Essential rural services in the Nordic Region

– Challenges and opportunities

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Preface

As part of the Nordic Co-operation Programme for Regional Development and Planning 2021-2024, three Nordic thematic groups have been established in the following areas:

- Green and Inclusive Rural Development
- Green, Innovative and Resilient Regions
- Green and Inclusive Urban Development

The groups were set up by the Nordic Committee of Senior Officials for Regional Policy (EK-R), and the members are representatives of relevant ministries, national authorities, regional authorities and cross-border co-operation committees. One purpose of the thematic groups is to implement the co-operation programme by contributing to the exchange of knowledge and experience between regional policy stakeholders, by promoting Nordic perspectives and by highlighting the importance of regional policy issues for the Nordic Vision 2030; to be the most integrated and sustainable region in the world.

This report is the result of work conducted for the Nordic thematic group for Green and Inclusive Rural Development. This group brings national and regional development representatives and experts together to develop and share new knowledge and to create Nordic added value through collaboration. The group provide valuable input to policymakers and planners at the national, regional, local, and cross-border levels to develop and plan for green and inclusive rural areas across the Nordic Region. The group decides together what activities to conduct, and the researchers involved are responsible for the implementation and results.

In this report, a knowledge overview of service provision and access to services in Nordic rural areas is presented. The challenges and opportunities identified for rural service provision in this report have potential for Nordic learning as well as contributing to the discussions of how to ensure a safe, secure, and attractive rural Nordic Region. The authors would like to thank all the members of the Nordic thematic group for Green and Inclusive Rural Development for sharing their knowledge and experiences about the topic.

Svensk sammanfattning

I den här kunskapsöversikten analyseras hur grundläggande servicebehov för samhällsgrupper och landsbygder i de fem nordiska länderna och tre självstyrande regionerna kan förstås och definieras, och hur utmaningar att förse personer på landsbygden med service kan lösas. Rapporten är en del av projektet "Service provision and access to services in Nordic rural areas – secure, trusted and for all ages", och är framtagen som ett uppdrag från den Nordiska Tematiska Gruppen för Grön och Inkluderande Landsbygdsutveckling, vilken i sin tur är en del av det Nordiska Samarbetsprogrammet för Regional Utveckling och Planering.

Modellerna för välfärdstjänster i de nordiska länderna har många likheter. De 'nordiska modellerna' är understödda av ett 'socialt kontrakt', vilket omfattar kollektivt ansvar att från samhället tillhandahålla viss service som upprätthåller grundläggande mänskliga behov, såsom hälso- och sjukvård, och utbildning. Efterfrågan på service förändras över tid, bland annat till följd av demografiska förändringar, klimatförändringarnas effekter, globalisering och andra faktorer. I rurala områden kan, som exempel, en generell befolkningsminskning skapa utmaningar för rural offentlig förvaltning att anpassa sin verksamhet till en krympande befolkning, som består av färre unga och fler äldre vuxna. Landsbygdens unika utmaningar måste inbegripas i beslutsunderlag för att den nuvarande och framtida servicen ska kunna anpassas till dessa faktorer, samt att det finns en medvetenhet för detta i de multiaktörsnätverk som etableras för att arbeta tillsammans ifall en klimatrelaterad eller annan typ av kris uppstår.

Som bakgrund redogörs för tre trender som finns inom landsbygdsservice i Norden, att samverkansavtal förespråkas och utvecklas, att digitalisering ses som en flexibel lösning och att koncentration av service sker för att upprätthålla en basal tillgänglighet av service. Dessa är kostnadseffektiva lösningar för vissa service och vissa personer, men de fungerar inte för alla och inte överallt, vilket indikerar att platsspecifika behovsanalyser och lösningar på service behövs. Med grund i en genomgång av vetenskapliga artiklar och en workshop med policyaktörer i nordiska länder och regioner, har ett antal servicekategorier identifierats som grundläggande för landsbygden, idag och i framtiden: klimatanpassning och hanterandet av klimatpåverkan, räddningstjänst och civilförsvar, utbildning och barnomsorg, hälso- och sjukvård, fysisk, och digital infrastruktur.

Rapporten presenterar också en analys av tillgänglighet till fyra servicekategorier i Norden, baserat på data från Nordregios interaktiva kartverktyg, the Nordic Service Mapper (2019). Tillgängligheten till livsmedelsbutiker, apotek, bibliotek, och skolor, har beräknats i kilometer baserat på vägnätet. Analysen visar, med få undantag, att invånare i rurala områden generellt har lägre tillgänglighet till dessa service än i urbana områden. Den största skillnaden mellan urbana och rurala områden gäller tillgänglighet till bibliotek och apotek.

Kunskapsöversikten inkluderar också en granskning av aktuella politiska styrdokument gällande landsbygds- och/eller regionalpolitik i de fem nordiska länderna och tre självstyrande regionerna. Den här genomgången visar att de flesta av de servicekategorier som identifierats som grundläggande för landsbygden är inkluderade i nationell politik i de Nordiska länderna. Några servicekategorier var inte inkluderade, i alla fall inte signifikant. I flera fall, fanns dock dessa beskrivna i specifika planer eller program. Förvaltningsdokument från de fem länderna och de tre självstyrande regionerna nämner alla behov av en förstklassig hälso- och sjukvård, såväl som fysisk infrastruktur. Flertalet understryker också behovet av utbildning och digital infrastruktur. Det skiljer sig dock åt mellan ländernas regional- och/eller landsbygdspolitik ifall de inkluderar klimatanpassning av grundläggande service, och räddningstjänst och civilförsvar.

Baserat på genomgången av vetenskapliga artiklar, förvaltningsdokument, tillgänglighetsanalys och workshop med policyaktörer presenteras slutligen en analys av utmaningar och möjligheter för service på landsbygden i Norden. Den framåtsyftande analysen indikerar landsbygdsspecifika problem och lösningar, och även om inte alla utmaningar som presenteras är unika för landsbygder i Norden, påverkar de alla landsbygder i Norden. Bland de gemensamma utmaningar som identifierats för alla Nordiska landsbygder är det faktum att offentlig sektor inte har nog med finansiella medel att täcka alla de servicebehov som finns, samt att det kan vara svårt att attrahera arbetskraft med rätt kompetens. Av de här anledningarna ses ofta digitala lösningar som en potentiell väg framåt för landsbygdsservice, men även för utbildning och distans-baserade anställningar. Sådana initiativ finns redan idag i många landsbygdsregioner runt om i Norden, och det finns också möjligheter att lära av varandra när det gäller politiska och finansiella innovationer, såsom samverkansavtal, och service-hubs. Det finns också möjligheter i nya sätt att tänka kring landsbygdens framtida behov, inte minst gällande multi-lokalitet, äldre vuxnas bidrag till samhället, och att service på landsbygden i

många fall har fler funktioner än enbart den praktiska. För att hitta rätt typ och nivå av service kan statistiska mätningar och övervakning av avståndsbaserad tillgänglighet vara till nytta, men även fortsatt dialog med landsbygdsbefolkningar kan anses centralt, för att servicen ska vara både landsbygds- och platsanpassad.

Summary

The objective of this knowledge overview of the project "Service provision and access to services in Nordic rural areas – secure, trusted and for all ages" is to analyse how essential service needs for different types of societal groups and ruralities can be understood and defined, and how solutions to rural service provision challenges can be organised. The project is part of an assignment from the Nordic Thematic Group for Green and Inclusive Rural Development, which is a part of the Nordic Co-operation Programme for Regional Development and Planning.

The models for welfare services in the Nordic countries share many similarities. The 'Nordic models' is underpinned by a 'social contract' which entails collective responsibilities of the society to provide certain services and fulfil human needs, for example, health and social care and education. Due to demographic change, the effects of climate change, globalisation and other factors, the demand for services is changing fast. These changes affect service provision in rural regions, as general population decrease poses challenges to rural public authorities, which have to adapt their activities to the shrinking population, which is made up of fewer young people and more older people. Rural-specific responses are also required in risk analyses so that the rural environments and distances involved are taken into account and multi-stakeholder networks established to work together in the event of climate related or other types of emergency.

The method and approach in this report start by identifying which rural services are considered essential for the future, according to the research literature and stakeholders in Nordic public authorities. Based on this approach, the following services have been identified and categorised as essential for rural areas now and in the future: climate adaptation and the management of climate impacts, emergency services and civil defence, education and childcare, health and social care and physical and digital infrastructure.

The report also presents an analysis of the accessibility of four services, based on data from Nordregio's interactive mapping tool, the Nordic Service Mapper (2019). The data presents street-based proximity in kilometres for the population to the service categories grocery stores, pharmacies, libraries and educational facilities. This accessibility analysis shows that, with a few exceptions, inhabitants in rural regions overall have less access to such services than urban regions. It also shows that the biggest difference between rural and urban regions in terms of access to these services is to libraries and pharmacies.

The report also reviews how services considered 'essential' are presented in current rural and regional Nordic policies, relevant governmental reports and assessments of rural matters. This policy review proves that most of the essential services identified in the research literature are covered by national policy in most of the Nordic countries. However, the review found that some services are not included, or at least not prominently. In many instances, these topics are addressed in sectoral plans, however, or in specialised policies on that topic or in a related subject. For example, policies from the five countries and three autonomous regions all discuss the need for quality health and social care as well as physical infrastructure. Most of them also highlight education and digital infrastructure. However, the extent to which climate adaptation of basic services, emergency services and civil defence are included in rural policies varies from country to country.

Based on the research and policy review an analysis of challenges and opportunities are presented which indicate possible rooms for improvements regarding how essential rural services in the Nordics can be provided. Among the main common challenges identified for Nordic rural regions is the fact that the public sector does not have the funds to cover all the service needs and that it can also be hard to attract skilled workers. For this reason, digital solutions are often seen as a potential way forward in rural service provision, as well as in employment and education. Such opportunities and resources are found in many rural regions across the Nordic countries, and they can learn from each other in terms of policy and financial innovation, collaboration agreements and new ways of thinking regarding multi-locality, older adults and the aim of the service provision. In addition, monitoring accessibility to services needs to be accompanied by attention to communications so that rural populations can influence the level and quality of service delivery.

Libraries provide knowledge, culture, and a place to meet. In some Nordic rural areas, mobile libraries are used to increase the access to these services.
Emil Widlund - Unsplash

Introduction

Future perspectives on the Nordic model for welfare and service

The Nordic countries have similar approaches to social welfare, and the Nordic model differs from many other approaches by being underpinned by a 'social contract' – a foundation that supports a handful of core public services. This social contract has developed into welfare states, in which certain basic needs and services are the collective responsibility of local, regional or national government (cf. Dølvik *et al.*, 2015). The Nordic model and social contract have in this way taken responsibility for fulfilling key human needs such as education and healthcare.

The European Network for Rural Development (2020) states that access to rural services is one of the key factors that help rural areas thrive and make them more attractive and viable. Attractiveness is also pinpointed as one of the underlying reasons for some municipalities doing better in the labour market and demographic trends than others with similar resources – including land, labour, capital, knowledge and infrastructure (Kull et al., 2020). To achieve the goal of becoming a more attractive and viable municipality, it is essential to provide the relevant infrastructure and services (Clark & Harrison 2017, the European Network for Rural Development, 2020). Characteristic of the Nordic model of society is strong local and regional self-government, and municipalities and regions are responsible for a significant proportion of the welfare services provided (Dølvik *et al.*, 2015). However, despite the many similarities, there are also significant differences between the countries, e.g. in terms of the number of municipalities and regions, the size of the municipalities and regions and their specific areas of responsibility (Tillväxtanalys, 2021).

The demand for rural service solutions is changing in the Nordic Region. Ongoing demographic changes, extreme weather due to climate change and the COVID-19 pandemic have all highlighted the importance of keeping both long-term and short-term perspectives in mind when planning, supporting and arranging service provision. What people want the future of the Nordic welfare services model to look like depends greatly on political beliefs. However, research can help to develop the knowledge needed as a basis for such political decisions and to help people come together to develop new ideas. The ambition behind this knowledge overview is for it to serve as inspiration for future service provision in rural areas, within (and with collaboration between) the Nordic countries and regions. The basis for this is that it should be safe and secure to live in rural areas in the Nordic Region and that access to essential services will facilitate this.

After this introductory section, we present the background and three trends regarding service provision, followed by the methods and approach used in our knowledge overview. After that come three chapters containing our results. The results present a list of essential services enriched with examples from international and Nordic research. The results from an accessibility analysis of four services in municipalities across the Nordic countries and regions illustrate the accessibility of certain services within each country. Finally, a policy review provides an overview of which services identified in the research review are included in the national policies and where there is potential room for improvement. Based on these results, we present an analysis of the challenges and opportunities for service provision in Nordic rural areas. The report ends with our concluding remarks.

