

# Smart Shrinking in Þórshöfn

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# **Right-sizing in Þórshöfn**

#### Abstract

This study explores the potential for right-sizing in Þórshöfn, a small town in northeastern Iceland, by addressing critical questions regarding the town's development possibilities, socio-economic path dependencies, and community place attachment. The analysis encompasses changes in key economic sectors—fishing, agriculture, and tourism—along with demographic and social life assessments. The town's historical role as a trading hub and its strategic location have influenced its evolution through various economic phases, leading to a current economic structure dominated by fishing, agriculture, and tourism. By extending the concept of shrinkage from urban to rural contexts, the study aims to understand how smart shrinkage can be adapted to Þórshöfn's unique challenges. Utilizing qualitative and quantitative methods, including desktop analysis, surveys, observations, and interviews, the research provides comprehensive insights into the town's current state and future potential. The findings suggest that Þórshöfn can adapt and thrive amidst socio-economic changes by embracing right-sizing strategies tailored to rural settings, fostering sustainable development, and enhancing community cohesion.

Key words: Right-sizing, Þórshöfn, Development, Rural areas, Place attachment

# Introduction

This study explores the potential for right-sizing in Þórshöfn, a small town in northeastern Iceland. We aim to address several critical questions:

- What possibilities exist for right-sizing in Pórshöfn?
- Which socio-economic path dependencies affect the town's development?
- How is the place attachment of the community created?

To answer these questions, we examine different aspects of Þórshöfn's development. This includes analyzing the changes in its key economic sectors—fishing, agriculture, and tourism—as well as the town's demographics and social life. The town's isolation from larger urban centers and its migration patterns also play significant roles in shaping its future.

Þórshöfn, with a rich history as a trading hub due to its strategic location, has evolved through numerous economic phases. Initially marked by mixed farming and agriculture, the town's economy saw growth in its fishing industry during the 15th century. The late 19th and early 20th centuries marked the establishment of modern commercial activities, setting the foundation for its current economic structure dominated by the fishing, agriculture, and tourism sector.

Our theoretical framework extends the concept of shrinkage which is typically applied to urban settings to Þórshöfn to understand its development trajectory. We explore how right-sizing, or smart shrinkage, can be adapted for rural areas like Þórshöfn, which face unique challenges due to their geographical and socio-economic contexts. Path dependency theory helps analyze the historical and communal influences on regional development, while attachment theory provides insights into the emotional and social connections residents have with their place.

This research combines qualitative and quantitative methods, including desktop analysis, surveys, direct observations, and interviews with locals, experts, and tourists. This mixed-methods approach provides a comprehensive understanding of the town's current state and future potential. Through this analysis, we aim to offer insights into how Þórshöfn can adapt and thrive during socio-economic changes, providing a broader understanding of the application of right-sizing in rural and small urban settings.

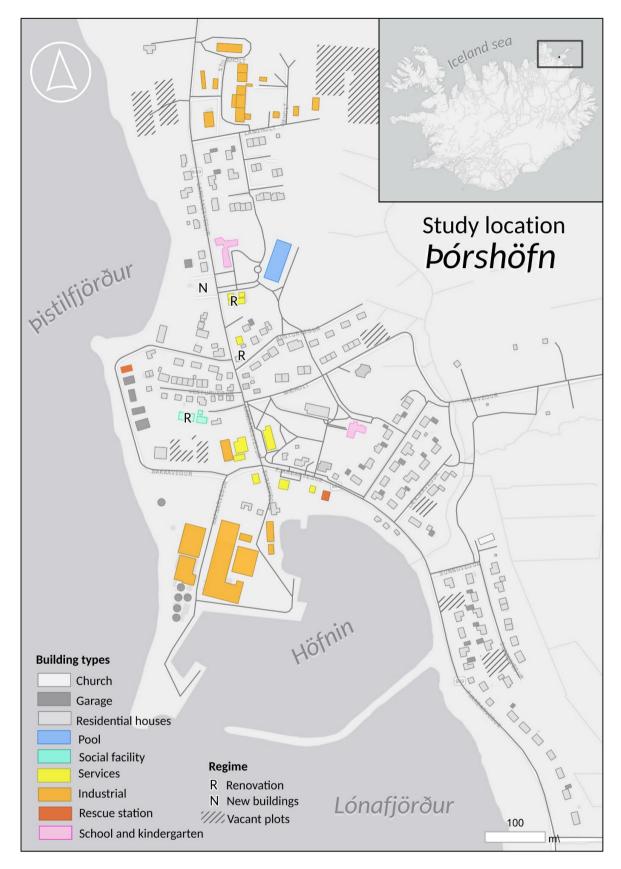


Fig. 1. Location of the study site (Data: OSM, 2024)

#### Theoretical background and conceptualisations

#### Right-sizing as a planning strategy of rural development

Shrinkage is a concept which has been used to differentiate the development of regions, cities, towns, villages, and suburbs which have not followed the paradigm of urban growth. It can be considered as a result of factors which may subsequently produce outmigration from the respective location (Makkonen & Inkinen, 2023, p. 334). These factors include structural changes, globalization, urbanization, and deindustrialisation (ibid.), for instance. The concept of 'shrinkage' was first used academically by Rybczynski and Linneman in the latter part of the 90s and conceptualized as the solution to save the American industrial cities in decline (Rybczynski & Linneman, 1999). Following the understanding of shrinking as the decline of cities, and growth as the development of local and urban economies, Rybczynski and Linneman described shrinking cities as vertical and growing cities as horizontal (Rybczynski & Linneman, 1999, p. 33). In their analysis, vertical and horizontal cities differed significantly in terms of amenities, housing, population density, and infrastructure (Rybczynski & Linneman, 1999, p. 34).

Localities which are viewed to be able to tackle the challenges of shrinkage and outmigration, are described to be able to 'shrink smart' or in other words, to 'right-size' themselves (Makkonen & Inkinen, 2023, p. 334). However, there is no common academic consensus on the exact meaning of 'smart shrinkage' (Makkonen & Inkinen, 2023; Peters et al., 2018). Instead, multiple socio-economic factors can be understood to have an impact on developments of decline and growth. The 'smartness' of shrinkage, on the other hand, is often understood as the municipality or town exhibiting a good quality of life (Makkonen & Inkinen, 2023, p. 334) for its residents. As Makkonen and Inkinen write, the concept of 'shrinking smart' has not been applied in rural areas before the 2020s (Makkonen & Inkinen, 2023, p. 335). This is because it has been a concept that has been coined by using urban planning strategies. Consequently, there has been skepticism in using the concept of smart shrinkage in rural areas as they are considered to lack the specific human capital needed for planning shrinkage (ibid.). Smart rural shrinkage, thereafter, is not a widely used concept yet.

In this study, we understand the situation of Þórshöfn through its population dynamics, economic situation, and its service network. While Þórshöfn could be viewed as a shrinking town from the perspective of some of its population dynamics, the developments in the socio-economic sphere of the region could prove the strategies of smart shrinking, often made for 'abandoned' towns and neighborhoods, for instance (see e.g. Ehrenfeucht & Nelson, 2012), to be unfitting for Þórshöfn and the surrounding area. Furthermore, the community's experience of living in a small town is important to our study. We try to connect an analysis of the spatial factors and development in the town to the local perspectives.

#### Path dependency in rural development

Path dependency is of crucial importance as a concept when assessing the factors which formulate the structure of regional and rural development in their historical and communal settings. The theoretical assumption of path dependency bases itself on so-called 'pathways of change' which are to be understood as the streamlined versions of cumulative and complex processes occurring in space-time at the community level (see eg. Wilson, 2012, p. 112). These pathways impact community resilience, for instance (ibid.). They are also prone to fluctuations and changes which are related to 'nodes' or 'nodal points' of decision-making in the community. These 'nodes' or 'nodal points' indicate changes

in qualitative direction of decision-making (ibid.) subsequently constructing the path dependencies of development in the community.

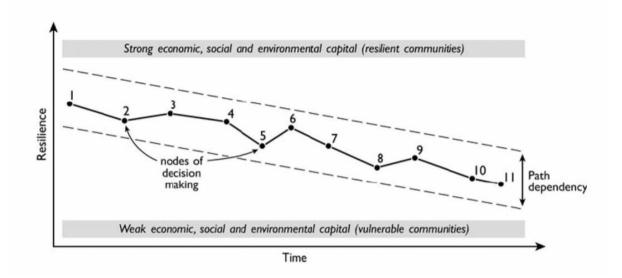


Fig. 2. Path dependency and the nodal points of decision making. Source: Wilson, 2012, p. 112.

When assessing the local economy's impact on rural development and right sizing strategies, the local pathways of change are important. The economic path dependency thinking has its basis on the evolutionary economic theory (see eg. Nelson & Winter, 1982; Dopfer, 2005). The region's or town's economic competitiveness relies on the path dependencies created in the region before. This approach has been predated by the staples theory of Harold Innis, where the development and pathways of an economy reliant on natural resource exports, such as the economy of Iceland (Sutherland & Stacey, 2017), will be dependent on the production mode of the commodities in the economy (Dow & Dow, 2014, p. 1344). In Þórshöfn, the fish factory has been modernized, while farming is extensive, and tourism needs a skilled workforce in the region, forming the main bases of path dependencies in the municipality of Langanesbyggð.

In the formulation of an economic path dependency, institutional changes have a significant influence. In the case of Þórshöfn the town development has been surrounded by the development of the fish industry in the North-East region of Iceland. The 1984 national change in the fishing quota system affected the community by making locals fishing endeavors and fishing as a livelihood more challenging to maintain. Larger economic entities were able to purchase fishing quotas leading to the withering of the local small boat fishing. These kinds of path dependencies of policy legacy can be presupposed as quite permanent (Tawat, 2018, p. 6).

#### Place attachment in small towns

In the understanding of place attachment in small towns and their communities, the concept of social infrastructure forms the basis of conceptualisation of attachment. Social infrastructure creates the opportunities for attachment to be formed (Tomaney et al., 2023, p. 2). According to attachment theory (see eg. Bowlby 1999), place attachments and the consequences of their disruption are important in understanding the patterns of human development. When the attachment is damaged, it leads to feelings of grief and loss. (ibid.) The addition of attachment theory to the study of places highlights the importance of the affective dimension of rural and urban development in the formulation of local and regional pathways of change.

