Despite the fact that these settlements are only 4 kilometers apart, their social and physical environment are not at all similar so both these settlements are examined in this research in order to find a possible solution for Kamara's revival strategy.

## **6 Methods**

Our main research method was interviews. We conducted seven interviews in total during our three day field work. In Mõisaküla we interviewed a middle aged museum clerk lady. In Kamara we talked to two young mothers and their children as well as to a middle aged shop clerk lady. In Abja-Paluoja, we interviewed a local geographer as well as the retired and current mayors. Our last interview for field work was with a former Kamara representative. All the Abja-Paluoja interviewees were men aged between 30 and 50 years old.

We wrote notes on our interviews. From those notes we formed different themes that from our opinion best describes the main challenges of the declining villages of Mõisaküla and Kamara. We formed four themes in total: education & social challenges, work, housing and closed and conflicted communities. In addition we created potential solutions keeping the theory of smart shrinking in mind.

## 7 Analysis

### 7.1 Education

In Kamara most of the people are taking their children to kindergarten and school to Abja-Paluoja which is 11 km away. Actually school and kindergarten in Mõisaküla would be closer to them (4 km) but Kamara people are more looking in direction to bigger places according to locals in Kamara and Mõisaküla. Some kids are going to school as well in Kilingi-Mõmme because their parents are working there. Locals we talked to in Kamari said that they do not know anyone in the villages who have gone to university or are planning to go. People have mostly only high school diplomas or they have learnt some profession. Kamara women laughed at the thought of higher education and the possibility of children's future in academics.

Shop lady said how all the young people move to the cities for better life quality. Or are they just moving to the same kind of areas in just bigger towns, do the social problems follow them. But in Mõisaküla there are many educated people who can work remotely from their homes and there are many middle aged people who are getting their university degrees again or even second ones. Children from those villages are going to high school mainly also to Abja-Paluoja. There are only 25 children in Mõisakülas school at the moment and this year no one put their children there to the 1st class. There are children at a young age who should be going to the 1st class there but parents decided to put their children in bigger schools nearby. Parents think that education quality has shrunk in Mõisakülas school according to Jüri Patune. But on 2nd of March there was already one student from Ukrainian refugees who started studying in Mõisaküla school (Saksala, 2022). And there are already more coming so there will be a bit more students. At the same time there is not enough space for children who want to go to kindergarten in Mõisaküla, there is a queue of children.

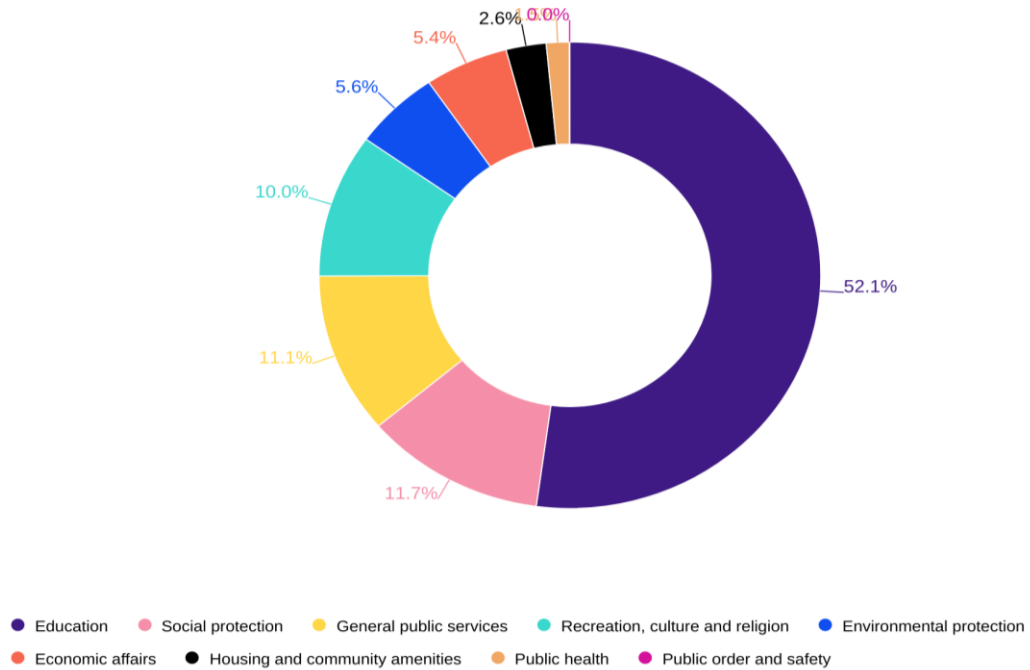
### 7.2 Social environment

#### 7.2.1 *Social challenges*

Local budget of Mulgi rural municipality is distributed to 9 spheres. The municipality spends the most money on improving the education situation (see Figure 2). Then with budget money they seek to give social protection to the people who need it the most, for example unemployed, new mothers.

Head of Mulgi rural municipality thinks that one of the biggest social problems in Kamara is alcoholism because some people simply didn't manage the collapse of the soviet union in the

90s. The rest can't work (e.g. old) or don't want to work, so they are preferring social support. Which is so small that people who are living just from that can't afford renovating their houses or apartments.