Background

Current trends: collaborative service agreements, digitalisation and service concentration

The Nordic Region is characterised by different types of physical and geographical realities, each requiring specific approaches to service provision. These varied geographies include coasts, inland areas, mountains, islands, the Arctic with its permafrost, sparsely populated areas and densely populated ones. Nordic public authorities differ significantly in size, conditions, language, work culture, demographics, tax base and responsibilities. All these aspects affect how authorities are able to provide (or enable other actors to provide) rural services and infrastructures. Within the Nordic Region, different national, regional and municipal authorities and institutions, public companies, private enterprises and private, public and civil-society actors provide services and service infrastructure in rural areas, both individually and in partnerships with each other. To develop services on the right scale–for the number of service users in the various rural areas – these stakeholders need data on where people live, spend time and travel.

Despite the rural diversity in the Nordic Region, the analysis arising from this study highlights three common trends in relation to rural service delivery: collaborative service agreements, the digitalisation of services and their concentration in 'service hubs'. These features are described in the following sections.

The trend towards **collaborative service agreements** involves agreements to ensure service provision between different public actors (municipalities, regions and state bodies, both national and cross-border) or between public and private sector actors (Cedergren et al. 2021). The trend towards collaborative service agreements in the Nordic countries also takes the form of:

- 'smart adaptation to shrinking populations', or
- 'smartly adapting service provision', or
- 'co-production of services', or
- 'municipality 3.0' – from service provider to enabler.

Services are organised and provided through co-operation agreements involving public, private and civil-society initiatives. These agreements are, however, not an exclusively Nordic trend. Rauhut *et al.* (2013) also describe this type of 'co-production of services', and Copus *et al.* (2020) investigate 'smart shrinking' in a European context (cf. Chartier *et al.*, 2021; Chmieliński *et al.*, 2021).

The trend toward increased **digitalisation** is an opportunity for rural areas, as it enables distance-spanning service solutions. While digitalisation provides new opportunities for local communities to be connected, and in this way can lead to transformation, there is still a lack of digital infrastructure in (some) Nordic rural areas (Ormstrup Vestergård *et al.*, 2020; Randall *et al.*, 2020). The Nordic policy actors we engaged with during our work on this study highlighted the potential risk of digitalisation lowering the quality-of-service provision as humans become more distant from each other when digital solutions are implemented. This is relevant, not least in relation to the effects upon and transformations of physical services. In a study of digitalisation in Nordic healthcare, Lundgren *et al.* (2020) said that the drivers of digitalisation in the healthcare sector come, to a large extent, from patients and other types of users. The study by Lundgren *et al.* (2020) also suggests that the expectation is that digitalisation in the healthcare sector will bring greater quality, accessibility, flexibility and efficiency. Based in a study of Sweden and United Kingdom, Dubois & Sielker (2022) highlight three risks with digitalisation of public services in sparsely populated areas; that local actors perceive the digitalisation as a decommitment of the state and other public authorities in rural areas, that vulnerable groups that are in most need of seamless public service are excluded, and that cloud-based solutions and data storage cause an increased administrative burden for local authorities already over-stretched.

The trend towards **geographical service concentration** includes multipurpose provision of services, i.e. several services being provided at the same office or location. This may be of particular importance from an equality and security perspective, in that all local people (regardless of where they live) should have access to essential services. The service hubs are

contributing to minimising wide distances to services, this can also be solved via on-demand transport solutions for rural inhabitants or mobile solutions to temporarily bring the service to the rural area. Since service concentration can also be a cost-effective solution, it is important that it is coupled with the monitoring of spatial accessibility.

Collaborative service agreements, digitalisation of services and geographical concentration of services are cost-effective strategies for some services, some rural areas and some individuals. Different services are based on different logic, and not all can be replaced with digital solutions and tools. Nor can they all be covered by local collaborative agreements. For instance, care of the elderly can be partially replaced by local collaborative agreements but not by fully digital solutions. The same goes for a petrol station or a place to charge your electric car. Neither of these can be replaced by a digital solution. On the other hand, Internet banking does enable private individuals and businesses to manage most transactions at a distance from the actual bank. This and other everyday tasks depend on stable high-speed internet, which highlights the importance of closing the 'rural digital divide'. Importantly, these approaches do not work well for everybody, every type of service and every area in the Nordic Region. Instead, **place-based solutions** are required in order to adapt service provision to the specific needs of the region, municipality or village.

The digitalisation enables distance-spanning solutions. For instance, it can increase access to information about planning and policy processes, traditionally stored in physical archives in public authorities.
Ryunosuke Kikuno - Unsplash

Spurred on by the need not to rely solely on public funds or only on market-based solutions for services in rural areas, innovative interlinkages are being developed between different types of public services and between public and private services.

Nathalia Rosa - Unsplash

Methods and approach

The knowledge-building in this study is based on reading studies published in journal articles, reports published by research institutions, public authorities and civic society organisations, statistics on accessibility, a policy review – as well as input from individuals working in public authorities at national, regional, local and cross-border institutional levels. The material collected was read with a focus on the following questions:

1. What are the service needs, now and in the future, for rural and sparsely populated areas in the Nordic Region?
2. How is it possible to provide people in rural areas with good, location-based services?
3. What are the key challenges and opportunities for secure and safe service provision in rural and sparsely populated areas across the Nordic Region?

The response to the first question is presented in the chapter called "Research into essential services in Nordic rural areas". The response to the second question is presented in the chapter "Services in rural and regional policy". In the chapter called "Challenges and opportunities for service provision in Nordic rural areas" the response to the third question is presented. In the following sections in this chapter, the methods and approaches used to respond to these questions are presented in detail.

Taking stock of relevant research publications

To identify and add insights from studies published in journal articles, a structured literature search was used to find published peer-reviewed journal articles via the Science direct platform (2021 10 04). In the fields "Title, abstract, keywords" we searched for the terms: ((essential needs) AND (service) AND (rural)). This resulted in a sample of 70 documents published between 1981 and 2021. It consisted of six review articles, 54 research articles, two book chapters, four conference abstracts, one discussion paper, one set of practice guidelines, and two short communications. In all, 55 of these 70 results were accessible for download as full-text documents. To ensure the inclusion of future perspectives, an additional search was added. For this, we searched in the fields "Title, abstract, keywords" for the terms: ((essential needs) AND (rural) AND (future)). This resulted in 46 documents published between 1979 and 2022 and consisted of six review articles, 33 research articles, three book chapters, one conference abstract, two discussion papers and one short communication. Altogether, 36 of these 46 results were accessible for download as full-text documents. The 91 (55+36) documents were then sorted and read in order to decide on their relevance for the purposes of this study. In total, 25 journal articles were considered relevant. Some of the 25 articles are not included or elaborated on here because the research findings were considered relevant but peripheral to the theme, such as studies of and results regarding agroforestry and food production, energy, and medical studies about cancer, tuberculosis, and sexual and reproductive health. To ensure the inclusion of other perspectives, other types of studies, such as those produced by the OECD, the European Network for Rural Development, and previous ones conducted by Nordregio, were also collected. To ensure the inclusion of relevant future perspectives – that is, considering what can be and what is wanted, not only what is and how it has been – additional literature related to human needs and sustainability was read and adapted to the scope of the study.

Insights from officials in Nordic public authorities

A workshop involving the Nordic Thematic Group for Green and Inclusive Rural Development was held on 22 November 2021 in Helsinki, Finland. The aim was to bring together insights from policy actors working in public authorities at national, regional, local and cross-border institutional levels. The work of this thematic group is part of the implementation of the Nordic Co-operation Programme for Regional Development and Planning. Members of the group include individuals working for public authorities at the national and regional levels in the five Nordic countries and the three self-autonomous regions.[1] As preparation for the workshop, participants were asked to reflect on four questions based on a background paper. This included a review of research regarding essential rural services (previous version of Table 1). At the workshop, the group was given a summary of the background paper in an introductory and summarising presentation and then divided into three sub-groups of 5–6 per group. These groups had a mix of country and/or regional representatives. The groups discussed the four questions for about 30 minutes. The group discussions were held in English and led by Nordregio researchers, who also took notes. The questions forming the basis for the workshop were: 1.) Are the results presented so far relevant to you? If yes, in what way? If no, why not? 2.) How could rural policy be used to support essential service needs? Is the current use of rural policy sufficient? What type of policy innovation do you suggest? 3.) What are the future service needs in the rural areas? 4.) Please provide an example of service provision in rural areas in your country or region about which you would like others to know?

The results from the workshop discussions were used to draw up the results presented in this report. The note takers had a dialogue after the workshop to identify the main messages, and these notes have been used to rework both the text and the focus. Among other comments and inputs during the workshop, policy actors working in Nordic public authorities highlighted the need to add emergency and civil defence services (such as police, fire fighting, ambulance, coast guards) as well as harbours to the list of essential rural services. This list is presented in the following chapter on results. It should be noted that some services not included in the list of essential services were mentioned during workshops with policy experts. For instance, housing and retail were mentioned as important for people's lives in rural areas. These have not been included in the list of essential services presented here. The main reason for this is that they were not identified as essential in the review of peer-reviewed journal articles, and few of the participants in the workshop addressed these topics. However, we mention it here in order to ensure the transparency of the process and to maintain the possibility of addressing housing and grocery stores as essential for people's lives in future research addressing rural services. Access to grocery stores has also been added to the accessibility analysis because statistical data is available on a Nordic level.

The actors included in the workshop were also invited to comment on a draft version of this report before publication. All comments received were considered and adjustments were made accordingly.

Analysing accessibility based on georeferenced statistics

The report includes results from an accessibility analysis of four services operating at a municipal level in the Nordic Region (see Map 1). At this stage, we do not have statistical indicators and georeferenced data for the essential services presented in this report (see Table 1). An accessibility analysis of this type was not a priority when the project plan was drawn up and has not, therefore, been included. To be able to give an indication of the level of accessibility to services, we focused on the services for which geographical data is available. This data is available via the interactive mapping tool Nordic Service Mapper (2019), produced by Nordregio with funding from the Nordic Thematic Group on Sustainable Rural Development, 2017-2020. The data presents street-based proximity in kilometres, stretching from the relevant population to the location of various categories of service. The service categories included in our analysis are grocery stores, pharmacies, libraries and educational facilities. The data reflects the situation as of December 2019. Service locations and street data were collected from HERE Technologies, population data on a 1,000m grid-level was acquired from national databases and the

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1. For further information about the Nordic Thematic Group for Green and Inclusive Rural Development, see: https://nordregioprojects.org/rural/

infrastructure network from Open Street Map. The spatial analysis was done in ESRI's network analyst (closest facility). All network calculations are cross-border. Bridges, ferry links, road hierarchies and one-way restrictions were included in the analysis. The assumption behind the accessibility analysis is that there is a difference between urban, intermediate and rural areas. The rurality topology of the region employs the standard Eurostat definition and categorisation. Natural barriers (such as water bodies or mountains) and the configuration of specific municipalities affect accessibility but no detailed analysis of this has been conducted at this stage. The configuration of the road network is another accessibility component and depends on population distribution patterns, the geographical peculiarities of the area and other factors.

The concept of 'high' or 'low' accessibility is relative and may vary between regions and countries. To express the concept of accessibility in an objective way, Map 1, includes calculations of the accessibility coefficient. This means that data for all Nordic municipalities is analysed separately for each country and type of service. The minimum, the first quartile, the median, the third quartile and the maximum values regarding accessibility have been identified for each of the service types and country or region. Based on these breakpoint values, the data has been categorised into four classes (lower than 25%, 25%-50%, 50%-75%, more than 75%). These classes have been given a number from 0 to 3, ranging from higher (0) to lower (3) accessibility to the service. The sum of the four service types then represent the cumulative coefficient for an accessibility level for each municipality. The accessibility ranges from 0 to 12, with 12 indicating a municipality in one of the 25% in the country with the lowest level of accessibility to all four services. We present these calculations in Map 1. The benefits of the method chosen for this analysis is the independence of the measuring units, and the possibility of extending the accessibility analysis to more service types.

Reviewing policy in the Nordic countries and regions

For the purpose of this study the policy review is focused on the in-force national rural and/or regional policy policies (latest state and/or regional policy) in each country. Limitations as the size of the study and since rural and regional matters touch upon many different policy sectors only the most relevant policy document from each country was chosen. This was done in consultation with representatives from each country that are members of the Nordic thematic group for Green and Inclusive Rural Development. The policies included in the policy review were sent to the researchers after the workshop described above. The policy documents were then analysed on the basis of the questions: 1) Is service delivery included in the policy?, 2) Which services? 3) How does rural policy ensure good, location-based services? It should be noted that the policy documents are not fully comparable since policy frameworks are of a different nature in each country. For example, they are written by different institutional actors and cover different aspects of policy. However, all of the documents were drawn up at national level and have a rural development focus. This enables the review to draw conclusions and make recommendations about how rural policy can enhance the work on services.