Place attachment was formerly divided in its biophysical dimension to place identity and place dependence. In the 21st century, the classification of attachment has been developed to contain more sophisticated layers of self-identification and psychometric scales as seen in the personal, communal and environmental aspects of place attachment. (Raymond et al. 2010: 422-423) In this study, we are interested in how the formulation of place attachment of local residents is changing and affecting the pathways of right sizing in Þórshöfn.

#### Historical background of Þórshöfn

The town of Þórshöfn, located on the northeastern coast of Iceland, has a rich and dynamic history. According to legend, at the dawn of time, Mjölnir, the hammer of Thor (Þór), the god of thunder, was hurled into the heart of the Langanes Peninsula, forming a harbor. This is how the place came to be known as 'Thor's harbor' (Þórshöfn). The following information was extracted from information boards near the harbor wall at the southern end of Þórshöfn.

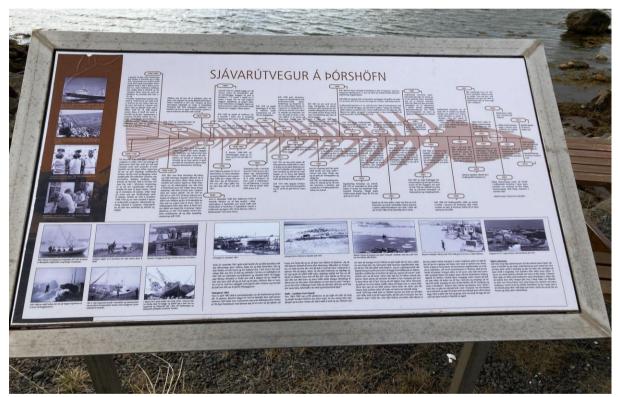


Fig 3. Information board near the harbor wall at the southern end of Pórshöfn. (source: the authors)

Signs of inhabitants in Langanes peninsula where the town of Þórshöfn is located can be traced back to the 12th century (Master plan of Langanesbyggðar, 2012). Mixed farming and agriculture have been the main sources of food and income for the local people since the beginning. The region's fishing industry started rapidly growing during the 15th century.

As early as the 16th century, German merchants were involved in trade in the area, introducing various goods and fostering early commercial activity. This period marked the beginning of Þórshöfn's long-standing tradition as a trading hub. Eventually, due to the Danish-Icelandic Trade Monopoly, trading was banned in Þórshöfn. Residents were forced to do their business in Húsavík.

The foundation for its modern commercial activities was laid in 1895 when an ordering company was established with its trading place in Þórshöfn. This early endeavor marked the beginning of the town's development as a trading center. In 1897, the Danish company Örum & Wulff contributed significantly to this growth by constructing a large and elaborate wooden trading and residential building. This impressive structure became a central feature of Þórshöfn, symbolizing its emerging importance in regional trade.

The economic landscape of Þórshöfn evolved further in 1911 with the establishment of the Langanes Co-op. This cooperative organization played a crucial role in the town's economy for the better part of the 20th century. The Co-op managed an array of business activities, including trading operations, a slaughterhouse, a freezing plant, a fishmeal plant, and several workshops. These ventures not only provided employment for the local population but also established Þórshöfn as an economic hub in the region.

The Co-op's influence persisted until 1996, after which the town's commercial focus shifted primarily to fishing and fish processing. These industries continue to be the mainstay of Þórshöfn's economy, sustaining the community. The town's port and processing facilities are expanding and supporting a seafood industry that supplies both domestic and international markets.

In recent years, Þórshöfn has seen a slow, but gradual increase in tourism. Occasional visitors explore the landscapes of the Langanes Peninsula, engaging in bird watching, and experiencing the local culture.

# Methods

The research methods employed focus on the essential issues pertaining to Þórshöfn and its residents, with the objective of comprehending the specific challenges faced by the population. The primary materials utilized included a questionnaire, direct observations of the town, and interviews conducted with locals, experts, and tourists present in the area throughout the research period. This study utilizes map outputs to enhance its qualitative research. Primary sources were supplemented by preliminary examination of accessible scholarly articles, information accessible on the internet, or research conducted on social media. This chapter will provide an exposition of both the process of collecting data and the subsequent analysis of the collected data. Considering the circumstances in Iceland, the decision was made to categorize the chosen area as a town, aligning with the perception of the local inhabitants.

#### **Desktop analysis**

This research methodology uses a combination of quantitative and qualitative methods to analyze data. It aims to obtain preliminary insights and complement information obtained from other sources during or after the fieldwork. Consequently, it serves as a supplementary source of information (Moore, 2006, p. 112). Initially, the theoretical framework was examined, followed by an investigation of general material accessible on the internet or social media within the case study. During the field research, an effort was made to enhance the information obtained from written books or newspapers.

#### **Theoretical basis**

To have a fundamental understanding of the subject, it was imperative to examine the theoretical framework that may be employed. To ensure clarity, the theoretical component is divided based on conceptualization. The article "Benchmarking the vitality of shrinking rural regions in Finland" by Makkonen & Inkinen (2023) and the publication "How to save our shrinking cities" by Rybczynski & Linneman (1999) were considered as the fundamental theoretical framework for understanding the concept of right sizing. As this concept is not widespread, it is necessary to read additional literature such as "Social infrastructure and 'left-behind places'" by Tomaney et al. (2023) or "Planning for Shrinkage to understand it: Paradox or Paradigm, European Planning Studies" by Sousa & Pinho (2015), which explains the concept is not a negative phenomenon, which is often a problem in research in this area. Understanding route dependency in rural development is crucial in the context of research. The book "Community resilience and environmental transitions" by Wilson (2012) effectively explores this notion, which is one of the central subjects of this case study.

#### Maps

In order to understand the regional and local spatial patterns of demography, infrastructure and natural resources freely available vector and raster data is used from an open source [https://kort.lmi.is/] and Statistics Iceland databases. ArcGIS Pro software is used to create maps, employing choropleth and dot methods.

#### Media analysis

As part of the research, it is vital to acknowledge the endeavors made to acquire information from local newspapers or media outlets. The main issue is the necessity to translate the Icelandic printed newspapers, which might occasionally result in misinterpretations. However, the publication may not

have included the requisite material for the research. Conversely, the town's website included a fundamental synopsis of the town's past, progress, and up-to-date information.

#### Survey

A questionnaire survey was selected as a major research method to gather qualitative data (Rasinski, 2005, p. 735). This survey was conducted internally to gain first insights into the circumstances of the residents of Þórshöfn. The survey was generated using Google Forms and shared on the Samferða community Facebook page. The survey was initially shared on the Facebook group "From/To Þórshöfn" which is a channel of communication connecting the town's residents, the surrounding area (at the municipal level), as well as tourists that either travel through or stay for extended periods in Þórshöfn. The questionnaire comprises inquiries regarding demographics, family status, affiliation with the locality, or reasons for relocating. Additionally, it assesses the level of contentment with the overall quality of life (see to Appendix 4). The questionnaire was intentionally developed to ensure that the questions were pertinent to the respondent. Consequently, inquiries were not posed to locals regarding visitors, specifically pertaining to the initial section of the survey. All remaining questions have already been addressed to all respondents. This questionnaire employs a mixed method approach, incorporating both quantitative and qualitative questions (Ponto, 2015, p. 168).

During the fieldwork conducted from 18-22 May 2024, the Facebook group "From/To Þórshöfn" had a total of 888 members. Therefore, the decision was made to use this channel for distributing the questionnaire. Regrettably, the questionnaire was posted but then withdrawn by the administrator, thus becoming the initial constraint of the research. During the discussion with the local school principal, contact information for two Facebook groups was given. The first one pertains to the sales and purchases within a municipality named Sölusíða Lnb, which has a membership of 1 300 individuals. Nevertheless, the second group, named "Boðinn II - Þórshöfn, Langanes og Þistilfjörður", was deemed significant due to its closed community nature and its membership count of 299 individuals as of 21 May 2024. A survey was dispatched to both groups. Despite initial setbacks, the questionnaire managed to attract 30 participants within a short timeframe, from Tuesday 21 May 2024 at 10:00 to Wednesday 22 May 2024 at 20:00.

The questionnaire was created in two languages, with the first language being Icelandic. To ensure that non-English speaking respondents could comprehend the questions, the Icelandic version was translated using Chat GPT 4.0. The research team acknowledges the potential flaws in the translation and, as a sign of respect towards the people, has explicitly mentioned this in the questionnaire's introduction.

# **Observation - walking**

In qualitative field research, the preferred method of data collecting is primarily through observation and auditory perception, or utilizing the senses (Smit & Onwuegbuzie, 2018). This study method, widely cited in several publications, is frequently employed to elucidate the dynamics of individuals or groups within their natural environment (Hassan, 2024). Observation necessitates sustained engagement and unwavering scrutiny in the field (Lincoln & Guba, 1985). Regrettably, this was not possible in this instance as only a total of five days (18-22 May 2024) were allocated for observation, with three of those days falling on non-working days (weekend and holiday). Although the time was limited and the choice of time was slightly incorrect, a significant amount of observations were made. The observation method employed was predominantly naturalistic, meaning that no deliberate interventions were made to manipulate the behavior or interactions of the individuals being observed, so as to gain a genuine knowledge of their real-life behavior and interactions. The observation was haphazard and lacked organization. Later on, this approach was modified into participant observation in order to provide the study team with a more profound understanding of urban existence (McIeod, 2024).

Initially, it is crucial to acquaint oneself with the environment. Consequently, on May 17th from 15:00 to 18:00, the inaugural observation walk took place, with the participation of all members of the research team. These journeys were spontaneous and lacked a specific purpose, save for one: to gain a unique perspective and judgment of the town that cannot be achieved from commonly accessible information. The event commenced in the northern part of Þórshöfn and gradually progressed towards the southern direction, following the main thoroughfare. Gaining a comprehensive understanding of the town's layout and its potential for residents, as well as the patterns of movement and population figures, was crucial. The research focused on observing the residences, including their quality and any ongoing construction, based on the research objective. The predominant construction activity was occurring in the harbor (see Appendix 5).