**Figure 2.** Local budget operating expenditure and investment activities in Mulgi rural municipality 2020

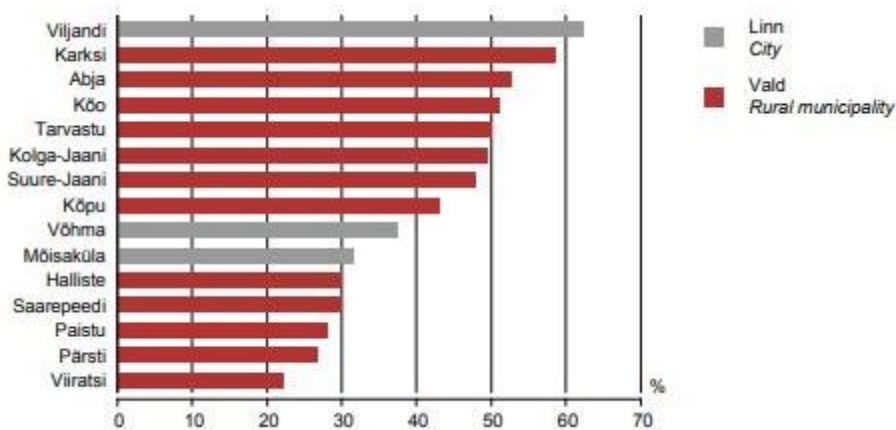
In the regional development plan in Estonia we found an employment situation in 2013. Situation can be changed now. There were 97 jobs in Mõisaküla where permanent residents of Estonia work. 93 people were working in Mõisaküla and living in Viljandi county, including 75 in Mõisaküla and 14 in Abja. Thus, 77.3% of the jobs in the city of Mõisaküla have been filled by the city of Mõisaküla and 14.4% by the residents of Abja municipality, in Abja municipality has an important place in the labor market. Most of the people working in Mõisaküla from Abja are probably residents of the neighboring villages of Mõisaküla. People working in Mõisaküla make up 2% of the employed in Abja municipality, which shows that Mõisaküla is not an important destination for the residents of Abja municipality. There were 238 employed people in Mõisaküla, of whom 215 (90.3%) worked in Estonia and 23 (9.7%) abroad. In Viljandi county, 140 (58.8%) inhabitants of Mõisaküla work, including 75 people (31.5%) in Mõisaküla, 37 (15.5%) in Abja rural municipality, including 25 (10.5%) in Abja-Paluoja rural municipality, and 17 people in the city of Viljandi (7.1%). More than 5% of the employed living in Mõisaküla still work in Pärnu (15 people or 6.3%) and Saarde municipality (14 people or 5.9%). From the point of view of labor migration, the city of Mõisaküla is not a



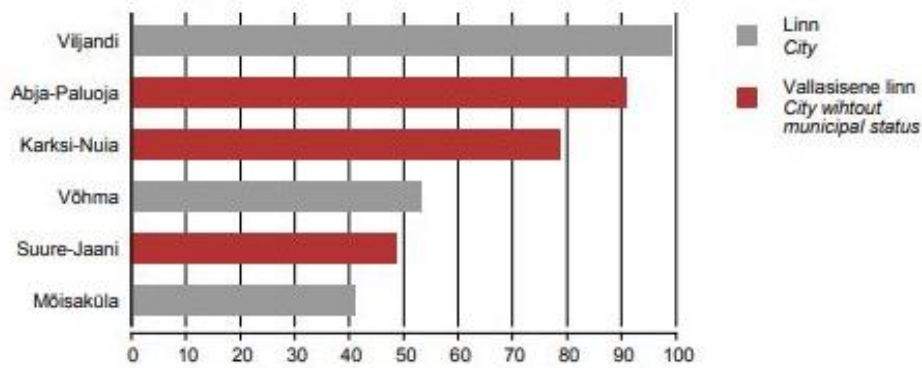
center of attraction. Mõisaküla is the main employer for the inhabitants of its city, but if all the employed inhabitants of the city wanted to work in their city, only 40% of those who wanted it would have jobs. It can be said that the city within the municipality of Abja-Paluoja is the main employer for the people of Abja municipality and an important destination for labor migration to the city of Mõisaküla (10.5% of the employed in Mõisaküla).

**Table 7.** Number of residents in the urban settlements of Viljandi county 1989, 2000, 2011, 2013.

	Rahvaloenduse andmed <i>Data from population census</i>			Rahvastiku- registri andmed <i>Data from population register</i>	
	12.01.1989	31.03.2000	31.12.2011	01.02.2013	
Viljandi linn	23 080	20 756	17 473	18 786	<i>Viljandi city</i>
Abja-Paluoja vallasisene linn	1 737	1 417	1 084	1 208	<i>Abja-Paluoja city without municipal status</i>
Karksi-Nuia vallasisene linn	2 361	1 997	1 573	1 718	<i>Karksi-Nuia city without municipal status</i>
Mõisaküla linn	1 349	1 165	825	893	<i>Mõisaküla city</i>
Suure-Jaani vallasisene linn	1 503	1 324	1 039	1 073	<i>Suure-Jaani city without municipal status</i>
Võhma linn	1 998	1 596	1 314	1 441	<i>Võhma city</i>



**Figure 3.** Share of persons employed in the city or rural municipality of residence among the persons employed of the local government units of Viljandi county 2011.