Analysis of key challenges and opportunities

Combining the results from the research publications, workshop, statistics, and policy review, key challenges and opportunities for future services in Nordic rural areas have been identified. The process to identify the challenges and opportunities has included going through the material numerous times, with the aim to focus on the core problems and openings that are relevant for Nordic regions now and in the future. Not all challenges and opportunities listed are unique for the rural areas, but they are all having implications for rural areas.

Research into essential services in Nordic rural areas

In this chapter we present the results regarding the first research question: What are the service needs, now and in the future in Nordic rural and sparsely populated areas?

Research serves as a crucial foundation on which to base decisions on what rural services that are essential. Research results from psychology and from social-environmental and sustainability studies indicate that human beings – regardless of their physical prerequisites, age, sex and gender, cultural background or place of residence – appear to have a set of universal needs (McLeods, 2018; Tay & Diener 2011). These needs appear to exist regardless of cultural differences: physiological needs, safety, sense of belonging, love, esteem and self-actualisation (Lester, 2013; Mathes, 1981; McLeods, 2018; Tay & Diener, 2011)[2]. They are like the social boundaries that we must uphold and stay within in order to live a sustainable life together as people on this planet (cf. Raworth, 2017). Although formulated with different words and concepts, the idea of integrated sustainable development, with humans and the environment included under the same overarching concept, is also the basis for the UN's Agenda 2030, adopted in 2015, and also for the vision of the Nordic Council of Ministers, adopted in 2019 (Nordic Council of Ministers, 2019) which envisages the Nordic Region being the most sustainable and integrated region in the world by 2030.

Taking the knowledge that we humans have similar essential needs (regardless of who we are or where we come from) as the starting point for this knowledge overview influenced the approach to how we studied the topic (Lester, 2013; Mathes, 1981; McLeods, 2018; Tay & Diener, 2011). Basically, it was included in the search terms used to find relevant research literature and was the reason for focusing on general human needs rather than presenting every essential need that humans may encounter throughout the course of their lives.

Based on the journal articles reviewed for this study and input from individuals working in Nordic public authorities at national, regional, local and cross-border institutional levels, it appears that the essential service needs for rural areas now (and in the future) are climate adaptation and management of climate impacts, emergency services and civil defence, education and childcare, healthcare and social care, physical infrastructure and digital infrastructure (see Table 1).

ESSENTIAL RURAL SERVICES, NOW AND IN THE FUTURE

Climate adaptation and management of climate impacts
Emergency services and civil defence
Education and childcare
Healthcare and social care
Physical infrastructure
Digital infrastructure

Table 1: List of rural services considered essential in reviewed research articles, not ranked
Reference: *Authors' summary.*

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2. This is based on a contemporary version of the well-known psychologist Abraham Maslow's theory of motivation. Maslow's model suggested that water, food, shelter and warmth – the physiological needs – must be satisfied before security needs emerge; and then the sense of belonging, love, esteem and self-actualisation (Lester, 2013; Mathes, 1981; McLeods, 2018). Since the 1940s, this model has been tested and used in both psychological studies and other research fields. It has also been employed outside academia, in business management, and in organisational and project leadership courses. Maslow continued to refine the concept of a hierarchy of needs over several decades. In 1987 he suggested that the order in the hierarchy "is not nearly as rigid" as he may have implied in his earlier description (cited in McLeods, 2018, p. 68). Testing the theory in 2011, by analysing survey data from 60,000 participants in 123 countries, Tay and Diener (2011) conclude that universal human needs appear to exist regardless of cultural differences, and that there is no empirical evidence for a hierarchy, since the ordering of needs is dependent upon individual variations and external circumstances.

Acknowledging the need of place-based adaptation of services makes it important to maintain continuous conversation on which services are considered the most important for individuals in different parts of the Nordic Region. Also, not all of the services listed in the table have the same status. The right to healthcare and the right to education, for instance, is granted to all, regardless of where they live. Climate adaptation is not a service on its own, but a process considered necessary for the adaptation of other services to Nordic climate change. Note that other services have been considered, too. For instance, in the report of Clark and Harrison (2017) and the European Network for Rural Development (2020), grocery stores are categorised as essential rural services along with kindergarten, hospital and doctor, primary and secondary school, electricity, drinking water, and roads. Rauhut *et al.* (2013) report on services in EU-27 and the four EFTA states. Services of General Interest (SGEI) are presented, and these are gas, electricity, energy and transport, as well as water and waste management and communications infrastructure – e.g. ICT, electronic communications and postal services. In turn, the Social Services of General Interest (SSGI) presented are: labour market services, education, healthcare, childcare, elderly care, social care, (social) housing and social assistance services. These results have all been considered, but the definition of 'essential services' for the purposes of this study is based first and foremost on what was identified in the research articles, with input from policy actors in the Nordic Thematic Group for Green and Inclusive Rural Development. This means that for the purpose of this project, these other services are considered important but not essential. The essential service needs identified and listed in Table 1 are elaborated in more detail in the following sections.

Climate adaptation and management of climate impacts

The research reviewed indicates that what is essential for future rural services is to adapt them and the infrastructure that already exists to extreme weather events caused by climate change. In practice, this means conducting risk analyses of existing services[3] and infrastructure[4] and making changes in such a way that basic foundations upon which society relies work properly, even if (for example) a storm should hit road and rail networks, or the electricity grid providing hospitals and nursery homes with power goes down. It may be considered important to develop risk analyses specifically with rural environments and distances in mind and build networks to work together in case of emergencies caused by political, economic or environmental crises – such as flooding, heatwaves, cold waves or storms.

More research is needed on Nordic rural climate adaptation and the management of climate impacts. However, based on research carried out in the USA, Australia, the United Kingdom and Ethiopia, recent events in the Nordic Region indicate that one of the areas to focus on for rural climate adaptation and management of climate impacts is the management of water, specifically (Adhikari & Fedler, 2020; Chen *et al.*, 2014; Oven *et al.*, 2012, Wilkinson *et al.*, 2015). Water scarcity has not previously been a major problem in rural areas across the Nordic countries. However, the impacts of climate change in terms of droughts and increased heat waves during summers such as the one in 2018 imply that secure access to freshwater is vitally important for Denmark, Finland, Norway, Iceland, Sweden, Faroe Islands, Greenland and Åland (Johnsson *et al.*, 2019). This calls for dialogue among actors around the use of fresh water during heatwaves in order to ensure that water is available for all those who need it and to regulate usage for different purposes (such as watering crops during droughts). One solution implemented recently, as a result of the many forest fires in Sweden, is collaboration between the emergency services and the Federation of Swedish Farmers to create a network and to agree to get help from farmers in the case of an emergency. For instance, some farmers with manure tanks have agreed to help by filling them with water from lakes, thus being able to spray water on roadsides and forest edges quickly (Federation of Swedish Farmers, 2021).

Other areas that require further attention in terms of research and other actors include mitigation of, and adaptation to, coastal erosion, plus action and investment to ensure that flooding, glacier meltwater, avalanches and disrupted permafrost do not cause damage to people and property, including houses and roads. Back-up solutions are also important in relation to the possibility of extreme weather conditions causing disruption to electricity, sewage

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3.   Such as the kindergarten, hospital and doctor, primary and secondary school, grocery store, places to meet, dentist and libraries.
4.   Such as electricity, drinking water, roads, harbours, broadband, irrigation, transportation and sewage.

systems, and harbours, for instance.

As stated by IPCC (2022) adaptation, in response to current climate change, is reducing climate risks and vulnerability mostly via adjustment of existing systems. IPCC (2022) state with very high confidence that adaptation can generate multiple additional benefits such as improving agricultural productivity, health and well-being, and biodiversity conservation as well as reduction of risks and damages. As adaptation options often have long implementation times, long-term planning and accelerated implementation, particularly in the next decade, is important to close adaptation gaps, recognising that constraints remain for some regions. Many adaptation options exist and are used to help manage projected climate change impacts. Exact guidance to adapt to climate change in a diversity of rural areas are provided by IPCC, in thematic chapters such as for Europe, Mountains, Coastal areas, Food, fibre, and other ecosystem products, and Climate resilient development pathways focusing on rural energy systems, rural coastal defense and forestry (IPCC, 2022).

Emergency services and civil defence

Emergency services and civil defence are crucial for safety and security. In the case of an emergency in a rural area, it is essential that the police, firefighters, ambulances, and/or coast guards are within easy reach and do not take too long to respond. The set-up of, and priorities for, the emergency services are also linked to extreme weather and climate change, as well as to pandemics, such as COVID-19. According to policy analysts in the Nordic Thematic Group for Green and Inclusive Rural Development, who participated in the workshop in Helsinki in November 2021, recent years have seen a rise in "local rescue thinking" and an awareness of the need to have robust response systems in place in rural areas.

As described in depth and acknowledged by the report from Enestam (2021), Nordic co-operation in the area of civil defence has been established by several declarations that would need to be reactivated and made bolder, both on a formal public authority level and in terms of co-operation between civil society and private actors. For instance, Enestam (2021) suggests that the Helsinki Treaty (the 1962 agreement that is the foundation for all Nordic co-operation) should be reformulated. In the Helsinki Treaty, the decision-making model is one of consensus. This means, in this case, that the country or region that wants to co-operate least effectively decides for all. This has functioned adequately enough up until now, but Enestam (2021) suggests revisiting the model because the COVID-19 pandemic has shown the differences in how the countries make decisions and because change will be needed if the Nordic Council of Ministers is to achieve Vision 2030. The alternative suggestion is that countries and regions that want to work together are simply allowed to (Enestam, 2021). Although these agreements, and suggestions to change them, are not specific to rural areas, it is important to be aware of the foundations for Nordic co-operation in civil defence and beyond.

In Finland, the importance of the voluntary side of thinking about emergency responses can be found in the Voluntary Rescue Service (Vapepa, 2021). The Voluntary Rescue Service, Vapepa, in Finland is a network of volunteers made up of 50 different organisations. The emergency teams from Vapepa support the authorities when accidents or other crises occur (Vapepa, 2021). Another example in Sweden, is the Swedish Sea Rescue Society (2022). The Swedish Sea Rescue Society (2022) has 2,300 volunteer crew members. It is involved in approximately 90% of all sea rescues along the coast and in the major lakes in Sweden.

A research project focusing on rural policing in Iceland (Oddsson *et al.*, 2021) confirms that rural police work is, in many respects, different from being a police officer in urban areas. Icelandic society has among the smallest number of police officers in Europe. It experienced Europe's most significant reduction in the number of police officers between 2009 and 2018 (Oddsson *et al.*, 2021). Aside from being under-resourced, rural officers are often deeply embedded in their communities, which presents challenges as well as opportunities. Officers must be excellent communicators and have the skills to de-escalate situations through dialogue. The strong informal social control present in rural areas helps officers in this regard (Oddsson *et al.*, 2021). The fact that police work is much more social in rural areas and must therefore be understood in that context is also confirmed in a recent article focusing on the situation in Sweden (Hällgren *et al.*, 2021).

Education and childcare

Kindergartens and schools with trained teachers are a crucial rural service (Clark & Harrison 2017, Cras 2018; the European Network for Rural Development, 2020). To enable children to go to school within a reasonable distance of their home is important for a dynamic rural community. When resources are scarce, which can be the case for public authorities covering rural areas, the focus of public service delivery should be on education and healthcare (OECD, 2020). The quality of schools in rural areas, in terms of the number of trained teachers, is highlighted as a challenge facing many governments throughout the world (OECD, 2020). For instance, one of the reviewed research articles using empirical data from China states that the quality of schools is tremendously varied due to the uneven distribution of trained staff (Wang & Gao, 2013). Support for teachers is crucial for schools in Nordic rural areas to be able to consider the needs of all children, including those with special educational needs (Karlsdóttir & Cuadrado, 2018; Pettersson *et al.*, 2016). For European and Nordic countries, the results of analyses of teachers' salaries can be useful for pinpointing how salary increases can be part of the solution to attracting teachers to schools in rural regions, thus enhancing or maintaining the quality of schools (European Commission/EACEA/Eurydice, 2021).