During the period of 18-21 May 2024, observations were conducted randomly, primarily focused on identifying individuals appropriate for interviews. The weather and the combination of the time frame being the end of the week and a public holiday had significant impacts on people's outdoor activities.

The observation was carried out in several social settings, including the community center, swimming pool, gas station, and church. These locations were primarily bustling with activity, but they also served as areas where individuals rarely ventured, in hopes of discovering any anomalies and potentially uncovering the underlying reasons for this phenomenon. While the marina allowed unrestricted entry, access to the fishing factory was refused.

The data acquired from the observations functioned solely as supplemental information, rather than establishing certain facts. The purpose of these observations was to facilitate the organization and analysis of the material gathered from the interviews and publicly accessible sources.

# Interviews

The interview is a component of qualitative research that provides a more profound understanding of the viewpoints related to a specific subject, scenario, or concept. A primary source of information is a research tool that researchers have complete control over. Its major objective is to provide insight into situations that are not widely comprehended (Connaway & Powell, 2010).

The interviews were conducted in both a scheduled and spontaneous manner. The interviews with the management of Langanesbyggð municipality, representatives of local institutions, and representatives of regional institutions were arranged by email, whilst the interviews with local citizens were impromptu. Consequently, the interviews with local inhabitants were not recorded. These interviews were semi-standardized, meaning that a predetermined set of questions was prepared and answered by each subject. Additionally, the researcher may ask supplementary questions throughout the interview to address any further inquiries that may arise (Boyce & Neale, 2006). The snowball sampling method is a non-probability sampling technique. Additional sources provide referrals to possible contacts who have the potential to be included in the sample. This process persists until the intended sample or saturation point is achieved (Nikolopoulou, 2023). In this study, there was a lack of adherence to the time limitations and, in certain instances, a refusal to use any method for conducting interviews.

The interviews with the people were done using a random sampling method, targeting individuals who were strolling on the street or working outdoors. As part of the set questions, they were queried about their affiliation with the place, demography, contentment, and the standard of living in the city, or their

viewpoint on the future of the city (Appendix 1). Sometimes language barriers took place in the tries to do an interview, but mostly people could talk in English language. As part of the interview, a cognitive mapping exercise of preferred locations was planned to be carried out. On each occasion, individuals were able to pinpoint a certain location that they primarily associated with themselves due to personal reasons. As a result, locations that may not be perceived as significant from an external viewpoint, but hold great importance to the local community, might be discovered. The purpose of these maps is to offer a more comprehensive record of the town from a viewpoint that is different from traditional maps or visual representations. However, the results could not be visualized as a map, because they concentrated on individual homes, nature and the sea for most of the residents.

The initial planned informant interview occurred on May 18, 2024. This informant furnished preliminary insights into urban living and also supplied numerous connections for subsequent interviews. The primary mode of contact was predominantly conducted via the extensively utilized communication site, Facebook, which is favored by the local populace. Regrettably, the research was constrained by time limitations due to the majority being away for the weekend and holidays.

The interviews were conducted according to a predetermined timetable, during which informants were called either before or during the field research. The questions asked during these interviews focused on the individuals and their activities in relation to the town. (See Appendix 2 and Appendix 3 for more details.) The interviews were recorded with the informant's explicit authorization. The sessions took place on the weekdays of May 21-22, 2024. After encountering early issues with the questionnaire, an informant supplied information on suitable Facebook groups to gather replies for the questionnaire. More informants were contacted on site through email and Facebook private messages, and interview questions for informal interviews (see Appendix 1) were adapted to each of these four interviews.

The utilization of qualitative research methods facilitated a deeper understanding of the occurrences transpiring within the town. Consequently, they were typically carried out in a haphazard manner, with the specific location being a determining factor. These communal locations included the public swimming pool, community center, Kistan (innovation center), and the petrol station. A number of interviews were held at the informant's residence, primarily involving elderly people. These comprehensive investigations will help to better identify significant issues for this research and provide guidance for the theoretical foundation on which this research is built.

# **Results and their analysis**

# **Population Dynamics and Trends**

Langanesbyggð municipality is located in the northeastern part of Iceland. The map of population decline by municipalities indicates that Langanesbyggð experienced a significant population decrease between 1998 and 2024 (fig. 4). The decrease reached around 29 percent (Statistics Iceland, 2024) and is comparable to other northwest and northeast municipalities, in contrast to southern municipalities, and especially the Reykjavík region, which experienced a large increase in population.

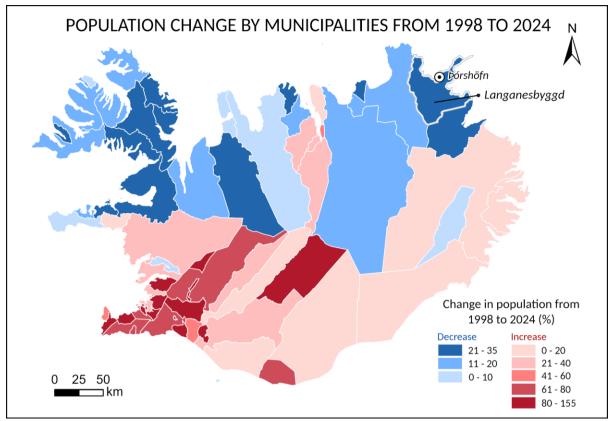


Fig 4. Population change by municipalities from 1998 to 2024 (Data: Statistics Iceland, 2024)

Throughout the years, the population of Þórshöfn locality exhibits a general declining trend with some fluctuations. The total population in 1998 was 440, which decreased by 21 percent to 345 by 2024. An increase in population is observed from 2005 to 2007, likely corresponding to the municipal merger in 2006 (fig. 5). A notable decrease is evident in 2008, likely due to the financial crisis. Male population consistently remains higher than the female population throughout the entire period. From the interviews, a slight trend of working-age women leaving the town instead of working-age men was also observed.

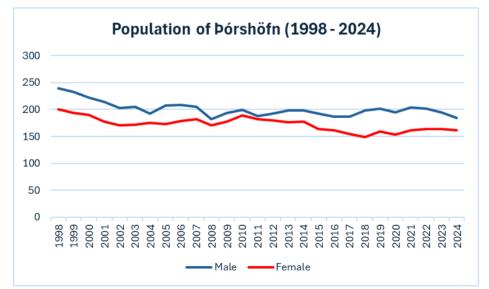


Fig 5. Male and female population in Pórshöfn from 1998 to 2024 (Statistics Iceland, 2024)

The median age exhibits notable fluctuations throughout the 1998-2024 period, with an overall median of 34 years (fig. 6). A significant rise in the median age is observed in 2008 during the financial crisis, followed by a subsequent decline. From 2014 onwards, the median age experienced another upward trend, only to dip during the COVID-19 pandemic years. In recent years, the median age has stabilized at approximately 36 years, closely aligning with the median age of the entire population in Iceland, which was 36.8 years as of 2024.

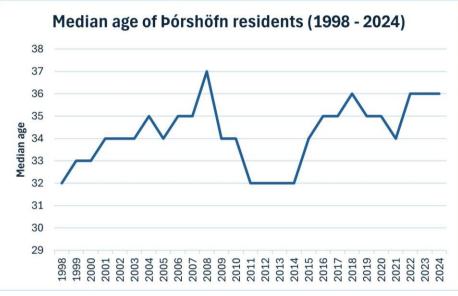


Fig 6. Median age of Pórshöfn residents from 1998 to 2024 (Statistics Iceland, 2024)

The shape of the population pyramid for 2023 shows that there are fewer individuals in the youngest age groups (0-3 and 4-7 years), suggesting a lower birth rate in recent years (fig. 7). The Working-Age Population (16-63 years) segment shows a relatively balanced distribution between males and females. The age groups 20-23 and 24-27 have significant populations, indicating a higher number of young adults. There is a noticeable decrease of male population in the 36-43 age group. In general, the pyramid shows more females in the older age groups, which is common as females tend to have a higher life expectancy. The shape suggests a slowly aging population with a relatively small base (younger age groups) and a broader middle section, indicating a larger proportion of middle-aged individuals.

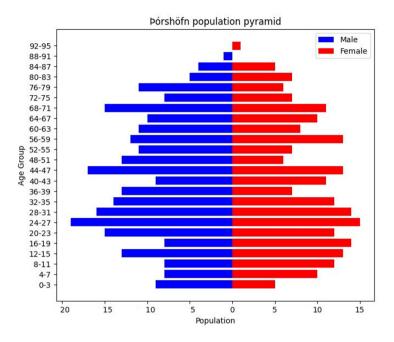


Fig 7. Population pyramid of Pórshöfn residents from 2023 (Statistics Iceland, 2024)

#### Economy

The economy of Þórshöfn is led by its fishing industry. Agriculture and tourism are also important sources of income in the town and its surrounding area.

#### **Fishing industry**

As mentioned earlier, the fishing industry has been a crucial economic sector in Þórshöfn and the northeast of Iceland for several decades. In the 1980s, when fish stocks were at risk of collapse, a quota system was introduced in 1984 to prevent overfishing, enhance efficiency, reduce costs, and maximize the revenue of Icelandic fisheries (Benediktsson & Karlsdóttir, 2011, p. 230f; Ministry of Food, Agriculture and Fisheries, n.d.). This system led to a de-facto privatization of fishing rights, which had previously been accessible to everyone and were a key source of livelihood for much of the Icelandic (ITQ) system was implemented, allowing previously allocated quotas to be freely bought and sold within the fishing industry (Benediktsson & Karlsdóttir, 2011, p. 231). This enabled large fishing companies to expand their market share by purchasing quotas from smaller operators, thereby restricting access to fishing grounds and jeopardizing the economic stability of many towns and villages throughout Iceland (Benediktsson & Karlsdóttir, 2011, p. 231).