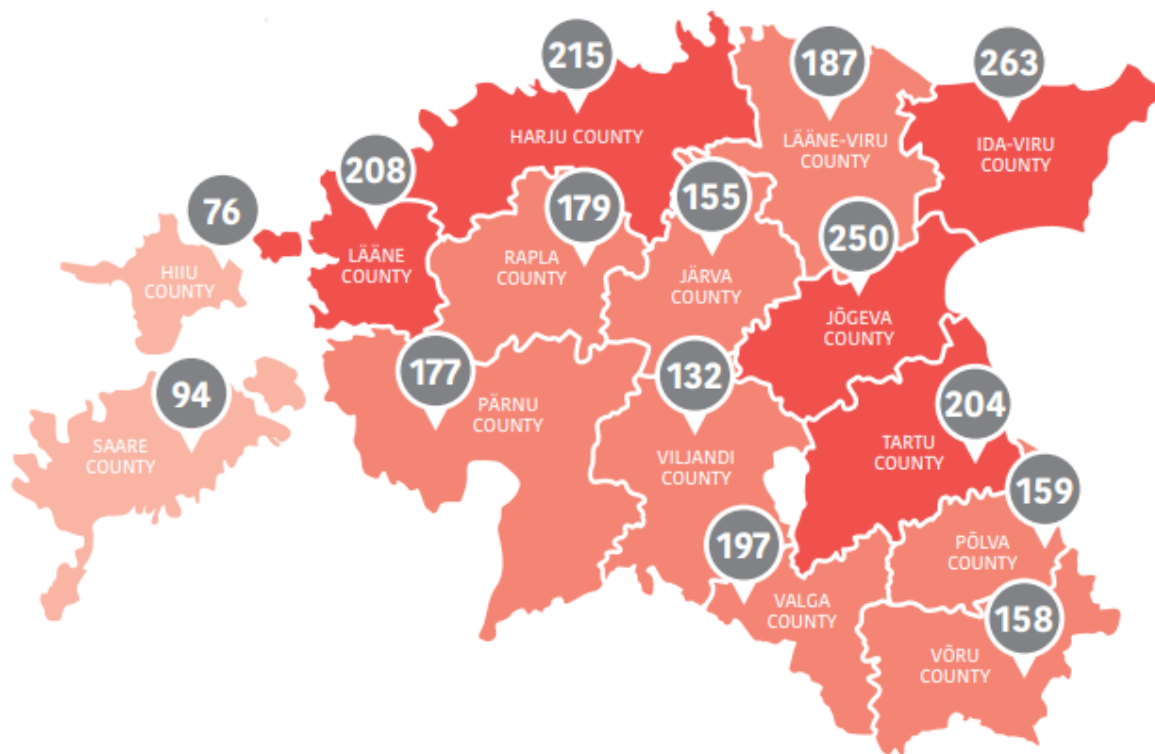


**Figure 4.** Jobs per 100 persons employed in the possible local commuting centres in Viljandi county 2011.

### 7.2.2 Safety

Estonia is one of the safest countries in the world to live and travel in. Looking at the crime index, Estonia's crime index is the lowest from the Baltics and Nord region (Numbeo, 2022). In research we did interviews which helped us to find answers to the situation of safety in Kamara village. Kamara village is in Viljandi county which is one of the safest counties in Estonia. We can see that in the 6 map which shows the crime rate per 10000 inhabitants across counties in 2018. Interviews with the local Kamara residents prove that living in this village is safe. Kamara's ladies said that they have been living here all their life and this is a safe place to live with families. In fact, this place didn't look very safe from our perspective because of bad condition apartments or due to a messy environment. For example, some of the basements of Kamara's apartments were flooded for almost a year and people can't do anything about it because they can't afford to fix those apartments. The big problem is that the flooded basement of the house is open and children can drown here while they are playing around. Non-utilized piles of branches are also a danger to children who play.

The main road of the village is in a good condition. There is a farm near the village center. Because of that there is a lot of agricultural machinery, which is driving very fast and causing dust. Rising dust pollutes the air and people have to breathe polluted air that can harm them. In the backyard of flats there are some ponds that look terrible and are unfenced. They endanger people who are living nearby.



**Map 6.** Crime rate per 10 000 inhabitants across counties in 2018.

### 7.3 Employment

We thought that the villages would need more “pragmatic jobs” for “pragmatic people”, for example how the brewery owner said in Enonkoski that the brewery work is pretty simple and they were able to employ local people with zero experience, locals are good and loyal workers. The former mayor of Mõisaküla Ervin Tamberg said also that the village would be perfect place for some lighter factory work because there are not many jobs for women at the moment but there are more jobs for men in metal and furniture industries.

The head of the museum Anu Laarmann is educating herself even in her fifties to get higher pay. And there are many more citizens in Mõisaküla who are returning to university to get their first or even second degrees. Anu Laarmann thinks the biggest reason for staying in a small place is to have a job that you love and love the place you are living in.