Based on the situation in Finland, Norway and Sweden, Beach *et al.* (2018) state that even though the national authorities recognise the need to protect and provide key services to local communities, and consider local schools as valuable resources, market-based politics in education seems to have challenged these commitments. The authors say that there is a tendency to close small urban and rural schools in Finland, Norway and Sweden in general (Beach *et al.* 2018; cf. Karlsdóttir & Cuadrado, 2018). Travelling long distances to school has a negative impact on student health, and Beach *et al.* (2018) also note that schools in Nordic rural areas are identified as being of specific importance for producing and maintaining social and cultural capital for the communities of which they are a part, for instance, when students are given assignments about the local labour market, or regional history and traditions (Karlsdóttir and Cuadrado, 2018, Kull *et al.*, 2020).

Healthcare and social care

In general, populations in rural OECD regions are older, ageing faster and less healthy than in urban and intermediate regions (Douthit *et al.*, 2015; OECD, 2020). In a review paper on barriers to healthcare in the USA, Douthit *et al.* (2015) express concern over significant differences in access to healthcare between rural and urban areas, which result in rural residents having poorer health. In a study focused on the situation in India, Jana and Harata (2016) acknowledge that the quality of care is often associated with patient volume. This is also confirmed in a study by Gyedu *et al.* in 2020, in which they compare patient volume and quality in relation to trauma surgery in New Zeeland and Ghana. A study from Australia looking at young people with complex health support needs in non-metropolitan areas shows that success in helping them depends on how clearly service providers communicate with each other. It suggests that services in rural areas require appropriate support from policymakers, something which goes beyond the application of models developed primarily from the urban context (Ellem *et al.*, 2019).

For the Nordic countries and regions, many of the predominantly urban regions have higher levels of life expectancy compared to predominantly rural regions (Lundgren & Cuadrado, 2020, p.131; Rehn-Mendoza & Weber, 2018). Bremberg (2020) demonstrates that in Finland, Norway and Sweden, high mortality rates at the municipal level are particularly associated with rural areas, areas with low population density.[5] Bremberg (2020) also shows that the welfare provision to offset this gap has obviously been insufficient. There are, however, nuances and regional exceptions to general Nordic trends regarding the relationship between health and rurality (Lundgren & Cuadrado, 2020, p.131-). Some rural areas have very healthy populations, and even in areas with a statistically high proportion of unhealthy people or high suicides rates, there are still people living happy lives. For instance, the Faroe Islands and the Norwegian region of Sogn og Fjordane are rural and remote areas that have low suicide rates, although the overall rural trend implies something else. Sogn og Fjordane, in Norway, is even known as "trivselfylke", a

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5. Denmark is an exception, with no significant differences between municipalities in respect of population density and mortality rates (Bremberg, 2020). One potential explanation for this might be a narrower range of municipal population density in Denmark compared to the other Nordic countries (Bremberg, 2020). Another could be that the relationship between patient volume, mortality rates and the quality of the care is not that clear.

region with satisfied, healthy and happy inhabitants (Rehn-Mendoza & Weber, 2018, p.175-176).

Service providers are developing digital solutions in various sectors. The health sector has developed several distance technologies to complement care in hospitals, care homes, and other types of facilities (Rehn-Mendoza & Weber 2018). Lundgren *et al.* (2020), studying the digital solutions in the health and social sector in the Nordic countries and regions, have found that there is a lack of comprehensive studies on the effects of digital solutions in healthcare and social care. In a study on nursing students' perceptions of telehealth-based simulations (video visits, short message services and video conferences) in Florida, USA, Villegas *et al.* (2021) conclude that distance-spanning technologies for skills development are a promising way of addressing knowledge gaps among nurses and meeting the needs of breastfeeding mothers in rural settings (Villegas *et al.,* 2021). This indicates the potential for using digital solutions in developing skills and competencies via distance education and web-based courses. Moreover, Befort *et al.* (2014) highlight the fact that phone-based counselling via digital meetings is cost-effective and can be used for several patient groups; for instance, to provide group support for rural breast cancer survivors in their struggle to overcome barriers to good mental and physical health and wellbeing.

Physical infrastructure: roads and transports, harbours, and marine routes

Land- and sea-based transport is a main concern for people living in rural and remote communities around the world (Horn *et al.*, 2021). Transport poverty or disadvantage, i.e. the lack of affordable and reliable transport, prevents access to education, health services and employment opportunities (Shay *et al.*, 2016; Shirgaokar *et al.*, 2020). Lack of mobility also impacts people's ability to maintain social relationships, which is important for mental health and social inclusion (Shergold & Parkhurst, 2012; Shirgaokar *et al.*, 2020).

In a global review of potential health impacts on older people in rural areas, due to lack of access to affordable transport, Bridgman (2018) highlights that access to public transport in rural communities is an important factor in mitigating social exclusion for older people and for their physical and mental wellbeing and maintaining an active lifestyle (cf. Israel Schwarzlose *et al.*, 2014; Šťastná & Vaishar 2017). With a larger proportion of elderly people in general, combined with the increasing popularity of retirees choosing to live in rural communities, mobility among elderly people is becoming an increasingly important rural issue (Israel Schwarzlose *et al.*, 2014; Shirgaokar *et al.*, 2020; Stjernberg *et al.*, 2021). In rural areas, where public transport is sometimes unavailable, and particularly for those older people who do not have a car, car-pooling and social networks are being utilised to access services such as hospitals and shops. Lack of public transport presents a barrier to older people's independence and freedom to make leisure trips such as visiting their friends and relatives. This represents a physical and mental health disadvantage, particularly for those older people who live alone. (Shergold & Parkhurst, 2012 Shirgaokar *et al.*, 2020).

The research project 'Smart transport in rural areas', develops tools and services for Mobility-as-a-Service, specially tailored for sparsely populated rural areas. The research is based in Innlandet in Norway, and among the concepts and innovations is a travel planning service to stimulate social interaction and cut social isolation among elderly people living in rural areas (Research council of Norway, 2019; Karahasanovic, 2020).

Digital infrastructure: internet access and the digital divide

Internet technologies are expected to help people to overcome barriers related to transport poverty in rural areas and provide access to important services – including health, finance, education and public administration (Ormstrup Vestergård *et al.* 2020). A basic prerequisite for this is access to digital infrastructure, such as broadband. Lack of access to the Internet, or material digital exclusion, has been called the 'rural broadband gap' (Salemink and Strijker 2018). Finland and Sweden are the European countries where the gaps in access to fast broadband, to next-generation access, and between rural and urban households were the largest in 2018. Norway also performed below the European average on this indicator. However, Iceland stands out as the regional frontrunner in this regard, both because of its high levels of coverage overall and as a result of relatively small differences between urban and rural households. (Ormstrup Vestergård *et al.*, 2020; Randall *et al.*, 2020)

In an article about the situation in the Netherlands, Salemink and Strijker (2018) say that in terms of solutions to the 'rural broadband gap', policy development has focused a good deal on stimulation of and reliance on local and civil action to establish broadband in rural areas. This entails making local people responsible, but it also has many legal and financial risks attached to it. Salemink and Strijker (2018) conclude that governments in the EU cannot expect communities to solve these problems without substantial governmental support. Local people alone will not solve geographical inequalities. National guidance and resources are also needed.

Based on concerns that older people have limited abilities to access and use the Internet, Hodge *et al.* (2017) have studied the 'digital divide' in rural areas in South Australia. The digital divide indicates that people with certain demographic and socio-economic characteristics may be disadvantaged in accessing and using the Internet (Löfving *et al.,* 2021). Löfving *et al.* (2021) have studied these processes in Västerbotten in Sweden. The study by Hodge *et al.* (2017) does suggest that the digital divide for older people is not necessarily specific to those in rural areas since the results from rural cases are the same as have been found regarding digital participation in urban case studies. Therefore, to overcome the challenges for older people in general, service providers need to adapt their online engagement strategies to the specific needs of older people. Providing the infrastructure, such as high-speed broadband, is not enough on its own (Hodge *et al.*, 2017; Löfving *et al.*, 2021).


Some rural service providers face challenges in attracting highly skilled workers, such as medical doctors, nurses and teachers.
Unsplash

Accessibility to four services in Nordic municipalities

To reach an understanding of the level of accessibility of essential services, we present here an accessibility analysis based on four services[6]: grocery stores, pharmacies, libraries and educational facilities.
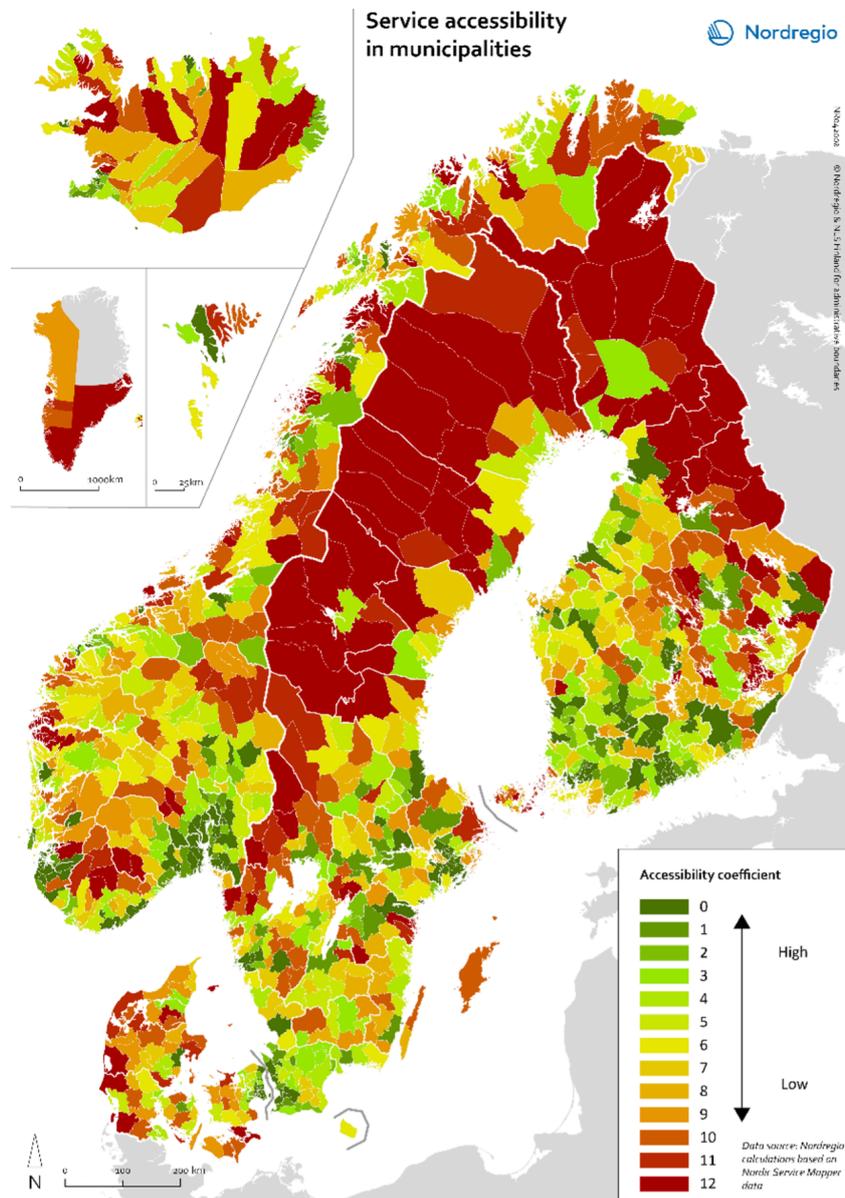
Map 1: Service accessibility by municipality. The services categories included in the analysis are grocery stores, pharmacies, libraries and educational facilities. The data reflects the situation in December 2019. The calculations of an 'accessibility coefficient' have been carried out separately for the four service types and with regard to the region type and the country. This means that the accessibility reflects the situation within the respective country and region but can still be compared with the situation across the whole Nordic Region.

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6. At this stage, we do not have statistical indicators or georeferenced data for the essential services presented in this report (Table 1). To be able to give an indication on the level of accessibility to services, we present instead results based on accessibility to four services at a municipal level across the Nordic Region: education, grocery stores, libraries and pharmacies. For more information about this analysis, please see the methods section.

The map of service accessibility by municipality (Map 1) shows that access to services varies in the Nordic countries, as well as between urban, intermediate and rural regions within countries. Denmark, the Faroe Islands and Sweden have the highest average accessibility to the four services. The analysis of accessibility for Greenland is incomplete compared to the other countries and regions because the background data only includes accessibility to education. Accessibility in Danish municipalities decreases from east to west, from the capital region towards the North Sea. Similarly, in Finland and Sweden, there is a gradual decrease in accessibility from the southern Baltic Sea municipalities to the inland areas, towards the Norwegian and Russian borders. Municipalities in Iceland and Norway have a mixed distribution, with no clear geographical pattern, although the inland municipalities and the ones with multiple islands tend to have lower levels of accessibility.