In many cases, such as close-by towns of Raufahöfn and Bakkafjörður that also highly depended on their fisheries, a big company bought the quotas and left the towns after a short period of time, leading to drastic economic and social changes (Kokorsch & Benediktsson, 2018). When Samherji acquired majority ownership stakes of 31 percent of the local fishing company Hraðfrystistöð Þórshafnar, the municipality among other stakeholders decided to repurchase shares of the factory in 2004, thus safeguarding the town's local fishing industry (Ísfélag, 2022). In 2007, Ísfélag bought all the fishing company shares from Þórshöfn fjárfesting ehf., which held all the shares of Hraðfrystistöð Þórshafnar at that time (Ísfélag, 2022). Throughout the existence of the company, which was founded in 1969 as a

freezing plant, there have been a considerable number of mergers, ownership transfers, expansions, and big investments (Ísfélag, 2022) - some important events can be seen in fig. 8 below.

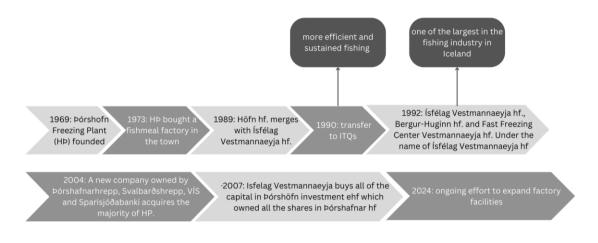


Fig 8. Important events in the history of Hraðfrystistöð Þórshafnar (Ísfélag, 2022).

Nowadays, the Ísfélag fish factory is the biggest employer in Þórshöfn, employing between 50-80 people depending on the season, according to informants. The company was founded in 1901 in Vestmannaeyjar and owns several fishing vessels as well as fish and shrimp processing plants in Vestmannaeyjar, Siglufjörður, Þórshöfn, and Þórlakshöfn (Ísfélag hf., 2022). A considerable part of the employees working in the fish factory of Þórshöfn are migrant workers from Eastern Europe, e.g. from Poland, Romania, Lithuania, among other nationalities. As the main fishing season is from July/August until October/November, many workers stay for a few months and leave after the season. Work usually takes place in shifts of 12 hours during the peak season, consisting of day and night shifts.

Many residents have a connection to the local fish factory, as they currently work or used to work there at some point in their lives. Conversations with several local people suggested that the harbor facilities as well as the fish factory seem to form an inherent part of the local identity and cultural heritage of the town. However, the relationship between the fish factory and the town's population is somewhat complicated. While the factory provides essential jobs for the community, it also creates dependence. There are ongoing efforts to expand the harbor facilities through land reclamation for a new freezer plant, evoking mixed feelings in the local community. On one hand, the investment into the expansion of the factory facilities is seen as a commitment from Ísfélag to stay in town, as the new freezer plant will improve cost-efficiency and logistics. On the other hand, some residents are concerned about the town's dependence on a single company and its strong influence on town-related matters. In many cases we noticed that residents would prefer a situation where the fishing industry consists of smaller fishing companies instead of a large, very powerful one, similar to the fisheries structure before the introduction of the ITQ system. As the expansion of the factory facilities will take up space for other vessels, locals involved in small-scale fisheries might be negatively affected.

Also, a considerable number of local residents lament the relatively low salaries for factory workers compared to other employment options, reducing attractiveness for Icelandic residents and leading to a large share of migrant and seasonal workers employed in the factory. This has implications for social aspects of community life, as described later.

As can be seen in Figure 9, most of the fisheries of the northeast region of Iceland, including the Þórshöfn harbor, are considered as vulnerable (Kokorsch & Benediktsson, 2018). Even if the fishing quotas were kept in town, the reliance on a single big company or quota holder leaves the community in a vulnerable position in case of unpredictable events, such as the loss of the factory or a trawler (Kokorsch & Benediktsson, 2018; Kokorsch, 2017).

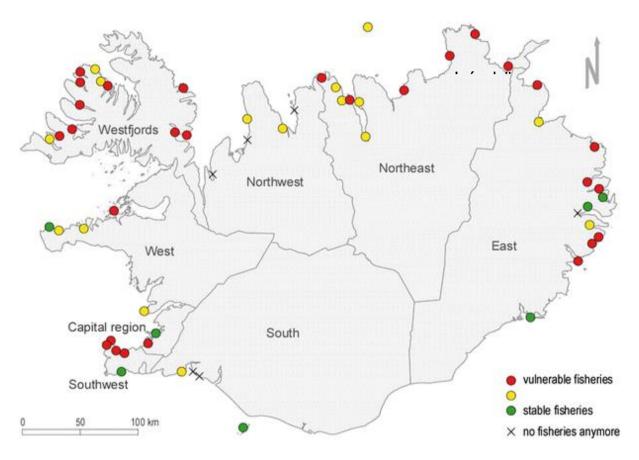


Fig. 9. "Spatial distribution of clusters in the fisheries dimension, 2014" (Kokorsch & Bendiktsson, 2018).

As can be seen in Figures 10 & 11, there are strong fluctuations in the annual catches that are landed in the Þórshöfn harbor, both in terms of tonnage and value.

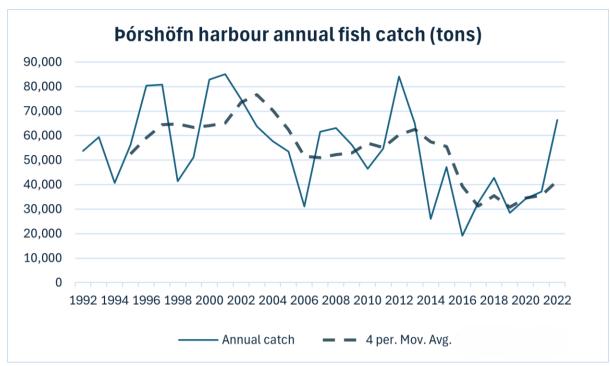


Fig. 10. Annual fish catches in Pórshöfn harbor from 1992-2022 (Statistics Iceland, 2024).

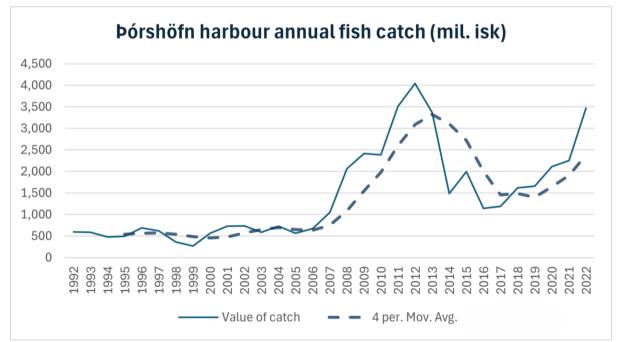


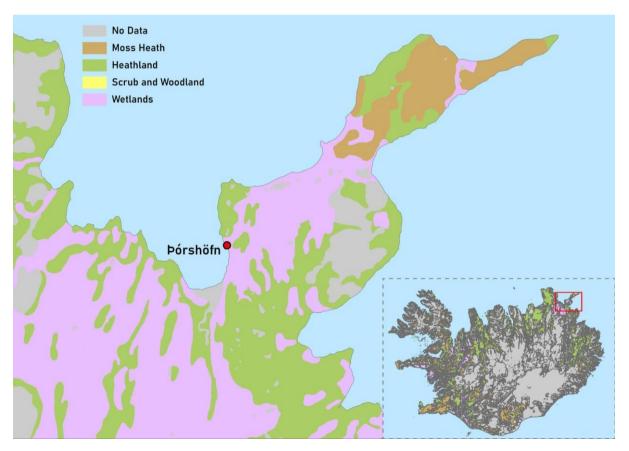
Fig. 11. Value of annual fish catches in Pórshöfn harbor from 1992-2022 (Statistics Iceland, 2024).

These fluctuations further emphasize the vulnerability of the local fishing industry, as varying landings also have implications for the activities of the fish factory, and therefore the people working there. Interesting is also the rapid increase in the value of catch from 2008-2013, followed by a drastic decline between 2014-2017, as seen in Figure 11. While we are not sure about the reasons for this development, it could be linked to the takeover of Ísfélag in 2007, the global financial crisis of 2007/2008, or other factors we are unaware of.

#### Agriculture

Historical farming practices have adapted to site-specific conditions, including soil and microclimatic variations, to optimize fodder production (Adderley et al., 2008). Erosion and soil degradation have still been long-standing issues in most of Iceland, exacerbated by livestock grazing. The introduction of livestock at the time of settlement led to extensive vegetational degradation due to the fragile volcanic soils and harsh climate (Arnalds, 1987). The integration of Iceland into international markets in the 19th century led to increased livestock numbers and intensified farming practices (Sigurmundsson et al., 2020). Over time, drivers of restoration have evolved, incorporating ecological, socioeconomic, and policy-related motivations (Aradóttir et al., 2013). Livestock farming and crop production are still affected by practices in the past, a similar story applies to Þórshöfn and the municipality of Langanesbyggð as a whole.

Agriculture is the second largest economic sector in the municipality of Langanesbyggð. Livestock farming has historically been an important part of local life, with signs of it dating back to the 12th century. The relatively flat landscape and low population density (about 0.22 inhabitants per square kilometer; Statistics Iceland, 2024) favors the sector until this day. According to the locals, farming in the region is not very profitable, but can still be considered very important, especially after the fishing quota system was introduced in 1984. There is a lot of heathland in the area surrounding Þórshöfn (fig. 12), which is suitable for livestock farming. Crops can also be grown on heathlands if the soil is properly fertilized and the acidity reduced.



*Fig. 12.* Vegetation types in the area surrounding Þórshöfn. Data: Icelandic Institute of Natural History, 2024.

In 2024, the municipality of Svalbardsshreppur was merged with Langanesbyggð. In Svalbardshreppur, sheep farming is the most important sector and because of that, a sheep figure was added to the municipal logo. The numerous sheep farms in the locality often exchange rams to diversify the herd according to locals. Sheepherding is often done collectively and farming equipment is rented out or shared between farms to reduce overall costs.

Even though growing livestock is still an important source of income for a lot of locals, the profitability of it has been declining in the last decades. Main reasons for that according to local officials and farmers are the rise of workforce costs and the importing of meat products from foreign countries.

According to a local farmer, crop production has also declined which is partly due to lower profitability and the higher cost of fertilizer because of the war in Ukraine. Extensive farming practices in previous periods that have damaged the soil quality in the region. Excessive use of fertilizers, which has been a problem in Langanesbyggð, can lead to soil degradation, accumulation of salts, and nitrate leaching (Ju et al., 2007). The profitability of crop production has also suffered partly because of rising imports from Ukraine according to the locals.