Municipality want’s businesses to come to Kamara, but since there are no employees who would be qualified for the job or want to do that factories and businesses can’t come there. They used to have a small metal industry in Kamara but because they lacked workers they moved to Karksi-Nuia which is a bigger town in the area.

Andres Rõigas thinks that the region needs more places for tourists to stay overnight because in Summer all the places are full. There are people in Mõisaküla who are thinking of making a hotel out of an old train wagon. This would be a really interesting place to stay and there would be people who want to try it out. Also would it give a job for few people.

Tourists are not finding their way further from Tallinn and that is a big problem to Estonian tourism overall. It is the same way in Southern Estonia. There could be more tourists coming to Mõisaküla as well because they have a great museum there and the town's only 1,5 km away from the northeast point of Latvia. For Mõisaküla museum (see Picture 5) is like the heart of the village, newcomers feel like it is a safer place to come and ask about life in the area than going to official people (*“people are afraid of the official places”*).



**Picture 5.** We, the research group, took a ailway trolley ride in Mõisaküla museum.

## 7.4 Housing

Anu Laarmann said how her children have higher education and have high paying jobs in the Tallinn area. The children want to keep the house and that is at the same time a motivation to renovate and keep the house in good condition but there's no motivation for the children to move back because of lack of work opportunities.

Houses are quite cheap and because of the low value people can't get a loan from banks to buy them. There is not enough for a deposit. People want houses but there aren't any. Apartment is a cheaper option so people had to take it otherwise they could not afford a place to buy. Municipality plans to renovate some buildings in Mõisaküla center to rent them out because there is no rent market in Mõisaküla but people are asking for them. Privately owned and in bad shape flats are the problem. People don't have the money to renovate these flats. It is especially hard to do when most of the apartments in the blockhouse are empty.

Professors and Andres Rõigas said that in Kamara there are block houses in the center and private houses around. Private house people have a lot of visions and opinions on what to do however in the blockhouses many feel like the municipality should help them in some way. There is the conflict of soviet arera thinking and private ownership thinking. Private house owners are not expecting so many things from the municipality. That was also pointed out by the mayor. Soviet era mentality, where residents assume that the officials take care of the houses water and heating systems but the private ownership mentality makes people do things by themselves because they want something of their own and want to enhance their property. People started to leave Kamara if there were no central heating anymore. Mõisaküla does not have a central water system as well and it is the biggest issue for newcomers. Nostalgia for the easier times when you didn't have to do much yourself. Life is so much better nowadays but you have to put in some work to achieve things. And some older people don't want to put in the work needed. Main thing is to motivate them, so they'd start to do something, but that is very hard to do.

But the Kamara women also showed passion towards their living conditions: the many years fight to get the new playground for their children. And also Mõisakülas ex-major helped them with that. Kamara has been left out by politicians already for many years and it has made the situation even worse. People do not have anyone to ask for things they need in their villages and if they ask, the municipality will not listen to their needs because they have already the idea in their head that places like Kamara are meant to die out and they do not want to do anything about it.

Anu said over and over again how she appreciates the fact that she has something of her own that she can pass down for her children. She talked about how it's hard for her children to find something of their own in places like Tallinn. In this sense rural areas are heaven for the future generations craving for something of their own because it is affordable for them. Andres Rõigas also said that people usually want a house in the countryside, not a flat. Flat is usually a temporary thing for the time that people renovate their houses. Because in rural areas you can get an apartment only for 500 euros and that can be the temporary place because of the affordability.

Coming from empty Northern Latvia to Mõisaküla it seems like a lively area, but when coming from Northern Estonia it looks like a full rural area. The area has two faces and it depends much from where you are looking at it.

Andres Rõigas said that there's a process of people moving back from cities to the countryside going on in Estonia and covid affected it positively, country houses are more expensive in Estonia than in Finland. Moving back to the countryside affects more areas that are closer to the big cities but it is happening also in smaller places and in rural areas because people who left their home villages for better jobs are now returning to their roots thanks to the remote work possibilities. Mayor finds that if people return from Tartu and Tallinn, they want to be 4-5 km from the town, this undermines the possibilities of rural Estonia.

The happy spirit of the countryside small towns "*when you live in the countryside, you don't feel like you are living in the countryside*": people who are just passing by and making a quick stop it might seem to them that there's nothing to do and no reasons to live there, but when you do live there and you are "in it" you start to see all the possibilities instead of the challenges.

Big thing for Kamara is that there is still a local store but the store worker said that it can only run until there are enough locals to do their shopping there. People who are working in bigger places and going to shop there as well when they are already there with their cars. Village still has a library, community center and clothing swap.

Some of the apartment houses in Kamari are more than half empty. One has only three apartments occupied from 18. Small apartment that is next to the Kamara store has only two occupied apartments and the basement in this house has been totally flooded for many years. The flood has brought mold and this huge amount of water in the basement is really dangerous for children and small animals. Anyone could easily drown there. We suggest demolishing this building because it would not be reasonable to rebuild or renovate it. Municipality could offer new apartments in some other buildings in Kamara (for example in the community center because it is half empty at the moment) for people who are still living in these bad conditions.

So half empty buildings would have more habitants and this dangerous building could be demolished.