Map 1 also shows that the main cities and their metropolitan areas – Helsinki, Reykjavik, Stockholm, Oslo, Greater Copenhagen– have higher levels of accessibility than outlying regions. Municipalities in regional centres surrounded by rural municipalities tend to have higher levels of accessibility; for example, Rovaniemi in Finland, Borås and Östersund in Sweden, Trondheim in Norway.

Overall, rural municipalities have lower levels of accessibility to services than urban ones. This is the case for all the Nordic regions and territories, albeit with the following exceptions. On the one hand, service accessibility correlates with population density and the density of the road network. These two aspects are commonly higher in a densely populated area. On the other hand, the pattern of a settlement's distribution influences service accessibility in the sense that variety within municipalities has not been considered in the analysis on which the map is based (Map 1). These correlations and patterns could be studied further in a selected case study area. Moreover, case studies can also highlight nuances beyond statistical analysis. For instance, they can include more details on how regions and municipalities have solved the problem of low accessibility to some services, for example, through library buses in rural areas.

The biggest difference between rural and urban regions in terms of the four services included in this study is in the level of accessibility to libraries and pharmacies. The data shows the greatest variations in access to library services in Norway, probably due to the geography of the country. The differences in the level of accessibility to various services for Nordic countries may be described as a combined result of geographical variations (in terms of the physical environment) and different policies regarding essential service provision. A policy analysis focusing on services in rural areas across the Nordic Region has, therefore, been conducted and are presented in the next chapter.

In the coming year, this knowledge overview will be used as a foundation for case-study work, which will entail interviews and dialogues with actors in the different Nordic countries and regions. These case studies will look at the challenges and opportunities presented in this report in greater depth. It has been suggested that a data-driven approach should be used for the case studies. As a starting point for the identification of potential case study regions, accessibility to the four service areas of grocery stores, pharmacies, libraries and educational facilities has been analysed in relation to population density in the rural municipalities.

It is essential that the police, firefighters, ambulances, and coast guards are within easy reach and do not take too long to respond. Ian Taylor - Unsplash

Grocery stores are important for our modern everyday lives. Several policy measures support retail in rural areas.
Imants Kaziluns - Unsplash

Services in rural and regional policy

Rural and/or regional policy is used in combination with sectoral policies to frame issues of service delivery in rural areas in the Nordic countries and regions. Municipalities are responsible for general planning and spatial planning in all of the countries (Lidmo *et al.*, 2020), while responsibility for regional development strategy lies with the regions in the larger countries[7] (Tillväxtanalys, 2021). In Iceland and the autonomous regions, however, more of the responsibility is at the national level. The different governance structures in the Nordic countries are, therefore, assigned different roles when it comes to the creation, development and implementation of regional and rural policy.

In this chapter, we present a review of Nordic national rural and regional service priorities. As such, these are the results regarding the second research question How to provide people in rural areas with good, place-based services?

For the purpose of this study, the policy review focuses on the current national rural and/or regional policies in each country or other national reports that present the priorities for rural service provision. As described in the methods section, these documents were chosen in consultation with the representatives from each country on the Nordic Thematic Group for Green and Inclusive Rural Development. The different documents are not fully comparable since they are different in nature in each country, written by different institutional actors and cover different aspects. However, they are all written at the national level and focus on rural development, which has enabled the review to focus on how rural policy can enhance the work on service provision.

Rural and regional policies in the Nordic Region

In the action plan 2021–2024 for the Nordic Council of Ministers' Vision 2030, "welfare for all" is one of 12 focus areas (Nordic Council of Ministers, 2021a). The documents provided by the Nordic Council of Ministers show that co-operation on welfare is first and foremost a matter of focusing on health (Nordic Council of Ministers, 2021b). The analysis presented in this report also indicates a focus on health in policy concerned with services provided at a Nordic level, although the results indicate that other services, and related sectors, can also be considered essential.

The national rural policies of the five Nordic countries and three autonomous territories can roughly be divided into two different categories based on governance structure and the size of the territory. The national policies for rural and peripheral matters in the four larger countries of Denmark, Finland, Norway and Sweden all provide a quite general policy overview. This includes highlighting access to service sectors such as education, social and healthcare, along with physical infrastructure, e.g. transport. Generally, much of the detail about place-based services is not presented in policies written at the national level. This can most likely be attributed to the fact that these countries have larger total populations and cover a greater geographical area. They have more varied demographics and different governance structures. In these larger countries, more tasks are dealt with by regional or local authorities, and it is up to the regional and local authority to find place-specific solutions. Moreover, certain issues are addressed in sectoral plans, e.g. health policy, social policy, educational policy, innovation policies, agricultural policies, transport policies, climate policies, youth panel reports, special agreements on co-operation between national and municipal authorities and other policies and reports on special programmes (e.g. the Merkur programme that supports retail in rural parts of Norway).

The autonomous regions of Greenland, the Faroe Islands and Åland share demographic characteristics with Iceland. All have small populations, one main urban city or town, combined with many small communities spread around the rest of the landmass. In Iceland, for example, more public services are a government responsibility because the country has no regional authorities and most of the municipalities have a small population – which also means that the

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7.   The regions in Denmark and Sweden, the regional associations in Finland, and the *fylkeskommunerna* in Norway. In some of the Nordic countries, the state authority also have regional offices important for the regional policy development and implementation, such as the *Länsstyrelserna* in Sweden, and *Fylkesmann* in Norway. The roles and responsibilities of the different public authorities differs and is also under constant development, with the new welfare regions in Finland as the latest addition. (Dølvik *et al.* 2015; Info Norden, 2022; Tillväxtanalys; 2021; Vaalit, 2022).

number of people working in the public administration is low and resources limited. That is why Iceland has a more centralised structure that allows national policies to go into greater detail and address specific challenges in specific regions. As such, the national policies form an overall framework for priorities in rural policy while also being able to go into greater detail and specifics on certain challenges faced by different regions. Often however, particular topics are also addressed and operationalised in sectoral plans, as is common in the larger countries.

	Denmark	Finland	Iceland	Norway	Sweden	Faroe Islands	Greenland	Åland
Is service delivery included in rural policy	Green	Green	Green	Green	Green	Green	Green	Green
(How) does the rural policy ensure place-based services?	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Which services are included?								
Climate adaption and management of climate impacts	Red	Green	Red	Green	Green	Red	Red	Yellow
Emergency services and civil defence	Red	Green	Red	Green	Red	Green	Red	Green
Education and childcare	Yellow	Green	Yellow	Green	Green	Green	Green	Green
Healthcare and social care	Green	Green	Green	Green	Green	Green	Green	Green
Physical infrastructure	Green	Green	Green	Green	Green	Green	Green	Green
Digital infrastructure	Green	Green	Green	Green	Green	Green	Red	Green

Figure 1. This figure illustrates the analytical work on Nordic rural and regional policies and should only be read alongside the text as the subtler nuances might otherwise be missed. The aspects and questions to the left in the figure are questions asked about the material collected in each Nordic country and region. The services listed are derived from the research review performed by the authors and presented in this report. Green indicates that the topic is included in the documents reviewed; yellow that it is included to some extent, red that it is not included **Reference:** Authors.

Denmark

Denmark does not have a specific rural development policy. However, the national government has presented two political plans – *Tættere på I* and *Tættere på II* (Closer I and II) – designed to create balance and equality of opportunities across the whole country, including the balanced development of rural and urban areas (Indenrigs- og Boligministeriet 2021a; Indenrigs- og Boligministeriet, 2021b). The *Regional- og landdistriktspolitisk redegørelse 2021* is the main national document reviewed for this study. It consists of a report describing developments in the regions and rural areas. Overall, it frames the central issues common to most rural regions, but specific issues and tasks are generally not operationalised. Instead, particular topics are addressed in sectoral plans that are sometimes referred to in the report (Indenrigs- og Boligministeriet, 2021c). The central issue addressed is that many services have moved away from the rural regions towards urban centres in recent decades (Indenrigs- og Boligministeriet, 2021c). This centralisation of services is said to have been spurred by political decisions. The change has left its mark in many areas, with the closure of shops and the remaining commercial buildings and a housing market that is under pressure in some places. Some of the main challenges mentioned in Denmark are (in addition to demographic changes) education, employment and sustainable business development, transport and digital infrastructures, the housing market and the accessibility of welfare provision. Denmark also has a specific focus on the needs of its small islands communities and the specific challenges they face (Indenrigs- og

Boligministeriet, 2021c).

Two political plans that aimed to create balance and equality of opportunities for all in Denmark (Indenrigs- og Boligministeriet 2021a; Indenrigs- og Boligministeriet, 2021b) focused on the importance of rural areas having a local shop, a well-functioning leisure and cultural life, access to public services and health services, as well as access to nature. These features are seen as essential for the local population, as well as for the attractiveness of the areas to newcomers, businesses and tourists (Indenrigs- og Boligministeriet, 2021b). As a member of the EU, Denmark's rural policy is also framed by European policy objectives, priority areas and funding streams. Danish actors can also access funds for rural service provision from the Common Agricultural Policy (CAP), as well as regional, structural and other EU funds (cf. The Danish Strategic CAP Plan, 2023-2027; Landbrugsstyrelsen, 2021).

Our combined research and policy review (see Figure 1) indicates that rural policy in Denmark could benefit from adding climate adaptation and management of climate impacts to ensure safe and secure services and infrastructure in rural areas. Climate and environmental issues are certainly mentioned, but not in the context of the future need to adapt the management of basic services to climate impacts such as flooding, droughts and storms. In a Danish context, climate impacts and challenges are often framed as urban challenges and not necessarily rural ones. As a result, there seems to be a lack of focus on the challenges faced by rural areas. Emergency services and civil defence, e.g. the response time of police and paramedics, are other topics not particularly addressed in the report (Indenrigs- og Boligministeriet, 2021c) but which are referred to elsewhere. In 2020, a political agreement was negotiated by which 20 local police units ("nærpolitienheder") will be established, along with 110 more local officers, in order to make sure that the police are present and accessible all over the country (Justitsministeriet, 2020). The government presented *Tættere på II* in October 2021, containing initiatives for the creation of 20 decentralised hospitals ("nærhospitaler"), more defibrillators, and new rapid alert systems that place greater possibilities to respond to emergencies (Indenrigs- og Boligministeriet, 2021b).

Finland

The Finnish policy document reviewed for this study is the draft of a new policy, *Ajassa uudistuva maaseutu – Maaseutupoliittinen kokonaisohjelma 2021–2027* (Finland's National Rural Policy Programme; Kattilakoski *et al.*, 2021). This policy can be viewed, as its name suggests, as a comprehensive rural policy programme for the years 2021-2027, considering national and regional adaptation of the EU policies. It is an operational programme for Finland's national rural policy. It is being implemented by the Rural Policy Council as part of broad co-operation with stakeholders (Kattilakoski *et al.*, 2021). At the national level, there are also other relevant policies, such as the Regional Development Decision: Sustainable and Vital Regions, Innovation and Skills in Finland 2021 – 2027: EU regional and structural policy programme, the National Island Programme, and also an action plan adopted by the current and second Parliamentary Working Group for Sparsely Populated Areas.

In the comprehensive rural policy programme, the diversity of the countryside is seen as an important factor and opportunity for positive national development – with the regions offering a platform, resources and opportunities for a good life, innovation, entrepreneurship and a sustainable society. The programme emphasises that the countryside offers solutions to the climate crisis and the possibility of contributing to a more sustainable form of development. The goal of rural policy in Finland is to develop location-based opportunities.

Strategically, the programme focuses on interdependence, environmental justice and new, knowledge-intensive economics. These are consistent throughout the programme's five themes, which are: 1) Greater added-value through sustainable use of natural resources, 2) Rural actors as part of the solution to a sustainable transition, 3) Strengthening competitiveness and vitality, 4) Ensuring a good everyday life, and 5) Strengthening local participation and local communities. The programme includes 73 concrete actions related to the five themes.

Overall, there is a strong focus on sustainable transition in Finnish rural policy, and climate action is connected to almost every policy field – whether it be transport, tourism, food production or the promotion of biodiversity. Issues regarding sustainable development are also discussed from the perspective of the future need to adapt to climate change and to prepare for changes in water and forest management, for example. The review, therefore, indicates that the policy in Finland covers essential services identified in the research literature (see Figure 1). Although it

could do more on climate adaptation and management of climate impacts to ensure safe and secure services and infrastructure in rural areas, in many ways, Finland does better than its neighbours. In that sense, it represents a good example of how to include those perspectives in a national rural policy. The Finnish policy also covers essential perspectives related to security in the rural and border regions of the country. While referring in more detail to a special report on security in the rural regions, it also argues that effective co-operation between the police, the rescue and emergency services, the border guard service and civic society is important for increased security in peripheral areas. 'Welfare regions', a new administrative level in Finland responsible for healthcare, social services and rescue services, was established at the start of 2022 (Vaalit, 2022). The implications of this reform on rural services remain to be seen.