As the population of Þórshöfn is aging (Figure 6), there seems to be a lot of uncertainty regarding the future of agriculture and sheep farming in the locality. Some of the local farmers are already relying heavily on migrant workers and based on the interviews conducted, much of the local youth has left the town. On the positive side, some newcomers have started getting involved in farming in the area.

All of this considered, the agricultural industry in the municipality of Langanesbyggð might need special attention from the state and national government. Making farming more attractive in the region can help strengthen the community of Þórshöfn and the lands surrounding it. Livestock farming and crop production can increase interaction between the people of Langanesbyggð. It is also important for the food security of Iceland as a whole.

#### Tourism

Iceland's unique attractions have gradually gained popularity, leading to significant growth in tourism arrivals. From 1997 to 2007, the number of tourists more than doubled, prompting rapid expansion in the sector (Jóhannesson et al., 2010). Following the global financial crisis of 2008, Iceland leveraged tourism as a key component of its economic recovery (Jóhannesson & Huijbens, 2013). The northeastern region has seen a substantial increase in tourist arrivals, with significant economic contributions from the sector. Tourism in Iceland has traditionally been seasonal, but efforts have been made to promote winter tourism to mitigate this effect (Arnason & Welling, 2019).

As the town of Þórshöfn is far away from all the larger urban settlements of Iceland, it also felt like a periphery in the tourism industry. Foreigners passed through daily and the pressure of tourism in Iceland could some way be felt, but their stops mostly consisted of a quick lunch at the local gas station and/or just a peak in the town and the surrounding area. There are a few guesthouses in the area and some of the tourists used the opportunity to stay there overnight. The observations were made in the middle of May which is not the main tourism season, but according to the locals tourists mostly do not stay in the town for more than a day. According to the guestbook in one of the main guesthouses in the area, pórshöfn is visited not only by domestic tourists and Scandinavian neighbors (Finnish, Norwegian, Swedish), but also by tourists from other European countries including Germany, Switzerland, the Netherlands, Lithuania, Latvia, Estonia, Poland, Hungary, Portugal, Spain, Italy, France, and the United Kingdom. Additionally, Pórshöfn attracts many visitors from the USA and some from The Republic of China (also known as Taiwan), Australia, Colombia, and Israel.

The area surrounding Þórshöfn does have a unique nature (Fig. 14), including the Langanes cliff shore and large cultivated grasslands. According to local officials, there are discussions of protecting the peninsula, which would also attract more sustainable tourism. The rapid growth of tourism has led to environmental pressures elsewhere in Iceland, particularly in fragile ecosystems. Because of that, managing the impact on natural resources and ensuring sustainable tourism practices have become critical concerns in many parts of the country (Sutherland & Stacey, 2017; Figure 13). The plan to attract nature-loving and relatively small-scale tourism might not be very profitable, but may have less social and environmental downside than mass-tourism.

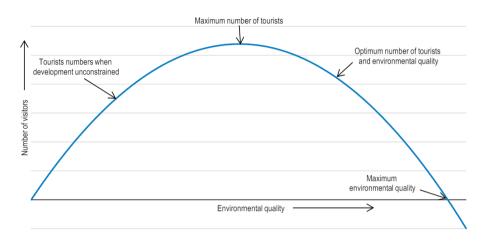


Fig. 13. Maximizing the number of tourists is not the best strategy. Source: Daubanes et al., 2017.

Even though the tourism industry of Þórshöfn does not stand out in general, there are some very profitable attractions which are mostly visited by foreigners. According to a local, there are several trout-rich rivers in the area where tourists can rent cabins, go fishing and hire a private cook to prepare food for them. According to local officials, there have also been discussions of making Þórshöfn a small-size cruise-ship destination. Despite this, officials acknowledge the lack of activities such as kayaking or hiking tours. During our field practice, we observed a few tourists who came to Þórshöfn for bird watching or egg collecting (Bjargnytjar, 2024).

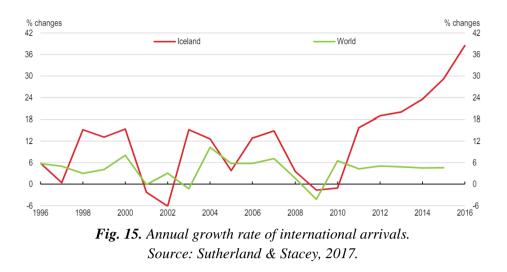


Fig. 14. The Langanes cliff shore (1) and an airplane departing from Pórshöfn airport (2).

According to people working in the tourism sector in the area, there is a lack of available housing to expand tourism and attract more visitors. However, as in most of the rural areas, building new apartments, including guesthouses, is usually viewed as a bad investment and the problem prevails.

While developing the tourism industry of Langanesbyggð, social aspects should always be considered. For example, tourism can help preserve cultural heritage by providing the financial resources needed for the maintenance of historical sites and cultural traditions (Puri, 2019). It can also attract more frequent airline connections to the airport of Þórshöfn (Fig. 14), which currently is mostly used by locals as we observed during our stay. Successful tourism development can also instill a sense of pride among residents as their community becomes a recognized destination. This pride can enhance community cohesion and social capital (Scholtz & Slabbert, 2016).

In the future, a moderate increase of tourism stays and arrivals can be expected in the town of Þórshöfn. Reasons for that are the overall growth of tourism in Iceland (Figure 15) and the rising popularity of the Northeast region. Additionally, the local government can catalyze the growth by executing the plans mentioned previously in this chapter. Sticking to the plan of supporting sustainable tourism in the municipality is probably the best way to go, Þórshöfn definitely has the natural resources to be a good example in this direction for the whole of Iceland.



#### **Innovation & Coworking**

The innovation centre Kistan, a former bank building that also comprises the post office, was founded in May 2023 and offers a space for remote work and distance learning in Þórshöfn. During our short stay in town, we were invited to use the facilities for several interviews. Since the covid-19 pandemic, there has been a significant push towards remote working and studying in many regions around the world. Consequently, these structures are nowadays more widely accepted in a large range of workplaces, allowing employees to work from anywhere, including remote rural areas (Hensher et al., 2023). This offers people more opportunities to live and work outside of urban centres compared to before the pandemic.

By providing a suitable and supportive working environment, there is a good chance that workers and students get attracted to the region, or are more likely to take up job offers or study programmes without having to move to Akureyri, Reykjavik or other regional centres. It is also likely that innovative ideas will be developed in Kistan, thus helping to diversify the local economy.

#### Outlook: Finnafjörður Harbor Project

As climate change exacerbates the melting of sea ice in the Arctic, opportunities for the international shipping industry arise. Shipping through Arctic waters has the potential to decrease sailing distances (and consequently fuel costs) from Europe and the east coast of North America to Asia drastically (Melia et al., 2016). Today, the Northwest Passage along the Canadian Arctic and the Northern Seas Route along the Russian Arctic coast are the two only possible shipping routes for short periods of time during the summer (Østreng et al., 2013). However, the prospect of an ice-free Arctic Ocean in summertime, even shorter distances and avoidance of tariffs and jurisdictions from Canada and Russia attract shipping companies to develop infrastructure for trans-polar shipping routes (Østreng et al., 2013).

Finnafjörður offers ideal physical features for a large-scale transit shipping harbor in a strategic location for the Transpolar Sea Route. Bremenports initiated the project in 2012, however, its outcome remains unclear. According to Bremenports (n.d.), the construction phase was planned to start between 2021 and 2023, and is supposed to finalize in 2040. The facilities would, if successfully constructed, be used for multiple purposes besides the shipping, e.g. green hydrogen production, water desalination, agribusiness, and processing of raw materials (Bremenports, n.d.). However, at the moment there is no

information available about the state of the project. It is also noteworthy that the topic was barely mentioned throughout the conversations with informants, even though an infrastructure project of that scale would be a drastic shift in the social, demographic, and economic composition of the region.

#### **Social groups**

In Þórshöfn, the population is notably segmented into various groups and subgroups, each exhibiting distinct social dynamics and limited interaction with other segments. This fragmentation results in a community structure characterized by insularity and compartmentalization, where individuals primarily engage within their specific subgroups rather than the broader community.

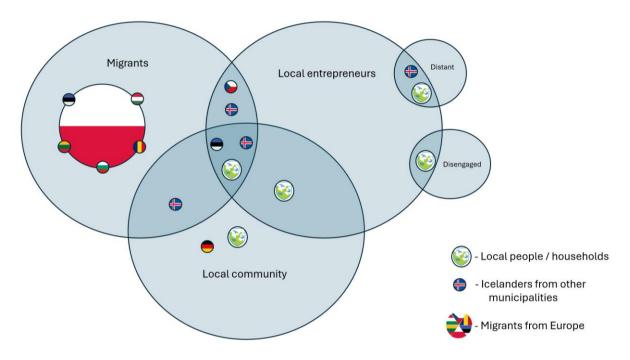


Fig. 16. Venn diagram of Þórshöfn's community subgroups.

Labor migrants predominantly communicate with locals regarding work and brief encounters, such as greetings in local shops. According to Bulgarian workers, a significant subgroup of labor migrants from Poland speaks so extensively in Polish that other smaller national groups have started learning the language instead of Icelandic or English. There are exceptions, mostly labor migrants and seasonal workers who are not working for the fish factory. For example, some seasonal workers on local farms actively interact with the employer's household but not with the broader community. In other cases, seasonal workers married locals and are on the path to Icelandic citizenship, actively communicating and integrating into Þórshöfn society. Finally, some seasonal workers found strong social ties with members of the community and returned regularly to help out in different projects.

Inland migrants add to the complexity; some are attracted by job opportunities, while others, originally from the town, had left for urban areas seeking education and possibilities before returning to the birthplace. Usually family connections are an important factor to return into the town. Contrast to them, there are disengaged residents who do not perceive themselves as part of the community, despite living and working in the town. Additionally, geographically distant individuals from nearby lands come to the town and regularly use the services without integrating into the community.

Figure 16 provides an overview of the various groups and subgroups within the town and their overlapping.