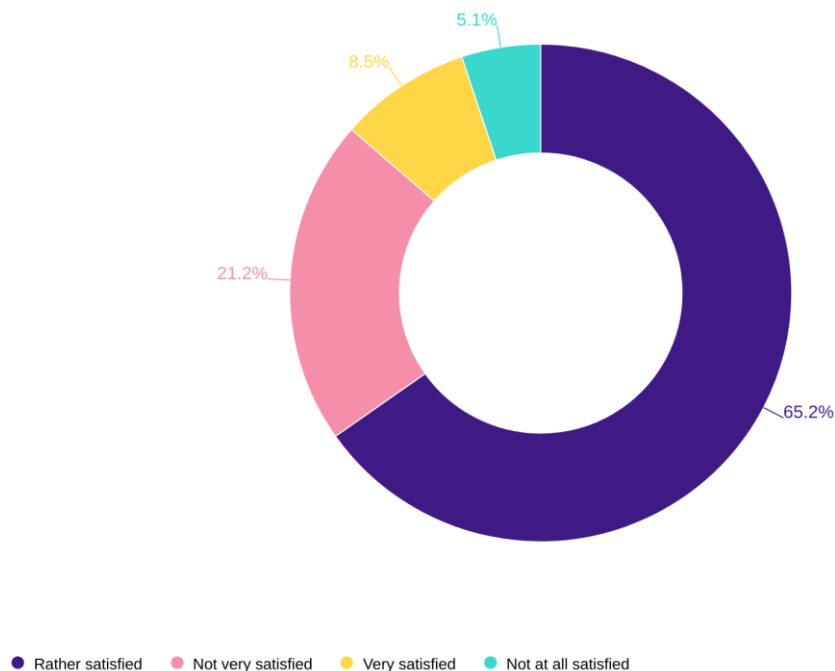
### 7.5 Closed and conflicted communities

The highway from Pärnu to Abja-Paluoja separates Kamara and Mõisaküla even though the villages are very close to each other. The road acts as a barrier, when the railroad used to pump life into Mõisaküla now its absence makes it harder for them to survive.

Anu had lived in Kamara and had her niece living there but even she couldn't tell almost anything about the place. Kamara does not have this rich history and stories behind it like Mõisaküla has. That is one of the reasons why Kamara people lack identity and that leads to lack of motivation to improve your home village as well.

Women from Kamara and also Mõisakülas museum manager says that people from Kamara have for a long time skipped Mõisaküla and have gone to Viljandi or to Abja-Paluoja to party. Communities sometimes lack trust. The mayor said that there should be more *we* in decision making and less *me or you* thinking. People in smaller places know now less how much money is spent on what and it makes them ask why are you investing there and not into our home village.

Overall, there is a bigger percentage of residents who are more satisfied than not satisfied with the living environment in Mulgi rural municipality (see Figur 3).



**Figure 3.** Satisfaction of local government residents with the living environment in Mulgi rural municipality 2020

## 8 Solutions

As our professors were meeting us in Kamara, one of the professors said: “*Kamara could be dying safe another village*”. That made us think, is the dying of small places and the growth of bigger ones a solution for a better future? People who are leaving Kamara could move to Mõisaküla or Abja-Paluoja where there is also an aging problem and it could relieve that. That could be one of the solutions or things that can happen if the municipality would not plan anything new with Kamara. There’s also the question whether to improve Kamara people’s quality of live in Kamara or does it happen by moving people out of Kamara? For this question we had multiple different answers.

Maybe put the solutions in a bullet point list so we don’t need to connect paragraphs somehow?

- Relationship between baltic states: “Baltics are stronger together”, cooperation in the border zone. Like the start of summer festivities in Mõisaküla and the market that two countries are organizing together. Inviting Latvian salesmen to sell their products in the Estonian market helps Estonians because Estonian producers have to reduce their prices to compare with Latvian prices. So ordinary people are winning from that and it attracts people to come to Mõisakülas market also from distant places to buy cheaper products.
- Latvians are already working in the Mõisaküla area but don’t live or spend that much time in the Estonian side, could this be changed, does it have to? Ten years ago the students from Mõisaküla school made a survey and found 17 different nationalities: the area is not new to international co-living and cooperation. That's why they are also very welcoming to Ukrainian workers and now also to refugees.
- Tourists like to visit the museum and the railway, it gets people excited and people leave with a huge smile on their face. Inviting more people to visit the museum could also bring more Latvians to do so.

Old fences should be taken down around the communal center in Kamara. This doesn't take much money but it would make the surroundings more welcoming and nice so people living and visiting can feel better. Also it would be nice to add some colors and brightness to Kamara. They could paint their big stones next to the store as ladybugs or turtles etc. or add some flowers next to the store.

The could be organized garden days: everyone does gardening together, it seemed that gardening is important especially for the Kamara people (there was a garden section in the tiny store plus the garden area behind the flats was very beautiful and well-kept).



From the tourist side could Kamara have a house tour day: people open their homes for tourists who can see Estonian homes and it can be connected with a home coffes project.

Also feels like a jump

Need to get rid of doubling services in municipalities to save money, and harmonization (by 2024), requires a lot of explaining to people.