Iceland

The main policy document reviewed for Iceland is the regional *Byggðaááætlun 2018-2024* plan, which is a descriptive national policy for regional affairs that serves as a coordination document for other public policies (Alþingi, 2018). The main goals of this regional plan are to secure equal opportunities for all Icelanders in relation to employment and services, to contribute to more equal living standards, and to promote the sustainable development of communities throughout the country (Alþingi, 2018). Special emphasis has been placed on areas facing long-term depopulation, unemployment and high economic dependence on a single sector. Business support is also included in the policy, and support areas – approved by the EFTA Surveillance Authority (ESA) – are presented. The plans for business support are implemented through regional action plans (Alþingi, 2018).

The Icelandic policy for regional affairs states specifically that *"…Iceland [shall] be in the forefront of modern infrastructure, advanced services, value creation, equal quality of life, and robust local authorities capable of undertaking local projects and providing residents with good and cost-effective services with the aim of sustainable development as its guiding principle"* (Alþingi, 2018). To achieve these goals, many policy aspects are addressed, and place-specific measures are operationalised in more detail in the policy. Goals and initiatives are also directly connected to the ministry, regional association and/or relevant institution responsible, with a specific timeframe for the implementation of initiatives and measures. Moreover, proposals for funding and for identifying potential partners are detailed in the policy. The Icelandic policy can, therefore, be complimented on the fact that it specifies goals, establishes who is responsible for implementing them, how they will be achieved, and when (Alþingi, 2018).

Our combined research and policy review (see Figure 1) indicates that the policy in Iceland covers most of the essential services identified in the research literature. However, it could add more specifics on climate adaptation and the management of climate impacts in order to ensure safe and secure services and infrastructure in rural areas. While the Icelandic policy for regional affairs specifically mentions adaptations to meet the impact of climate change as a priority in the first chapter of *Future Vision and Matters for Action* (Alþingi, 2018), this is not operationalised in the context of service provision. Environmental factors and climate-related matters are mentioned throughout the policy, but direct linkages are sometimes lacking. Similarly, emergency services are not discussed in detail in the policy. However, it does state that a formal definition of the right of people to basic public services, including law enforcement and first response, should be completed, and once the definition of basic public service is finalised, proposals will be drawn up for the technical implementation.

Norway

The two parties forming the new government in Norway since late 2021 have laid out their main priorities in a co-operation agreement (Hurdalsplattformen, 2021). The agreement between the Workers Party and the Centre Party highlights a number of important rural development issues, including that no municipality or county should be coerced or pressured into a merger and that local communities should have more authority. The agreement also calls for good services for all in the country close to the people who need them, including more jobs, better infrastructure, and varied cultural life. It is also emphasises that the public sector should have more of a presence in local communities (Hurdalsplattformen, 2021).

Many of the aspects presented in this agreement (Hurdalsplattformen, 2021) are also discussed in the report *Det handler om Norge - Bærekraft i hele landet. Utredning om konsekvenser av*

demografiutfordringer i distriktene . This report is an assessment of where the main challenges for rural development in Norway lie (Norman *et al.*, 2020). It was written by a committee appointed to gather knowledge about how the demographic trend towards an increased proportion of older people (and therefore fewer people of working age) will affect the less central areas of the country. It aims to identify consequences and challenges, in particular with regard to maintaining the sustainability of communities and produce suggestions about how these challenges can be met by the public authorities and private individuals (Norman *et al.*, 2020). The main themes considered most challenging are 'providing a good health service', 'care and social services', 'education', 'emergency services', 'access to culture' and 'places to meet' (Norman *et al.*, 2020).

The report by Norman *et al.* (2020) goes beyond more traditional rural issues and says that the challenges are more complex than just demographic change and lack of economic activity. It addresses a wider range of issues, identifying access to good services as an important factor. The new government has expanded further on this in its agreement by emphasising the importance of service availability in the local communities (Hurdalsplattformen, 2021).

Another relevant policy document for Norwegian rural issues is the ministerial report *Levende lokalsamfunn for fremtiden (2019-2020)*. This report focuses on rural business development, nature resource management for more rural economic growth, access to the right competencies, physical infrastructure, access to public services, the role of municipalities in providing public services, and also the placement of more government jobs in the rural regions (Meld. St. 5, 2020).

The ambition behind Norwegian rural policy, as also expressed in this report by Norman *et al.* (2020), is that the country should aim to keep rural districts as a living part of a greater national diversity and that rural policy should contribute substantially towards sustainable communities throughout the country. It mentions that most rural societies are able to adapt to new situations and take advantage of opportunities in a way that attracts both people and companies. The assessments, recommendations and proposals for measures presented in the review report by Norman *et al.* (2020) are based on this idea. The agreement between the Workers Party and the Centre Party is a response to these issues (Hurdalsplattformen, 2021).

Our policy review indicates that the policy in Norway does cover the most essential services identified in this study (see Figure 1), as well many others. It goes into some specifics regarding certain policy aspects while also referring to other policies, evaluations and reports for more detail (Norman *et al.*, 2020). An example of this is the discussion on the effects of a local police reform in 2015/2016 (Difi, 2019). While the impacts of this reform are addressed from the perspective of citizens, the report also mentions that increased centralisation and specialisation within police departments has caused frustration in some cases because it has led to less varied and interesting work for local officers (Norman *et al.*, 2020, p.77-78).

Our analysis does indicate that further work on climate adaptation for basic services, and the management of climate impacts, could be relevant in ensuring safe and secure services and infrastructure in Norwegian rural areas. However, sustainable development and the future development of service provision are, to a significant extent, discussed from a climate change perspective. There are often references to other relevant national policies when it comes to these matters (Norman *et al.*, 2020). Among those are the innovation policy, agricultural policy, transport policy and climate policies, as well as innovation programmes. The Gnist programme, for example, invites the business community to help solve specific challenges related to local and business development in municipalities. These solutions are to be based on local needs and make use of place-specific advantages (Gnist, 2022). Based on this policy review, Norway seems to be at the forefront of discussions about new ways of providing services and how they can be implemented. Examples include encouraging more private/public co-operation alongside citizen engagement and increased local participation in decision-making. This is something that the governmental agreement from late 2021 says should be the basis for a new rural development policy to be developed and implemented by the parliament during the government's current term (Hurdalsplattformen, 2021, p. 34).

Sweden

In Sweden, the national strategy for sustainable regional development is called *Nationell strategi för hållbar regional utveckling i hela landet 2021–2030* (Näringsdepartementet, 2021). The implementation of the national regional development policy is to be coordinated with rural policies, the sustainable urban development policy, environmental policy and other relevant policy areas (Näringsdepartementet, 2021). To meet current and future challenges while also finding solutions, the government has identified four strategic areas in the policy that will form the basis for the implementation of the regional development policy through 2030. These are: 1) Equal opportunities for housing, work and welfare throughout the country, 2) Skills supply and skills development, 3) Innovation, renewal and entrepreneurship, and 4) Accessibility throughout the country by means of digital communications and the transport system (Näringsdepartementet, 2021).

The national strategy for sustainable regional development covers topics like healthcare, social care, education, and physical and digital infrastructure from a sustainable development perspective (Näringsdepartementet, 2021). Moreover, the Swedish Agency for Economic and Regional Growth (Tillväxtverket, 2022) and the County Administrative Boards (Länsstyrelserna) have responsibility for the development and implementation of rural and regional policy in Sweden. Access to more privately owned and managed services is, therefore, addressed in more detail in another report published by the Swedish Agency for Economic and Regional Growth (Tillväxtverket, 2021). This report describes and analyses access and availability to several important services in both the commercial and public sectors across the different regions of the country and is designed to serve as guidelines for regional planning and development. To ensure regional presence of the services provided by Swedish national authorities and agencies, county administrative boards have carried out an accessibility analysis focusing on all parts of the country. Also this analysis can function as guide for planning and development (Länsstyrelsen i Örebro län 2022).

Our combined research and policy review (see Figure 1) indicates that policy in Sweden covers most the essential services identified in the research literature. Although the Swedish national strategy often only makes general reference to specific priorities and challenges, it also refers to other policies and sectoral plans for more detail, as well as EU policies[8].

Our analysis does identify that the climate adaptation of basic services could be addressed in greater depth, along with the management of climate impacts to ensure safe and secure services and infrastructure in rural areas in the future. In addition, it should be noted that the Swedish policy studied here does not address security in relation to the availability of the police or civil defence in rural areas.

Much of the national policy is in practice implemented at the regional and local authority level in Sweden, and it is worth mentioning that SALAR (the Swedish Association of Local Authorities and Regions) has an innovation guide that addresses the challenges of the future. This guide provides methodological support for developing innovative solutions in the public sector, based on an understanding of the users' needs and experiences, rather than continually providing services for which there is no demand (SALAR/SKR, 2022). This is meant to provide a deeper understanding of what creates value for residents while also creating new and smarter ways to provide services.

The Faroe Islands

The Faroe Islands is a self-governing part of Denmark, with a high degree of autonomy over most internal affairs and external trade. The archipelago of 17 inhabited islands and one uninhabited one is located between the Norwegian Sea and the North Atlantic Ocean. Among the population of almost 52,000 people, the island of Streymøy is by far the most populous. It has almost half the population of the islands as a whole and approximately twice as many people as Eysturøy, the second-most populous island. Seven of the inhabited islands have fewer than 100 people living on them (Nordic Council of Ministers, 2020a). The demographics and geography of the Faroes create a unique situation when it comes to service provision.

The agreement between the current three-party coalition government of the Faroe Islands,

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8. As for the other Nordic EU member states, a new CAP Programme for Sweden (2023-2027) has been under development for the past few years. It is now awaiting approval by the European Commission.

Samgonguskjal 2019–2023, lays out the priorities for the Islands (Samgonguskjal, 2019). The focus is on economic and financial activities for the whole Faroese population, and in particular fishing policies, healthcare and social services, education, and transport. Since more than half the population is scattered between 17 islands, adequate transport provision is one of the most essential rural policy issues in the Faroe Islands. Housing is also something that Faroese policy emphasises, especially the lack of financing for housing construction in the countryside and outside the capital, Tórshavn (Samgonguskjal, 2019). The combined policy and research review (see Figure 1) indicates that Faroese policy might benefit from putting more focus on climate adaptation and the management of climate impacts in relation to providing services and infrastructure. There is a considerable focus on green transition and on minimising emissions of greenhouse gases, but little weight is given to the possible effects of climate change on everyday life on the islands, including the provision of basic public and private services (Samgonguskjal, 2019).

Greenland

Greenland, the world's largest island, is located between the Arctic Ocean and the North Atlantic Ocean. Approximately 80% of the land is ice-capped. Greenland has had greater responsibility for internal affairs since June 2009, when the Act on Greenland Self-Government was signed into law (Nordic Council of Ministers, 2020b). However, some policy areas are still managed in consultation between Denmark and the Greenland government. The population is just under 58,000 people, with settlements concentrated on the southwest shoreline and scattered along the remaining coastline. This makes Greenland a remote and rural country with great distances to navigate and difficult terrain between settlements. Since the country's main export and source of income is fishing, the labour market is fairly one-dimensional. Combined with the harsh terrain and long distances, this creates a unique set of challenges for service provision.

The policy document *Naalakkersuisuts beskæftigelsesstrategi 2020-2023* (Naalakkersuisuts, 2020) addresses some of the major challenges facing Greenland in relation to the effects of the COVID-19 pandemic. It highlights challenges that were already known, which in some regions have been accelerated by the effects of the pandemic. Economic affairs is the main theme, with the focus on sectors that can generate economic growth and help develop a diversified and sustainable economy and more jobs. Four priorities are identified for overcoming the biggest challenges: 1) Strengthening sectors that can create economic growth, 2) Cutting youth unemployment, 3) Special regional employment initiatives, and 4) Creating better matches between companies and workers.

