

Annex 10 d to SeGI Scientific Report

Case Study Report | Iceland (North-East Region)

Draft Final Version, September 2012



This report presents a more detailed overview of the analytical approach to be applied by the project. This Applied Research Project is conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

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1. Introduction to the case-study report:

This draft report is carried out as a part of the work in Activity 4 in the SeGI project by Hjalti Jóhannesson and Valtýr Sigurbjarnarson, researchers at the University of Akureyri Research Centre in June 2012. The report is constructed according to the template created by the Activity Leader; ISGO in Warsaw, Poland. Due to limited data availability on the LAU 1 and LAU 2 levels and technical constraints maps have not been made for indicators. Due to low population density and large uninhabited and uninhabitable areas indicators per km are not calculated.

1.1. Description of Iceland

Iceland and its settlement characteristics have in several ways a rather unique position in the European context. The total population size is only around 320,000, of which over 63% live in the capital city Reykjavík and its surrounding municipalities in the southwest part of the country. Most of the remaining population lives in towns along the coast but only 6,4% live in what is defined as rural communities and therefore the country can be considered is very urbanized. The population density is merely 3.2 persons per km² making Iceland the continent's most sparsely populated country. The population is however to a large extent concentrated on a narrow coastal belt and in valleys extending from the coast as the country is very mountainous and almost four-fifths are uninhabited and mostly uninhabitable.

Due to the relative size of Iceland (one third of the size of Poland) and the settlement structure, service provision, especially in the more sparsely populated parts of the country, is challenging. As the more remote regions lose more and more of their population due to out-migration, service provision becomes relatively more expensive and issues such as recruitment of specialists to those areas becomes more difficult. On the other side of the coin there is Reykjavík being by far the largest city and it has been the place where services have tended to concentrate. This service role for the whole country seems to have become gradually stronger as in recent years there has been tendency to rationalize public services and create larger units or make fewer institutes serve larger areas. Privatization and liberalization of the economy has also influenced and sped up this process and an example of this is the state telephone company which has closed many of its offices and service centres. Finally, the credit crisis has to some degree limited the ability of the state to maintain services.

A general problem in the Icelandic case and for similar studies undertaken in Iceland in order to analyse regional differences is lack of data

1.2. Description of the North East Iceland

The case study region, Northeast Iceland is among the sparsely populated regions in Iceland. It has 29,000 inhabitants, thereof 18,000 live in the regional centre Akureyri which is the largest town in Iceland outside the capital region. The region is divided into 13 municipalities (see table).

Table 1. Municipalities in northeast Iceland.

	Area	Inhabitants				Dependency ratios	
	Sq km	Total	Males	Females	15-64	0-14	>64
Akureyri	133	17875	8814	9061	64%	35%	20%
Norðurþing	3729	2884	1446	1438	65%	28%	26%
Fjallabyggð	364	2035	1038	997	64%	25%	32%
Dalvíkurbyggð	598	1900	993	907	64%	34%	22%
Eyjafjarðarsveit	1775	1031	530	501	66%	36%	16%
Hörgársveit	894	584	302	282	66%	28%	22%
Svalbarðastrandahreppur	55	390	199	191	72%	27%	13%
Grýtubakkahreppur	431	350	181	169	61%	42%	22%
Skútustaðahreppur	6036	385	192	193	72%	20%	19%
Tjörneshreppur	199	55	29	26	64%	0%	57%
Þingeyjarsveit	5988	915	472	443	63%	27%	33%
Svalbarðshreppur	1155	102	56	46	71%	22%	19%
Langanesbyggð	1333	512	271	241	62%	41%	22%
Northeast total	22690	29018	14523	14495	65%	33%	22%

The total area is close to one fifth of Iceland's size but the population is merely 9%. The municipalities are very different; some have few inhabitants but extend over large distances such as Skútustaðahreppur (much of that municipality is uninhabited, such as the highland) while other municipalities have somewhat more condensed settlement such as Akureyri.