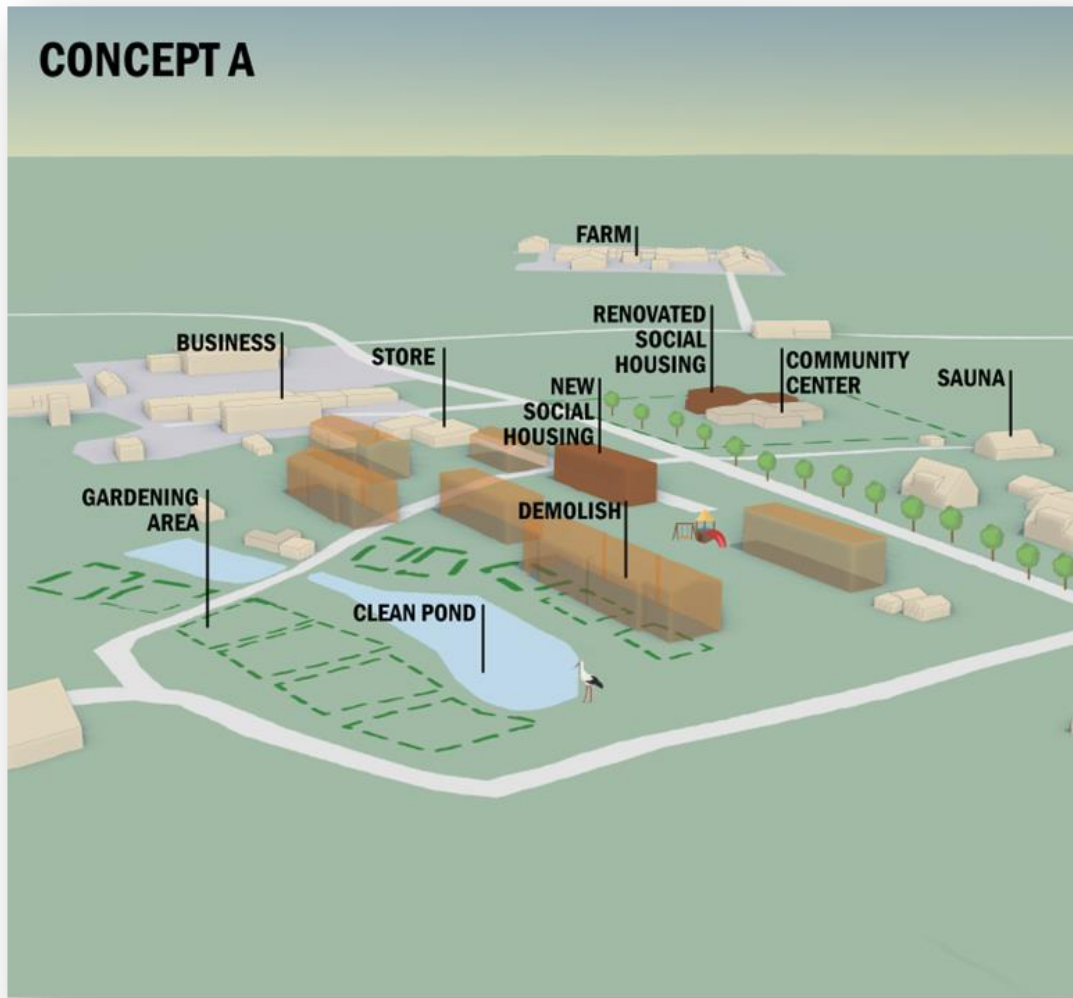
New sewerage for only Mõisaküla costs around 10 million euros according to the mayor of Mulgi municipality but in a four year period they have only around 5,4 million euros to invest. So they have to wait for country or European Union support before they can fix sewerage problems in Mõisaküla which is at the moment the most important sewerage problem. But in reality also Kamara needs a new system.

## 8.1 Scenarios

Above described solution should be applied despite a chosen scenario. These different scenarios are mostly trying to solve the housing situation in the apartment buildings which is the most conflicting problem and most difficult to solve.