#### Social life

The town has one grocery store and a small restaurant at the petrol station. Grocery store prices are considered lower than in most rural areas, however some people, and especially migrants, occasionally drive to Húsavík and Akureyri for shopping in supermarkets like "Nettó" and "Bónus". The petrol station provides locals with hot meals and coffee, as well as a shop with tools and essentials. Every workday during lunchtime, the petrol station becomes frequented with workers. Most informants acknowledged this place as the most popular public place in the town.

Þórshöfn pool and gym building is an important landmark in the town, serving as a key recreational facility. However, during our observations we mostly met migrants and tourists rather than local residents, despite the common pool culture in Iceland.

School provides activities to the children such as theater class and sport games like football, basketball, javelin throwing and basic exercises. However, limited supply for hobbies and growing opportunities still are one of the reasons young people leave Þórshöfn for regional centers.

Periodic major events take place at the local community center's hall: performances, concerts, speeches, celebrations. In addition to the hall, in the near future a new restaurant will open in the community center building, which was expected to help diversify leisure activities. Local young people, as well as migrant workers, complain they need to drive about 250 kilometers to Akureyri for activities, so they mostly support establishing the restaurant.



*Fig.* 17. Local community center building. Image taken by observers (1). Meeting with Katrín Jakobsdóttirwith, candidate for upcoming presidential elections. Image from Katrín's Instagram (2).

#### Logistics

Iceland's climate and landscape challenges drivers, forcing use specific for northern countries such as nailed tires and high suspension. That is the reason most popular cars are off-road vehicles and pickups. Based on the above mentioned challenges, Þórshöfn's car repair is especially vital for neighboring areas and discouraged households. It provides specialist service, tow trucks in case of accidents, tire changes, and orders of needed parts from southern Iceland. In addition, Þórshöfn has the only petrol station for more than 60 kilometers. For electric car users the town provides two electric vehicle charging spots.

People in Þórshöfn strongly depend on cars due to the insufficient availability of public transportation. Few people could be observed walking outside, while most prefer to use the car for short distances within the town. Usually the ones who go by themselves are young mothers with strollers and dog owners. Even though cars are more in usage, sidewalks are in good condition and there were no complaints from the ones who used it. All houses have big parking slots, and many families own at least two cars.

Besides using cars, residents of Þórshöfn can use the nearby airport for faster transportation. Norlandair provides regular flights from Þórshöfn to Akureyri, price for a ticket is about 10.000 Icelandic krona. There are discounts for six flights per year for locals with the Luftbrú program, however the high cost and rare discounts makes it profligate for regular usage by locals. For a long time there were discussions between locals about whether it was necessary to continue the subsidization programme of small local flights. From one side planes regularly depart empty and are therefore not profitable, from another side some locals use plane flights because of its advantages. In February of 2024, a survey was published about plane usage and passenger desires. The survey showed passengers mostly used flights for faster travel to the capital area, mostly flying 1-6 times per year, and half of responders would prefer a straight flight to Reykjavik over Akureyri (SSNE, 2024). Airport workers who are against changing the flight connection realized that nowadays passengers can fly to Akureyri as one of the flight destinations. According to Statistics Iceland (2021), in the year 2021, the airport of Þórshöfn served 964 passengers, 15 of them were cared for by ambulance flights.

#### Local Perspectives: Þórshöfn Survey

30 respondents took part in the survey, of whom 27 or 90% were locals and the rest were visitors. Among the locals, more than half grew up in the city. 70% of respondents have at least one child.

To the question how are participants attached to the place, the majority of participants chose family (Figure 18). Such environmental factors as peaceful life and landscape are also popular for a large group of residents. Property and job are economic factors that significantly attach people to the town. Low population was expected to be less popular than other options, and still one third of respondents think a large population would tear up connection to the town.

 Hvernig ert þú tengdur þessum stað? Veldu eins marga og þú vilt How are you attached to this place? Choose as many as you want.
 <sup>30 responses</sup>

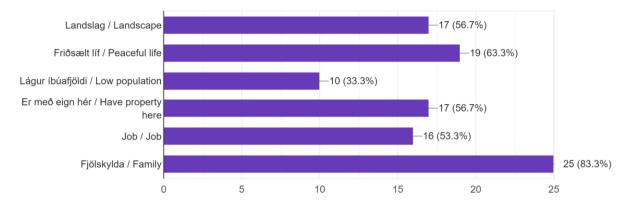


Fig. 18 Answers for 5th question from the survey.

According to the survey for residents of Þórshöfn, social factors such as family and community were chosen as main factors for staying. Additionally, relative low prices and availability of a workplace are economic reasons that motivate people to stay. The natural environment also attaches more people to the area than it repels. However, at the same time economic struggles and insecurities are tied with social problems such as gossip, lack of entertainment and distance from highschools. The survey results confirmed what we often heard in conversations with informants, that Þórshöfn momentarily cannot offer a suitable environment to attract or make young people return from large urban areas like Akureyri and Reykjavik. Moreover, sometimes parents are ready to follow their kids wherever they go to high school. Overall, according to survey's responses of childless participants, their motivation to stay in town is mainly linked to economic reasons. They also suggest that if they had children, they would rather consider leaving the town.

# **Education and Demographic Insights**

According to the demographic data, the population of the city is declining, although the decrease is not easily evident. This information can be found in the Results and Analysis chapter, specifically in the Population Dynamics and Trends section. The village is remote, yet it has a tightly-knit society where familiarity is widespread. The overall land area measures 2 400 square kilometers, and the population density is five individuals per square kilometer. What is the demographic composition of the population? During the observation, several women pushing strollers were noticed. Conversations with informants indicated that none of them would like to have more than three children. Additionally, some consider relocating from the city in search of better work prospects. Nevertheless, the limited prospects and lack of available daycare were mentioned as issues. First, they do not have consistent access to medical treatment for their children. In the event that parents require immediate resolution of issues with their children while having a doctor in the vicinity, they must undertake a journey of 160 kilometers to reach the nearest hospital. The doctor visits the town biweekly due to the low staffing capacity at the local clinic. In addition, there was a scarcity of recreational options and a lack of motivation among the population to engage in activities. What influences the future growth of leisure activities.

There is a single kindergarten and a school. The head teacher reports that there are a total of 20 children in the kindergarten. The population is hence not declining as significantly as anticipated. Adjacent to the kindergarten, there is a park featuring a playground. Additionally, a trampoline can be found near the swimming pool, which is located a short distance away. However, during the surveillance, only two children were observed playing there. However, these locations were consistently filled with a large number of people. Despite the local school's efforts to arrange various recreational activities such as swimming, sports, and art, children only engage in these activities within the school premises during the academic year.

Regarding the school, there were a total of 55 students enrolled as of May 21, 2024. These students come from a wide area and are picked up every day by a bus driver who travels about 200 km every day. Nevertheless, during the two decade long service of the former head teacher, there has been a notable decline in the student population, which initially stood at approximately 80 children. The classrooms are grouped together, with grades 1 and 2, grades 3 and 4, grades 5 and 6, 7 and 8, and grade 9 is taught separately. The majority of the children are Icelandic, but a minority consists of immigrant children, such as those from Poland. Due to the availability of Icelandic language courses at the school, the students are able to acquire proficiency in the language, despite it not being their native tongue. Consequently, they can seamlessly assimilate with their peers. The entire school has a total of 16 staff members, 12 of which are instructors. Two of these teachers are from Revkjavik and do not have a specific subject concentration, therefore they teach a variety of subjects. Additionally, several of the teachers also serve as class teachers. Due to a shortage of qualified teachers, local individuals are being recruited to fill these positions. While they may not possess the required qualifications, they do have the advantage of being familiar faces to the children since their early years. Consequently, both the children and their parents are more likely to place trust in these individuals. From their viewpoint, it may appear quite favorable, but among the upper echelons, it might lead to dissatisfaction that youngsters are not receiving a sufficiently high standard of education. However, in the event of the school's closure, a significant number of families would be attracted away, not just from Þórshöfn, but also from the surrounding region. Furthermore, the school does not have any financial constraints, hence it obtains ample resources to foster innovation.

The issue lies with the high school kids who must go to either Reykjavík or Akureyri in order to receive a secondary education. This phenomenon is part of a prevailing pattern in Iceland, where smaller towns like Þórshöfn experience it to a greater extent, particularly when students choose not to come back to their hometowns. Although the kids are granted autonomy in decision-making, further investigation has revealed that there is a certain degree of societal influence on pupils, compelling them to return to the city. Their departure is correlated with the challenge of securing a steady and lucrative employment opportunity, which is a priority for numerous young individuals who aspire to establish themselves. Individuals in Þórshöfn engage in multitasking or undertake multiple roles within the town. Conversely, the prevalence of multitasking among individuals in this context fosters a heightened sense of independence. This may be attributed to a scarcity of resources to compensate for these jobs individually. However, a significant number of students choose to come back to the town, primarily due to their familial connection and heritage, and strong connection with the community (see, eg. Raymond et al., 2010, p. 423).

Consequently, the entire population is seeing an increase in age (refer to the Results and Analysis chapter for further details). Þórshöfn is home to an elderly care facility. However, the elderly perceive it not as a delightful getaway, but rather as a residence to transition to during the final stage of life. An elderly informant stated that "it is well-known that entering this house will result in death". Despite the

restorations and endeavors to enhance the reputation of the town, it is sometimes perceived in a negative way.

The general perception of the future of this town is predominantly optimistic rather than pessimistic. According to numerous interviews, individuals believe that the population may experience a modest increase. The residents desire an increased presence of youngsters in order to perpetuate their heritage and sustain the community. Nevertheless, it has been pointed out that the death of prospects for young individuals may result in a greater migration to major urban centers in search of better chances.

#### **Migration patterns**

Þórshöfn has both internal and external migration patterns affecting the possibilities of right-sizing in the area. Both the immigration and the emigration patterns have seen yearly fluctuations, but stabilized to a level of a total of 100 emigrants and immigrants per year in the whole municipality of Langanesbyggð (see Figure 19 and 20). Major migration patterns include the immigration of fish factory workers to the Isfélag fish factory, mainly from Eastern Europe. Secondly, the emigration of local Icelanders who seek education and work opportunities in bigger urban areas such as Akureyri or Reykjavik is a pattern seen in Þórshöfn. There are also emigration patterns of local residents who have moved abroad. Interviews which included this emigration factor gave insights to people seeking work in other Nordic countries, especially. Seasonal workers also emigrate each year back to their home countries.