Our combined research and policy review (see Figure 1) indicates that Greenland could add a few things to its approach to ensuring safe and secure services and infrastructure in rural areas. While employment is the main focus, it also addresses education and care and puts great emphasis on physical infrastructure, especially transport – while not mentioning emergency services or digital infrastructure to any significant extent. However, *Sullissivik* is an online portal dedicated to providing digital citizen service in Greenland (Sullissivik, 2022). Also, climate adaptation of basic services and the management of climate impacts could be addressed in more detail since Greenland is particularly vulnerable to climate change and the disruption of the Arctic environment. However, Greenland does discuss housing and the provision of better options for both public and private housing as a priority, and, as such, the housing challenge is framed from a service-oriented perspective (Naalakkersuisuts, 2020).

Åland

Åland is an autonomous region of Finland. It consists of thousands of islands, over 50 of which are inhabited by a total population of just over 30,000 people (Nordic Council of Ministers, 2020c). The policy documents *Ålands landskapsregerings interventioner ingående i Finlands CAP-strategi* (Ålands landskapsregering, 2021) and *Tillsammans för Åland* (Ålands landskapsregering, 2019), present certain priorities. The name of one of these policy documents, *Tillsammans för Åland*, means 'Together for Åland'. It clearly states that the aim includes collective progress towards a more economically, socially and environmentally sustainable Åland – including the capital, Mariehamn, the countryside and the archipelago as a whole. This is said necessary toprovide effective and socially just services for all Ålanders, regardless of where they live. (Ålands landskapsregering, 2019)

Some of the main sectors targeted in Åland´s rural policies are education, healthcare, social care and physical infrastructure, mainly transport by land and sea (Ålands landskapsregering, 2019; Ålands landskapsregering, 2021). Agricultural policy emphasises, to a great extent, a range of environmental factors – such as the need for a green transition, the circular economy, biodiversity, ecological food production, nature protection, and the safeguarding of natural resources. It also discusses the need for a just way to contribute towards more sustainable and environmentally friendly practices, e.g. in the form of compensatory payments where applicable (Ålands landskapsregering, 2021).

Our combined research and policy review (see Figure 1) indicates that policy in Åland covers the essential services identified in the research literature. Overall, there is a general climate awareness in Åland's policies, and even some mentions of climate adaptation and the management of climate impact to ensure safe and secure services and infrastructure in rural areas. Climate adaptation of basic services and the management of climate impacts could be further developed and operationalised, however, beyond the general climate goals. The discussion is mainly limited to water quality and the use of water (Ålands landskapsregering, 2019). Moreover, Åland has, for the past decade, since 2012, had a special policy in place, *Digital agenda för Åland,* part of which lays out the policy for the digitalisation of public services. This policy could be inspirational for other Nordic regions (Ålands landskapsregering, 2022).

Research-policy comparison: Which services are included, which are not?

The combined research review and review of relevant policies, evaluation documents, assessments and other documents on rural policy at the national level shows that Nordic rural policies generally include service delivery (see Figure 1). Which services and how the different countries suggest solving the challenge of service delivery differs, however, according to country or region, governance structure and the politicians in charge. When comparing services that were found essential for rural areas now and in the future (see Table 1), with the documents analysed from the Nordic countries, most of the essential services identified in the research literature are found to be covered (see the green colours in Figure 1).

However, some services were found not to have been included or were not as prominent in the review (see the red and yellow colours in Figure 1). A plausible reason for why some essential rural services identified in the research review were not included in Nordic rural or regional policies studied in this report could be that the documents analysed are not fully comparable between countries because of different governance structures. Some of the documents also contain detailed policies, while others only present key aspects, challenges and priorities. Often specific topics are included in other sector policies, in special agreements, or in programmes that the rural policy often refers to for more specific details. Nevertheless, the purpose of pointing out that some perspectives on services are lacking in the policy studied here is that it can indicate the need for further work on these topics, with rural-specific solutions in mind and to open up possibilities for further Nordic co-operation on such matters.

The documents studied for Denmark, Iceland, Greenland, the Faroe Islands and Åland indicate that these countries and regions might be lacking somewhat in more specific proposals on climate adaptation of basic services and the management of climate impacts to ensure services and infrastructure development in rural areas. Finland could be considered a good example in this regard, and Sweden and Norway also cover some important aspects, but also these countries could also do more work on how to adapt rural areas to the more fluctuating and extreme weather conditions that will come with further climate change.

Emergency services and civil defence are also topics discussed with the rural dimension in mind in some countries, while others do not mention them in the policies studied here. Finland, Norway, Denmark, the Faroe Islands and Åland include the importance of security, e.g. in the form of a police presence in rural areas, while Iceland, Sweden and Greenland do not address the issue. However, that is not to say that these aspects are not considered important in Iceland, Sweden and Greenland. The topic is simply not included in the documents analysed for this study.

The service category called 'Education and childcare' here is included only to a certain extent in the policies studied for Denmark and Iceland. While all policies mention the importance of access to basic education, and some even mention access to higher education, not all the policies discuss these topics from a quality perspective. Finland, Norway, Sweden, the Faroe Islands,

Greenland and Åland, however, all discuss the need for better skills. Enhancement for educational staff in the rural regions to some extent, e.g., in attracting better-qualified teachers and personnel to more rural education centres.

Digital infrastructure is not included as a topic in the policies studied for Greenland. It should be recognised, however, that in Greenland, large parts of the region do not have any need for digital infrastructure.

Housing as a public service category is also something that members of the Nordic Thematic Group for Green and Inclusive Rural Development mentioned in the workshop to discuss this project. Housing was mentioned to a certain degree in each of the documents analysed. The autonomous regions of the Faroe Islands, Greenland and Åland all have clear statements in their policies on this topic, discussing housing as a partially public service issue in the most peripheral areas. The other five countries have much more market-oriented approaches to housing issues.

Policy comparison: Good, place-based services?

To some extent, the here studied policy in all of the Nordic countries specifically targets the need to ensure good, place-based services (Figure 1). As stated in the background section above, place-based solutions are considered necessary for adapting service provision to specific needs within the region, municipality or village. Individually and collectively, the results of the policy review indicate at least two different models for ensuring place-based perspectives in the Nordic Region, both with their pros and cons. In Denmark, Finland, Norway and Sweden, several tasks are delegated from the national policy level to the regional or local authorities, which facilitates more place-specific solutions, while certain other issues are addressed in specific sectoral policies and plans. Norway and Sweden seem to be at the forefront of demonstrating how new ways of providing services can be implemented, specifically by encouraging more private-public co-operation and public engagement. Opening up different types of collaborative service agreements is one solution for enabling better, place-based services. In Iceland, Greenland, the Faroe Islands and Åland, the responsibility for public services lies at the national government level to a greater extent than in the other Nordic countries. Iceland has no regional authorities, and most of the municipalities have small populations and the people working in the public administration have limited resources. The structure is, therefore, more centralised, which allows for national policies to go into greater detail and operationalise policy in relation to specific challenges in specific regions.

Developing and implementing policy for rural services in a way that ensures good place-based service delivery is challenging, irrespective of the governance system. This is discussed further in the section on challenges in the following chapter.

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Challenges and opportunities for service provision in Nordic rural areas

In this chapter, we present an analysis of the challenges and opportunities for service provision in rural and sparsely populated areas of the Nordic Region. This is the response to the third research question What are the key challenges and opportunities for secure and safe service provision in Nordic rural and sparsely populated areas? The analysis presented is based on the reviewed research, a workshop with officials in public authorities, an accessibility analysis and a policy review. By including both long term and short-term perspectives it can be used as a foundation to ensure secure and safe service provision in Nordic rural and sparsely populated areas now and in the future.

Challenges

Demographic change and structure create rural-specific challenges for service provision

The populations of the Nordic countries stand out as being the most mobile in Europe, which contributes to the ongoing urbanisation of the population. The shift in the population away from peripheral rural areas and towards urban centres brings with it complex planning challenges in both shrinking and growing regions. (Heleniak, 2020, p.49) The general decrease in the number of inhabitants in sparsely populated rural areas is challenging those areas to look to the future from perspectives such as 'smart shrinkage', the process of public authorities adapting their activities to match the shrinking population (Heleniak, 2020; Stjernberg & Kull, 2021). The general demographic structure emerging in rural areas, comprising more older adults and fewer young people, also highlights the need for place-based approaches – for instance, to adapt educational and care facilities to the age and needs of the local population (Heleniak, 2020; Stjernberg 2020).

Importantly, the rural areas in the Nordic Region are diverse. Not all regions or municipalities that are categorised as rural in statistical terms are shrinking, and not all urban areas are growing in population. In fact, there has been a decline in fertility rates in almost all Nordic countries and regions over the past decade (Karlsdóttir *et al.* 2020). Analysing the fertility rates in the Nordic countries during the covid-19 pandemic, Sánchez Gassen *et al.* (2022) however declare a potential change, as the number of births during the pandemic in large parts of the Nordic Region has remained stable or even increased. It remains to be seen if this is a short-term baby boom and fertility will go down again after the pandemic – or if we are seeing a longer-term increase in fertility from lower levels.

With these nuances in mind, there is a risk that adapting education and schools directly to the number of school-aged children, which could lead to school closures, would have severe negative effects on student health – due to travel time, dropping out and fewer opportunities for young people in terms of both work and education in their home areas (Karlsdóttir & Cuadrado, 2018). An increasing number of elderly people in rural societies does not just imply a slowdown in the growth of the workforce, changing economic patterns in relation to savings and consumption and greater pressure on public expenditure for social purposes (Norlén & Randall 2020). It also indicates an opportunity to change the way in which we perceive elderly people, for instance, using the term 'silver economy' and acknowledging the contribution of older people to informal economies.[9]

9.   Read more about the silver economy in the section below on opportunities for service provision in Nordic rural areas.

The public sector does not have the funds to cover the rural service needs

Studies show that rural populations, in general, have higher service needs for health services than urban populations (Bremberg, 2020; Douthit *et al.*, 2015; Lundgren & Cuadrado, 2020; OECD, 2020; Rehn-Mendoza & Weber, 2018). However, socio-economic factors and health are closely entangled. They contribute to a diverse pattern. There are also several Nordic rural regions where people live long lives due to structural factors such as high economic standards of living, good health and high levels of education influencing wellbeing (Lundgren & Cuadrado, 2020). Based on studies from 2013, EU member states and the regional and local authorities are considered not to have the financial resources to maintain the current levels of their services (Rauhut *et al.*, 2013). In an assessment of public service delivery, the OECD (2020) highlighted the fact that public spending has increased due to the pandemic while revenues have fallen. As economic models are based on the number of inhabitants, areas with low population density have difficulty in achieving the same economies of scale as densely populated or urban areas. At the workshop on 22 November 2021, members of the Nordic Thematic Group for Green and Inclusive Rural Development confirmed the challenge of covering the cost of rural public services. The workshop participants were, however, concerned that a singular focus on the costs and profitability of service provision, regardless of whether it be in urban or rural areas, could lead to the erosion of the Nordic welfare models.

Difficulties attracting highly skilled workers

It has been noted that some rural service providers face challenges in attracting highly skilled workers, such as medical doctors, nurses and teachers (Penje & Berlina 2021). One of the policy actors in the Nordic Thematic Group for Green and Inclusive Rural Development expressed the view that the relatively poorer prospects for career advancement in rural areas, which are located far away from university 'competence centres' or central hospitals, discourages ambitious professionals from seeking employment in rural communities. Ensuring proper skills development of already employed persons and digital professional peer support is two possible solutions for this challenge.

Lack of innovation capacity and digital skills in public authorities

The experts working in public authorities told the workshop on 22 November 2021 that many people working in the Nordic public sector at regional and local levels lack spare capacity for innovations to solve the above-mentioned challenges because they have too many tasks and too many different things to do. They also talked about a lack of 'digital maturity' in public authorities. To address these challenges, they suggested hiring staff with high levels of innovation and digital capacity to provide a boost to on-house competencies.

Risk of decreased quality of service in the process of digitalisation

Digitalisation is first and foremost an opportunity for rural areas, but there is also a potential risk that it will also damage the quality-of-service provision, as people find themselves more distant from one another due to new digital solutions. This is particularly relevant to the effects on and transformations of physical services. (Ellem *et al.*, 2019; Hodge *et al.*, 2017) As set out above, digitalisation in the healthcare sector is expected to improve quality, accessibility, flexibility and efficiency (Ormstrup Vestergård *et al.*, 2020; Lundgren *et al.,* 2020). If these expectations are fulfilled, then how digitalisation supports, complements, replaces or disrupts existing service structures at local levels in the health and other sectors could be a topic for future study. By proactively responding to this challenge, the public authorities can enhance in-house skills, and also establish digital service advisors to people with little ability to access them. An example of how this can be done is through a library service, as in the Vingåker municipality in Sweden, where a *Digidelcenter* has been set up where local people can book a time to get help with everything from digital banking to setting up an Instagram account (Digidel, 2022).