### 8.1.1 *Concept A*

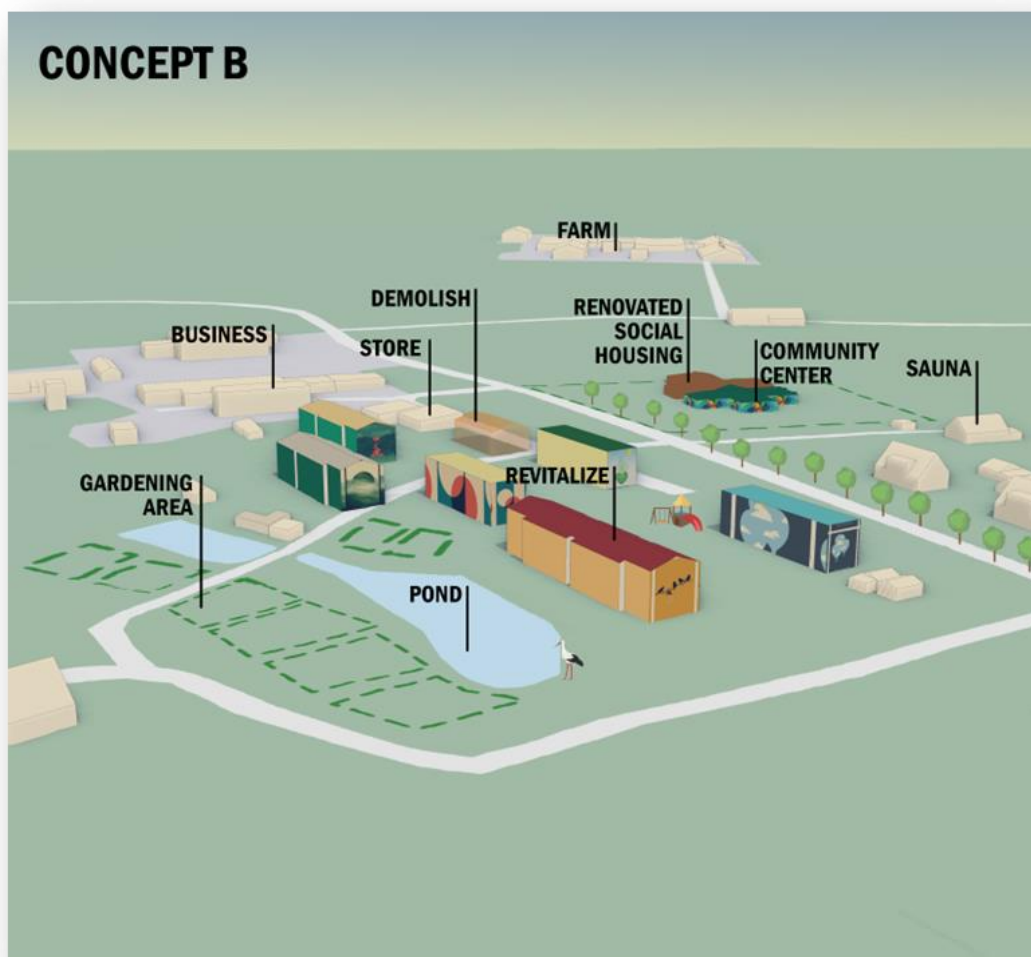
The idea could be demolishing houses that are in really bad conditions and create space for new ones (see Picture 6). That is something that should be financed partly by the municipality. The municipality could plan some municipal apartments into the communal center as well because at the moment the center is too big for locals and half of the house is just empty. It would raise the living conditions and maybe even attract new residents. This concept would let Kamara rais from the ashes. Jüri Patune thought as well that there is going to be new and better times for Kamara and that would help it to happen.



**Picture 6.** Plan of concept A.

### 8.1.2 Concept B

Possibility would be to put spray painting culture into use, painters from cities to villages (see Picture 7) to paint (Edward Von Longus etc.) positive visibility for the villages and the rural area. It would not solve the problem that most of the buildings are really old and need renovation but it would help to create a better environment and image to the place. Major problems like flooded basements should be solved and painting shouldn't be done to "mask" those problems. Mayor thinks that it would be nice to take down 18 flat apartments and one smaller one, and build a new 12 flat apartment with local heating (like ground heating). In our concept B we suggest demolishing a smaller apartment building that has an over flooded basement. And people living in this house could be moved to municipalities social housing that has potential rooms in the community center. Because there are empty rooms at the moment. They also could offer people leaving the houses that are in bad condition for a new apartment in another apartment building next door. So would the half empty houses gain new residence.



Picture 7. Plan of concept B.

## 9 Literature

Anna (2020) News article. 9.8.2020. Retrieved 5 May 2022,

*<<https://anna.fi/lifestyle/matkailu/oli-paivia-jolloin-peruutuksia-tuli-4-000-euron-edesta-saimaan-seudun-matkailuyrittajat-kertovat-mika-pelasti-huonolta-nayttaneen-koronakesan>>*

Eesti entsykloopia. (2022) Kamara. Retrieved 7 May 2022,

*<<http://entsyklopeedia.ee/artikkel/kamara1>>*

Enonkoski (2022a) *<<https://enonkoski.fi/enonkoski/>>* Retrieved 5 May 2022,

Enonkoski (2022b) Inner sport facilities. Retrieved 4 May 2022,

*<<https://enonkoski.fi/asukkaille/liikuntapaikat/sisaliikuntapaikat/>>*

Enonkoski (2022c) Out sport facilities. Retrieved 4 May 2022,

*<<https://enonkoski.fi/asukkaille/liikuntapaikat/ulkoliikuntapaikat/>>*

Etuovi (2022) Apartments for sale, Savonlinna & Oravi. Retrieved 5 May 2022,

*<<https://www.etuovi.com/myytavat-asunnot/savonlinna/oravi?haku=M1832563421>>*

Itä-Savo (2016) News article. 27.9.2016, updated 4.3.2021. Retrieved 5 May 2022,

*<<https://www.ita-savo.fi/paikalliset/3913566>>*

Korvenkutsu (2022) Retrieved 5 May 2022, *<<https://korvenkutsu.fi/tutustu-meihin/>>*

Lakeland wellness (2022) Retrieved 13 May 2022,

*<<https://www.facebook.com/lakelandwellnessup/>>*

Laurio, M. (2022) Jobs, labor and unemployment. Presentation on 4 May 2022. Enonkoski Municipality.