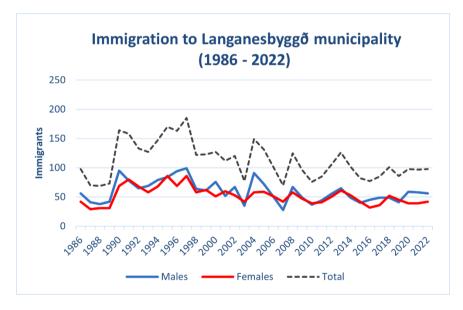


Fig. 19. Immigration to Langanesbyggð, yearly data between 1986-2022. Source: Statistics Iceland.

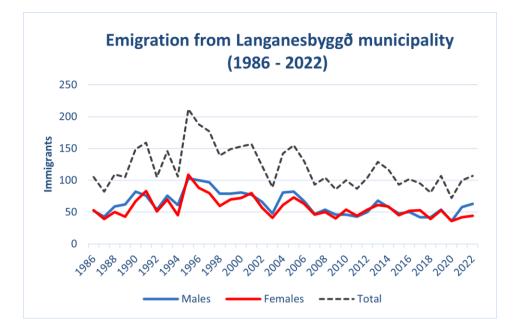


Fig. 20. Emigration from Langanesbyggð, yearly data between 1986-2022. Source: Statistics Iceland.

The emigration of young residents who have been brought up in the town seems to be happening partly due to administrative reasons, as the town of Þórshöfn, nor the Langanesbyggð municipality as a whole, have educational institutions from upper secondary level onwards. This forces most under-age residents to leave the town and the farms surrounding it at the age of 16 years, approximately. There is a remote studying possibility for upper secondary students, but studies may last for a longer time when choosing that option. This might affect the migration pattern of emigrating Langanesbyggð youth to be more prevalent than if the municipality had an upper secondary school for offline learning.

Emigration of working-age residents seems to happen mainly due to the lack of job opportunities in the town and the surrounding municipality. This was observed in multiple interviews. Especially, people with higher education do not have many opportunities in the town. As one interviewee said:

#### "They have their dreams elsewhere."

Some highly educated individuals who have settled down in the town, do not have plans to move from the town, as a life in a busy urban region cannot offer a life as less stressful as Þórshöfn. Additionally, the lack of varied job opportunities makes it more challenging for one's partner to settle down in the town.

The emigration possibilities of the elderly will be realized, according to the interviews, if their descendants will move away from the area. Their age itself tended not to be a factor in making a possible moving decision. Family migration is one of the most prevalent forms of internal and international migration, as family can be viewed as a major attraction factor when an individual has multiple family members at the same location (Thomas & Dommermuth, 2020, p. 1463).

The emigration patterns of Þórshöfn may be partly balanced in numbers by internal migration back to the town in addition to the effect foreign migrants have. In global observations, migration can provide an important skills boost in the 'host' country and help to conquer the problems for town development surfaced by a population decline and aging (IOM 2024, chapter 1). It seems from the interviews that the internal migrants have a family connection to the town. They have been brought up in Þórshöfn, or their parents or other relatives live in Þórshöfn or the surrounding area. These internal Icelandic

immigrants seem to be, according to the interviews in the town, mostly working age former Þórshöfn residents, or former residents in their early 20s who had been studying in the upper secondary level in a larger town or city in Iceland. This pattern of migration is of importance, as place identity is strongly related to residential history (Raymond et al., 2010, p. 425).

The immigration patterns from East Europe seem to have slowed down the shrinking in the town for now. The former seasonal workers of the fish factory and construction industry are becoming more permanent, at least the ones interviewed for this study, as they have decided to stay and work for the whole year, and rent or even buy a house. Additionally, some seasonal workers do not come back. The reasons for this were not collected, as they may vary significantly and cannot be included in this short study. It was discussed in the interviews that the low-salary work in the fish factory of farms may not be enough for the immigrants and the young locals when settling down or having a family. For the young locals, the work in the fish factory or the farms is seasonal work in between the study year in larger towns. Therefore, the seasonal work seems to rather create a dependency of emigration instead of settling down in the town.

There was a strong tendency that the immigrant community and the local (Icelandic) community were mostly separated. Their social circles did not match and they did not have a common language, or common freetime activities. In addition, some immigrants had been integrated in the community life of Icelanders more strongly than the seasonal workers, especially in the fish factory. Seasonal workers in the farms were more integrated in the community than the seasonal workers or even the permanent workers in the fish factory. This has major influences for the creation of sustainable social life in the town as some of the immigrants are more attached to the place and have a greater role in the community life than others. Especially some of the Polish immigrants who had been in the area for decades and formed a family in the area, illustrated a conflicting pattern of integration to the community.

Another migration pattern is related to town development and planning. As the area lacks a skilled workforce in many sectors, the town is hiring contract workers who come from outside the town. We met construction workers from Husavik and Akureyri. Some workers were from the town. This practice of hiring contract workers has an effect on rental housing and subsequently also the tourism sector in the Langanesbyggð area. Multiple groups seek a bed in the same housing, eg. guest houses in the region, especially during the summer months from May to August.

Additionally, the lack of entertainment possibilities in the town makes people move and drive to bigger cities such as Akureyri, which has bars, clubs, restaurants, and more varied sports activities for children.

In conclusion, the possibilities of right-sizing in Þórshöfn are greatly influenced by the emigration from the town and the immigration to the town. Especially the emigration of young residents to the upper secondary level to larger towns, and the emigration of working age residents who seek more varied job opportunities for themselves, and more freetime activities for themselves and their children.

# Discussion

#### Place attachment affecting right sizing strategies

According to our study, place identity is formed in a strong relation with earlier residency in Þórshöfn and the municipality of Langanesbyggð in general. This physical relation makes people move from larger cities back to Þórshöfn and creates a strong affective factor for right sizing rural development in the region. Therefore, the demographics of the town are significantly interlinked with place attachment and attachment theory (see eg. Tomaney et al, 2023; Bowlby, 1997), especially for Þórshöfn-born locals. Subsequently, this forms an interesting basis for analyzing right sizing of the tight community, which also has been quite international throughout the years according to field observations and statistics referred to in this study.

Simultaneously, some of the community members felt that their town was 'left-behind' and isolated from the development of Iceland as a whole. This was also highlighted by the lack of certain infrastructure, such as paved road networks inside the municipality, 5G internet, or few educational institutions in the area. Moreover, not all the community members were connected in the social infrastructure of the town, meaning the physical places and organizations (Tomaney et al., 2023), such as the community house and its events. A major factor of exclusion from the community was the lack of knowledge of the Icelandic language and seasonality of work. These challenges might reproduce feelings of detachment from the community and development in urban areas in Iceland, affecting political developments, for instance.

Conversely, the immigrant community of Þórshöfn developed their sense of place attachment through a variety of meaningful experiences and associations. The seasonal workers in the town constructed their place attachment through their personal objectives of income gain, while more permanent residents valued the surrounding nature, and some had already formed family connections to the town. The connections to the social life and social infrastructure of the community varied greatly between different groups of immigrants, which poses challenges to sustainable social and economic development in the town.

The right sizing of Þórshöfn would have more stable grounds if the place attachment of the different resident groups was more even. At this stage, it seems that the ones having the strongest place attachment, due to family, former residential history, or permanent employment relations, stay in Þórshöfn feeling strong attachment, while seasonal workers and immigrants are more prone to leave the town feeling less attached to the town. This creates challenges for stable pathways of change as a slowly decreasing pool of residents, due to aging population and internal migration patterns towards larger urban areas, is actively engaging in the local configurations, or the formation of nodal points (Wilson, 2012, p. 112) of right sizing. Making nodal decisions which concentrate on creating sustainable future pathways for all resident groups in the town would make right sizing a strong reality.

#### Future pathways and scenarios for Þórshöfn

Population shrinkage of larger regional centers and cities can have an effect on the development of small towns such as Þórshöfn. This happens through the motivations of abandonment which residents of larger towns such as Húsavík or Akureyri may have. Population shrinkage which has occurred in Þórshöfn may have a counterforce from the counterurbanisation movement to the countryside from more urbanized areas (see, eg. Andersson, 2009: 3; Mitchell, 2004) in Iceland and globally. The impact of immigration, in addition to this domestic migration pattern of counterurbanisation, could have

significant influence on the development strategies of small towns in Iceland. The existing human capital and knowledge in Þórshöfn, such as its established fishing industry, its long history of agriculture, especially sheep farming and equestrian facilities, and the starting tourism industry of the town, will also direct the motivations of new residents coming to the town.

The gradual emergence of new economic sectors could also be supported through the establishment of additional communal spaces in town, where community members can meet and engage with each other. The plans to open a new restaurant and a bar can be helpful to strengthen the social ties between residents, but ideally, improved community engagement and spaces for intercultural dialogue can assist to overcome the perceived division between the different local subgroups.

As existent in Raufahöfn, a small research center could also be beneficial to the community by promoting citizen-science, attracting researchers, locals, and visitors alike. This can engage the community to help evolve a better future as well by having a more diversified basis of human capital and education in the area. A center for research could also be used as a communal space such as a small library. A more balanced economic development needs gradual and slow diversification of economic sectors in the town, for instance in terms of developing a sustainable tourism sector in the town.

When it comes to harnessing the benefits of sustainable tourism, there are numerous measures that can be taken to enhance the appeal of the place to tourists without compromising its cleanliness and serenity. Firstly, it is recommended to construct a tourist center that can comprehensively provide information about available activities and places to visit. The primary issue that has to be addressed is the consolidation of the data and information present on the website. Inconsistencies between the opening hours listed online and the actual operating hours can have a notable impact on visitors' perception of a place, particularly during the off-season when they are seeking attractions to visit. This is especially relevant for places like the Sauðanes House, a museum located near the airport in the region. Local residents also engage in the practice of gathering Blackbird eggs from the cliffs in the region. This unique and intriguing pastime may potentially attract the attention of tourists if it were more prominently showcased within the town. To tap into the farmers' potential, a partnership may be established with the local government to allow tourists to visit the farms, observe traditional cultivation practices, and potentially purchase agricultural products directly from the farmers. Nevertheless, the primary draw may be the lambing season, which showcases the complete process and the farm's overall adjustment to the season. The quality of the accommodation on offer is very good and the fact that there is not much of it is not a bad factor at all, at least it will not have the potential for massive tourism.