Challenges to developing good place-based services

A localised democracy, as part of which the national authorities delegate responsibility for placed-based services to local and regional institutional levels, is something that enables the context-specific adaptation of services. This democratic model is included in the Nordic countries' welfare systems, albeit with certain variations (Dølvik et al., 2015; Tillväxtanalys, 2020). From a state perspective, one of the challenges of delegating responsibility is that national bodies are also expected to assure the quality of the services. This is not only a potential challenge for rural areas as the kind of service needed in (for instance) northern Norway is not necessarily the same service needed in western or southern parts of the country. A place-based service entails an awareness of the different service needs depending on where people live. However, the way the service is 'provided' or 'delivered' to the individual might also need to differ – whether it is in public, private or collaborative form. The delegated, or place-based, responsibility to provide services can prove challenging for national agencies. This makes it important to maintain an ongoing dialogue on which services are the most important for individuals in different parts of the Nordic Region, as well as a continuous multi-level conversation on these matters. For Iceland, Greenland, the Faroe Islands and Åland, responsibility for public services lies with the national governments to a greater extent than in the other Nordic countries. This structure and model for service delivery seems to work well in these contexts, indicating that it is not necessarily the case that delegating responsibility from the state to local authorities (and/or to the private actor) is the only model for rural service provision. The challenge involved in developing good place-based services under this more state-based governance model is, however, to ensure that local knowledge and variations are incorporated when drawing up the national policy.

Opportunities

Mitigate long distances via digital delivery and close the digital divide

Internet technologies are expected to help people overcome long distances in rural areas and provide access to important services – including health, finance, education and administration (Lundgren et al., 2020). A basic prerequisite for this is access to digital infrastructure such as broadband. Lack of access to the Internet, or to material digital inclusion, has been addressed in terms of a 'rural broadband gap' (Ormstrup Vestergård et al., 2020; Randall et al., 2020; Salemink & Strijker, 2018). Moreover, the so-called 'digital divide' suggests that people with certain demographic and socio-economic characteristics may be disadvantaged in accessing and using the Internet. As stated above, providing the necessary digital infrastructure in terms of high-speed broadband is not enough to overcome this challenge. Service providers also need to adapt and update their online way of working to the specific needs of the people using their services (cf. Hodge et al., 2017; Löfving et al., 2021). One proactive example is how actors in Åland is working with digitalisation of their regional and local public sector, as they in 2014 based on a collaboration agreement created Åda Ab, a business owned by the public authorities that is adapting and developing the e-services for and together with them (Åda Ab, 2022; Ålands landskapsregering, 2022).

Do more work on using tools for collaboration agreements

Spurred on by the need not to rely solely on public funds or only on market-based solutions for services in rural areas, innovative interlinkages are being developed between different types of public services and between public and private services. For instance, providing housing for groups of people who do not have access to bank loans, using service hubs for a multitude of services in the same location (such as libraries and grocery stores) and service homes adapted for healthy older adults in rural areas.

In Europe and the Nordic countries, several policy measures have been developed for collaboration agreements on service provision. For instance, in Sweden, state-third sector partnerships (sv. *idéburet offentligt partnerskap, IOP*) enable service collaboration agreements (Narbutaité Aflaki et al., 2018; SOU, 2019). In the Kvarken region, more efficient and advantageous co-operation has become possible since the region became a European Grouping of Territorial Cooperation (EGTC) in 2020. EGTC is the EU's legal instrument for cross-border

collaboration, and this formalised structure can attract investment in service solutions (Kvarken Council, 2020). In Finland, there are service obligation procedures (fi. *palveluvelvoite*) for essential services which are not provided on market terms. This procedure is a way for public authorities to delegate service delivery to private actors (Stjernberg & Kull, 2021). The legal regulation of the service obligation is described, for example, in section 131 of the Finnish Local Government Act (Finlex, 2015) as follows: "*For the purpose of ensuring the services necessary for the well-being of the municipality's residents, municipalities may impose a fixed-term service obligation on a services provider operating in a competitive market environment if the operation of the market is inadequate. Before imposing the service obligation the municipality must ascertain whether the operation of the market is adequate. The service obligation must be imposed in writing and must specify the main terms concerning service provision and the determination of compensation. The compensation payable to secure the service must also take into account the provisions of the European Commission's legislation on State aid and general economic interest.*" The decision on what services to consider is made in the municipalities, based on three considerations: legal, value-based and financial. The service is paid out of the municipal budget. Ways to investigate whether the market really is adequate include conducting a public consultation on the municipality's website or in a trade journal, consulting an outside expert or publishing a market consultation announcement at HILMA, which is the official service for notices on public procurement (Julkiset hankinnat, 2022). If the market is deemed inadequate, there are two routes: either tendering, following the law on procurements, and involving a written agreement with specific terms; or a subsidy procedure, involving an open call for service providers. So far, municipalities have rarely used the service obligation, and the bureaucracy involved is considered cumbersome. The state level has been more active, and the service obligation has been used, for example, to ensure traffic connections to Åland, for building social housing, and for ensuring the supply of electricity (Kettunen *et al.*, 2015).

Increase place-based adaptation of services by going beyond statistics about permanent inhabitants

Remote working, second home use, and new forms of entrepreneurship indicate a need to adapt Nordic rural service provision yet further to suit multi-locality living and the mobility patterns in the Nordic countries and who cross Nordic borders on a regular basis (Enestam, 2021; Slätmo *et al.*, 2019; 2020). Importantly, part-time residents, such as work migrants, second homeowners, and seasonal tourists, can have positive impacts on grocery stores, restaurants and jobs done by local craftspeople in rural areas. In a study on urban-rural linkages arising from the use of second homes and seasonal tourism in the Nordic countries, Slätmo *et al.* (2019, 2020) suggest acknowledging multilocality as a basis for service delivery. A community impact indicator based on location and the use of second homes was developed. It can be used as the basis for estimating the total population using rural services throughout the year at municipal level in the Nordic Region (Slätmo *et al.*, 2019; Turunen and Norlén, 2020). The impact of the COVID-19 pandemic in cross-border areas also shows the need for closer co-operation, especially in times of crisis (Gränshinderrådet, 2022).

Ensure service provision via fiscal innovation

National, regional, local and EU rural policies all provide opportunities for new financial solutions. For instance, taking the returns from businesses owned or co-owned by public authorities, such as energy facilities and mines, and investing them in service delivery models. Another possibility could be investigating the room for change in the parameters behind 'equalisation tax funds' (No. inntektssystemet/sv. skatteutjämningssystem/da, udligningssystem/is, Jöfnunarsjóður); that is the public system that seeks to guarantee a balance between urban-rural municipalities (see, e.g., Finansministeriet, 2020; Kommunal- og distriktsdepartementet, 2022).

Acknowledge the various functions rural services provide

Studies of closures of service facilities in Sweden show that they do not influence migration patterns to rural areas (Amcoff *et al.*, 2011; Cras 2018). They do, however, frequently cause controversy and concerns about the distance to school, grocery stores or petrol stations. Based on studies of services in rural Sweden, Cras (2018, p.69) says that arguments for the preservation of services in rural areas are often based on three perspectives concerning the

function of the service facility. The service has (1) a practical function in people's everyday lives; for instance, a petrol station is needed to run a car. The service has (2) a social function, meaning that people appreciate the spontaneous meeting places provided by the service facility, such as a small store in the petrol station. Services also have a function in (3) creating a feeling of a vivid place, which in turn influences the perception of the rural town or community. Cras (2018) says that this third perspective leads people to fight for the preservation of particular services, even if they do not use them personally (Cras, 2018).

Recognise seniors as active inhabitants in the rural north

The population in both urban and rural areas of the Nordic countries is getting older over time (Stjernberg 2020). The 'silver economy' refers to all economic activity linked to older age groups. Older people continue to make valuable economic and societal contributions after retirement, and they can provide significant economic and societal benefits, particularly if they are healthy and active (Stjernberg *et al.*, 2021). The potential of the silver economy requires changing popular perceptions of the ageing population. This includes overcoming outdated stereotypes of older people. Making society more age-friendly, and appreciating and activating the aspirations of senior citizens, is central to capturing the opportunities inherent in the silver economy. In rural areas where population ageing is most often felt and where seniors constitute an increasingly important consumer base, there is a potential for new types of products and services (Stjernberg *et al.*, 2021). Based on studies of Trøndelag in rural Norway, Stjernberg *et al.* (2021) suggest that the combination of welfare technologies and a well-established culture of volunteering in Norwegian rural areas represent an organic starting point for further development and for growing the 'silver economy'.

Devise policy innovations adapted to rural regions by learning from other Nordic countries

Set up and use meetings with policy actors from different countries and regions within the Nordic Region in order to derive inspiration for rural policy and procedures from each other.

Monitor accessibility to services and communicate with rural populations to calibrate the level and model of service delivery

Further studies should be made of people's perception of service delivery in the Nordic Region in order to calibrate the expectations of the rural population. The positive value of living in rural areas, with their vast open expanses and rich environments, comes with the downside that not all services are available everywhere. To find the right level of service provision and the right model of service delivery, continued dialogue is considered necessary. Regardless of who owns or provides the service –private, a public or a combination under a collaborative agreement – from the perspective of local people, what is important is to ensure the accessibility of essential services. The trend of service hubs, or service concentration, means that several services can be provided in the same office or location. Although this trend potentially represents a cost-effective solution to service provision, it also comes with the risk of lowering the level of accessibility. This makes it important to monitor the accessibility – in terms of distance - of rural services continuously in order to ensure that the access is distributed in a way that ensures safe and secure lives for people of the Nordic Region.

"The positive value of living in rural areas, with their vast open expanses and rich environments, comes with the downside that not all services are available everywhere. To find the right level of service provision and the right model of service delivery, continued dialogue is considered necessary. "

Concluding remarks

This knowledge overview is a part of the project known as "Service provision and access to services in Nordic rural areas – secure, trusted and for all ages". The project is an assignment from the Nordic Thematic Group for Green and Inclusive Rural Development, which is part of the Nordic Co-operation Programme for Regional Development and Planning. The objective of the project is to analyse how essential rural service needs can be understood and defined and how solutions to rural service provision challenges can be organised.

It should be safe and secure to live in rural areas in the Nordic Region. Accessibility to essential services facilitates this concept of safety and security. Services also creates attractiveness, important for investments, newcomers, and jobs. Extreme weather conditions resulting from climate change, demographic change and the COVID-19 pandemic have highlighted the importance of both long-term and short-term perspectives when planning, supporting and delivering services. In this study, the following services have been identified as essential for rural areas, now and in the future:

- Climate adaptation and the management of climate impacts
- Emergency services and civil defence
- Education and childcare
- Healthcare and social care
- Physical infrastructure
- Digital infrastructure.

Continued work on these and other services is important for ensuring secure and safe service provision in rural and sparsely populated areas, now and in the future. When looking more closely at the relevant policy documents from the five Nordic countries and the three autonomous regions, our analyses indicate that most of the essential services are covered by them. However, the extent to which national policies and priorities provide solutions and operationalise service needs does vary.

This combined research and policy review also indicates that there is room for improvement. Some essential services would benefit from further policy attention, in order to ensure safe and secure access to services in Nordic rural areas, both within and between countries and regions. This is especially the case for the emergency services and civil defence, as well as for climate adaptation of basic services and the management of climate impacts. To a certain degree, and for some of the countries, the categories of education and childcare, as well as digital infrastructure, might benefit from further work by policy actors.

Place-based solutions are considered needed to adapt the service provisions to the specific needs in the region, municipality, or village. The results from the policy review presented indicate at least two different governance models for ensuring place-based perspectives in the Nordics, both with their pros and cons. Developing and implementing policy for rural services in a way that ensures good place-based service delivery is challenging irrespective of the governance system. Monitoring the accessibility, and continued conversations is key to find the right level and model for rural services.

As stated in the introduction, the ambition behind this knowledge overview is to serve as inspiration for future service provision in rural areas within (and in collaboration between) the Nordic countries and regions. Presenting research perspectives on essential rural services, analysing the accessibility of some services, and investigating if and how essential rural services are included in policy frameworks has enabled and improved our understanding of the challenges and opportunities facing future rural service delivery in the Nordic Region. Even though there are major challenges involved in ensuring secure and safe service provision in Nordic rural and sparsely populated areas, there is also potential possibilities to work on and to identify rural-specific solutions. Indeed, our future analysis has identified several opportunities, including economic measures, new legislation, policy innovation and collaboration on the work ahead. The results call not only for rural-specific policy solutions but also for place-based adaptation of the policies to allow for the nuances of rural areas to be taken into account.

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