Maaleht. News article. 14.10.2021. Retrieved 7 May 2022,  
<<https://maaleht.delfi.ee/artikkel/94839925/suur-ulevaade-kui-palju-on-sinukoduvallas-20-aastaga-elanike-arv-kasvanud-voi-kahanenud>>

Maitolaituri (2022) Retrieved 5 May 2022, <<https://www.enonkoskenlaiturila.fi/>>

Metsähallitus (2022) Saimaa ringed seal. Retrieved 5.5.2022, <<https://www.metsa.fi/luonto-ja-kulttuuriperinto/lajien-suojelu/saimaannorppa/>>

Mikkeli library (2022) Retrieved 5 May 2022,  
<<https://kirjasto.mikkeli.fi/historia/enonkoski.htm>>

Möisaküla linn, Üldinfo. Retrieved May 11 2022, <<http://www.moisakyla.ee/>>

Numbeo (2022) Crime Index by Country 2022. Cost of Living. Retrieved May 13 2022,  
<[https://www.numbeo.com/crime/rankings\\_by\\_country.jsp](https://www.numbeo.com/crime/rankings_by_country.jsp)>

Oravin seutu (2022) Activities. Retrieved 5 May 2022,  
<<https://www.oravinseutu.fi/aktiviteetteja/>>

Oravin seutu (2022) Retrieved 5 May 2022, <<https://www.oravinseutu.fi/yhdistykset/>>

Oravivillage (2022) Retrieved 5 May 2022,  
<<https://www.oravivillage.com/fi/topmenu/Yritys,-rekry,-vastuullisuus>>

Out-of-hours medical care (2016) Sosteri. Retrieved May 13 2022, <<https://www.sosteri.fi/english/out-of-hours-medical-care/>>

Postimees. News article, 30 aastat põllumajandusreformist (2022) Retrieved 5 May 2022,  
<<https://maaelu.postimees.ee/7472661/30-aastat-pollumajandusreformist>>

Sakala, Ukraina lapsed on jõudnud Viljandimaa koolidesse (2022) Retrieved 5 May 2022,  
<<https://sakala.postimees.ee/7491294/ukraina-lapsed-on-joudnud-viljandimaa-koolidesse>>

Savonlinna (2022) Public transport. <<https://www.savonlinna.fi/asukas/kadut-ja-liikenne/liikenne/paikallis-ja-lahiliikenne/>>

Sotkanet.fi (2022) Results table - Sotkanet.fi Statistics and Indicator Bank. Retrieved 5 May 2022,  
<[Sotkanet.fi \(2022\) Results table - Sotkanet.fi Statistics and Indicator Bank. Retrieved 5 May 2022,  
<\[Sotkanet.fi \\(2022\\) Results table - Sotkanet.fi Statistics and Indicator Bank. Retrieved 5 May 2022,  
<\\[Statistics Finland \\\(2022\\\) Population grid data 1 km x 1 km. Retrieved on 7 May 2022,  
<\\\[>\\\]\\\(https://www.stat.fi/org/avoindata/paikkatietoaineistot/vaestoruutuaineisto\\\_1km\\\_en.html\\\)\\]\\(https://sotkanet.fi/sotkanet/en/taulukko/?indicator=s\\_Y1iTcEAA==&region=y7RONLA2TLTWtbKMNwQA&year=sy5zti7X0zUEAA==&gender=m,f;t&abs=f&color=f&buildVersion=3.0-SNAPSHOT&buildTimestamp=202109301228.></a></p></div><div data-bbox=\\)\]\(https://sotkanet.fi/sotkanet/en/taulukko/?indicator=s47Mije11jW31jWMNzO21jWy1jWON7Q20tM1BgA=&region=ywQA&year=sy6rsta1BAA=&gender=t&abs=f&color=f&buildVersion=3.0-SNAPSHOT&buildTimestamp=202109301228.></a></p></div><div data-bbox=\)](https://sotkanet.fi/sotkanet/en/taulukko/?indicator=sw5xt843sNY1TA6MtwAA&region=ywQA&year=sy5ztk7W0zUEAA==&gender=m,f;t&abs=f&color=f&buildVersion=3.0-SNAPSHOT&buildTimestamp=202109301228.></a></p></div><div data-bbox=)

Tilastokeskus (2022) Killed and injured in road traffic accidents by municipality in 2012 to 2022.  
<[Wikipedi \(2022\) Enonkoski health center. Retrieved May 13 2022,  
<\[>\]\(https://www.wikipedi.wiki/wiki/fi/Enonkosken\_terveysasema\)](https://tieliikenneonnettomuudet.stat.fi/PXWeb/pxweb/en/Tieliikenneonnettomuudet/Tieliikenneonnettomuudet__1_Tienkayttajat/050_tienk_tau_105.px/table/tableViewLayout1/></a></p></div><div data-bbox=)

Wikipedia (2022) Savonlinna. Referenced 5 May 2022,

<[https://fi.wikipedia.org/wiki/Savonlinna#cite\\_note-pinta-ala-2](https://fi.wikipedia.org/wiki/Savonlinna#cite_note-pinta-ala-2)>