As a result, the possibilities of different right sizing strategies in Þórshöfn are dependent on the pathways created in the community (see eg. Wilson, 2012). There is a crucial need to break the path dependency of excluding newcomers and other community members in Þórshöfn. The newcomers are also responsible for looking at Þórshöfn and its community without prejudices. This would make space for a more balanced social development which would create path dependencies towards stronger social capital in the town (Wilson, 2012, p. 112). Additionally, the dependence on the monogamous economies needs to be alleviated. These path dependencies can be changed with human decisions at the communal level to which Iceland offers a great administrative framework (Hlynsdóttir, 2018).

#### Scenarios

#### 1: a slow shrinkage of Þórshöfn

Despite the slowly declining and aging population, and the division of the local community into pockets of locals and immigrants, Þórshöfn is able to right size itself by allocating tax money into crucially needed services such as quality health care and schooling. It is also able to attract new residents, especially labor migrants who work in the fish factory, and some highly educated internal and international migrants who work remotely in Kistan, the innovation center in the town. The town uses the strategy of smart specialization and expands and diversifies its tourism sector. This is enabled by the protection of the Langanes peninsula, and respect for local culture and practices.

#### 2: a slow growth of Þórshöfn

With the expansion of the fish factory and the simultaneous emergence of other industries that could lead to a diversification of the local economy, Þórshöfn could attract outsiders with a variety of professional backgrounds while increasingly keeping locals attached to the area. Kistan could play a crucial role in the regional development of Langanesbyggð by fostering innovation and supporting local entrepreneurs. The slow growth of the town could alleviate the housing problems by improving the conditions for financing the construction of new housing. By improved social spaces and services for the community, the social cohesion could be enhanced.

#### 3: a peripheralization of Þórshöfn

Since the introduction of the quota system in 1984, Þórshöfn has experienced a slow decline of population. Even though the local fish processing factory and harbor did not experience a decline in yearly fish catch and turnover, it was given into the hands of a big company, which weakened local entrepreneurship and the strength of the community. Until today, Þórshöfn has managed to keep considerable activity and development, but if certain people and precious memories leave, life of the local community can be very vulnerable to future changes. If the community weakens, there might not be a reason to keep the fish factory in Þórshöfn. The fishery is already considered vulnerable by some measures (Kokorsch & Benediktsson, 2018). Closing it can catalyze a more rapid decline of population and local identity, which will lead to the peripheralization of Þórshöfn, one of the northernmost towns of Iceland.

# Conclusion

This study paper addressed three questions relating to rural development in Þórshöfn. The first question dealt with the existing possibilities for right-sizing in the town, the second one with socio-economic path dependencies affecting the town's development, and the third one the creation of place attachment.

The existing possibilities of right sizing in Þórshöfn are related to the diversification of the local economy and a stabilization of population dynamics. Through the development of sustainable tourism, especially in relation to the surrounding nature, a new pathway for rural development could be created. The diversification of the local economy also relates to more varied job opportunities which need, for instance, remote working possibilities in the area.

The socio-economic path dependencies are created by existing and historical events and investments in the town. The fish factory has been in the center of local path dependencies, both in terms of demographic change and the growth or shrinkage of local economies. A major nodal point, or a turning point in terms of local decision making, has been the mergers with larger fishing companies. This has given an opportunity to keep the factory in the town.

Place attachment is created through strong place identity and place dependence. Þórshöfn lacks both of these as a community as a whole. Some groups of residents are more deeply attached to the town and its surroundings than others. The contrast in the difference between varying place attachment is particularly seen between locals and most immigrants. A solution to the contrast could be seen with the inclusion and integration of newcomers to the local community, and the increased use of already existing communal buildings and public spaces.

We believe that scenario number one, so the current development, is the most likely one to occur, and the most beneficial for the town. Most people see shrinking in a negative light, but with the former statement, we conclude that slow shrinking of population or some economic sectors may be seen in a positive light, and have a development strategy at the local level.

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#### Appendices

**Appendix 1. Interview questions for informal interviews** 

- 1. Are you a permanent resident or a seasonal resident in Pórshöfn? For how long?
- 2. What are the most frequented places you visit in town? Why?
- 3. What would be a factor that makes you move from Pórshöfn? Why?
- 4. What would be something that you would like to see in the town?

Appendix 2. Interview questions for the primary school principal

- 1. How would you describe Pórshöfn?
- 2. How has the number of children developed in Pórshöfn?
- 3. What would happen if the school was closed?
- 4. If there was a high school would that change something for the town?
- 5. What would be something that you would like to see in the town?

Appendix 3. Interview questions for the mayor of Langanesbyggd

- 1. How would you describe Pórshöfn?
- 2. What are the biggest challenges in the town?
- 3. What would make a significant difference in the town?
- 4. What is the stage on the follow up on the general plan? Have the objectives of the general plan been realised? (Any contacts who would know in depth that we could contact)
- 5. Are there any plans on expanding services in the town? (aging)
- 6. What is the role of the fish factory for the town? (immigrant question)
- 7. What is the role of tourism in Pórshöfn in the future?
- 8. Do you think housing is an issue? If yes, how is it tackled? Is there an interest in vacant plots?
- **9.** Infrastructure: Are there any plans to renew the grid? Why is the new road needed?

# 10. Environmental officer's role (locals hunt and fish - the small vessels - any connection?)

# Appendix 4. Survey. Questions and example of answer

/24, 1:23 PM	Local Perspectives: birshofn Survey	5/24/24, 1/23 PM Local Perspectives: Dirshofn Survey		
		2. Ólst þú upp í Þórshöfn? *		
		Did you grown in Þórshöfn?		
Local Perspec	ctives: Þórshöfn Survey	) Já / Yes		
Hallo! Við erum nemendur frá ervópskum háskölum sem taka þátt í NordPlua verkefninu sem fjallar um dreifbýli á Íslandi. Við viljum gjarnan spyrja ykkur nokkurra spurninga því við munum heimsækja bæinn ykkur fljótigas og viljum ikar al heimamönnum. Þú getur fundið nánari upplýsingar um verkefnið okkar og níðurstöður á Jepsari vísfálju.		<ul> <li>Nel/No</li> </ul>		
Við þökkum fyrir alla aðstoð! V	voz. /ið verðurn á Gistihúsinu Lyngholt frá 18. til 22. (um morguninn). Endilega bjór eða hvað sem þú vilt. Ef þú vilt frekar skrifa getur þú náð til okkar á	Local Perspectives: Þórshöfn Survey		
Facebook. Þú getur svarað á e	nsku eða íslensku.	2. Kemur þú úr dreifbýli eða þéttbýli? *		
Takk fyrir og eigðu góðan dag!	0	Are you come from rural or urban area?		
Hello! We are students from Eu	uropean universities taking part in the NordPlus project, which looks at I love to ask you some quick questions because we are visiting your town	🔘 Dreiftzýli / Rural		
and want to learn from the loca website.	als. You can find more details about our project and results on this	○ béttbýli / Urban		
	e staying at Gistihúsið Lyngholt from the 18th to the 22nd (morning).	0		
Feel free to drop by for a chat of	over coffee, beer, or whatever you prefer. If you'd rather write, you can n answer in English or Icelandic.	Local Perspectives: Þórshöfn Survey		
Thank you and have a great da		Local Perspectives: Porsnoin Survey		
		3. Hver er fjölskyldustaða þín? *		
4 P.4. 7. 9		What is your family status?		
<ol> <li>Ertu ibúi, gestur eða átt ‡ Are you resident, visitor or d</li> </ol>	do you own a summerhouse?	Einhleypur / Single		
		O Í sambandi / In relationship		
Íbúi / Resident		Giftur / Married		
Gestur / Visitor				
🔘 Eigandi sumarbústaðar O	wner of summerhouse /			
		4. Áttu börn? *		
Local Perspectives: Þórshöf	fn Survey	Do you have kids?		
		Nei / No		
		🔘 Já / Yes		
/24, 123 PM	Local Perspectives: Infrshofm Survey	5/24/24, 1/23 PM Local Perspectives: Lenshoft Survey		
Ef þú átt börn, hve mörg? If you have any children, how many?		8. Would you reccomend to live in Þórshöfn? *		
II you have any children, no	w many:	1 2 3 4 5		
		Not reccomend O O O Would reccomed		
Local Perspectives: Þórshöf	fn Survey			
		This content is neither created nor endorsed by Google.		
<ol> <li>Hvernig ert þú tengdur þessum stað? Veldu eins marga og þú vilt * How are you attached to this place? Choose as many as you want.</li> </ol>		Google Forms		
Landslag / Landscape				
Friðsælt líf / Peaceful lífe				
Lágur íbúafjöldi / Low pop	pulation			
Er með eign hér / Have pr	roperty here			
dot / dot				
🔲 Fjölskylda / Family				
Local Perspectives: Þórshöf	In Survey			
C Milestowedd be e this	elizates units also 2 (feel fees to engine			
<ol> <li>What would be a thing me Buying a house</li> </ol>	otivates you to stay? (feel free to answer in Icelandic)*			
7. What would be a thing ma	akes you move?*			
New experiences				
Local Perspectives: Þórshöf	In Survey			
	GoFMFb0YUHkZMWz6g1JE7B3CQBwoKvQA/editiresponse=ACYDBNgyVR9u/2qQd0GCGLDV 3/4	https://docs.google.com/forms/dr/1FeyJTD5r2bGoFMFb0YUHkZMWz6g1JE7B3CQBwoKvQA/edit#response=ACYDBNgyVRRu/2qQdOGCGLDV		

**Appendix 5. Expanding of fishing factory** 



Source: Taken by researchers (22. 05. 2024)