Having Akureyri, a relatively large town in the region, makes the service base relatively strong and thus most common service functions are available in the region. Therefore, inhabitants of the town and the surrounding region are more privileged concerning access to services of general interest than some of the other sparsely populated regions of Iceland which neither have a strong regional centre nor an easy access to the strong service base of the capital region. Distance from Akureyri to Reykjavík is around 400 km by road (around 5 hours). By air the travel time is 45 minutes. Air traffic is extensively used and there are frequent flights between Akureyri and Reykjavík with 50 passenger planes. This transportation service makes other diverse services of Reykjavík more accessible for other regions served by air transportation but at the same time Reykjavík is costly to access. The population in the northeast region has increasingly concentrated on Akureyri and neighbouring municipalities. Rural areas and smaller towns, especially in the far northeast part of the region, have been losing population. Young adults are underrepresented in the region due to out-migration especially to the capital region but the gender ratio is very even.



Figure 1. The location of the northeast region.

2. National analysis of services

2.1. Description of the welfare regime of the country and its particular effects on various services

“Although included within the Nordic family of nations, propinquity to social democratic welfare regimes has not determined the development of welfare arrangements in Iceland” (Irving, 2011 p. 235) but instead there has been “affinity towards other more liberal ‘settler’ states (such as New Zealand), and to strong US relations” (ibid, p. 236). The issue of which welfare regime Iceland belongs to - or should belong to, has been much debated in recent years, both in the years before the credit crunch when there was apparently decreasing emphasis on social services. Thus public spending on social welfare has been relatively low compared to the other Nordic states but instead there was importance on maintaining high labour force participation. After the credit crunch in 2008 where Iceland was one of the first victims, unemployment rate has however been very high by Icelandic standards (6.5% April 2012), yet at the same time less public money has been available for social welfare. After the credit crunch, a leftist government gained majority in elections in the spring of 2009. This government presented a turn towards a more Scandinavian welfare regime, aiming at “creating a Nordic welfare society in Iceland, where collective interests take precedence over particular interests” (Prime Minister’s Office <http://eng.forsaetisraduneyti.is/news-and-articles/nr/3706>). For the most part since independence in 1944 the conservative Independence Party had been in government placing less emphasis on this type of welfare regime.

2.2. Overview of all services of general interest in the country

Despite its small size and distant location from mainland Europe, Icelandic society offers in general good availability of services of general interest but accessibility differs among places and regions within the country. This relates to the fact that Iceland is sparsely populated as a whole but this becomes much more pronounced outside the main populated area, i.e. the capital city Reykjavík and its immediate hinterland. While Reykjavík offers most SGIs it can in some regions be a challenge to access services it at all available in the most remote and thinly populated areas. Below there is an analysis of these services and their main characteristics and recent development.

2.2.1. Economic services of general interest

Gas (Geothermal district heating in Iceland). Gas is not used for heating in Iceland and to a small degree for cooking, but not distributed through a network grid and can thus not be included in the Icelandic SGIs. Instead geothermal water is used to heat around 95% of buildings as well as swimming pools and sometimes even for other applications e.g. for melting snow off paved surfaces such as parking lots and pedestrian areas. Hot water is distributed through district heating systems and sometimes over relative long distances from geothermal sources, or up to 63 km. In most cases these heating systems are owned and operated by municipalities or companies which are owned by municipalities. In some parts of Iceland, which are located far from the main geothermal fields, electricity or oil is used for heating. Electrical and oil heating is more expensive than geothermal heating and is therefore subsidised by the government.

Water. Water is usually abundant in Iceland and of very high quality. However there are few exceptions from this, as water can become scarce in a few areas during draught seasons, especially in farming communities in south and west Iceland.

In urban areas, water is distributed by municipalities or companies owned by municipalities. These are often the same companies that deliver hot water and in some cases they also distribute electricity. Water for homes is usually paid for by a water tax which is often a flat rate in relation to market value of house or apartment. Businesses pay for water according to consumption. In rural areas, i.e. farming communities, there are different methods of providing water, in some cases individual farms have their own water sources but in other cases water is provided by the municipalities and paid for with water tax or an organisation owned by a group of house owners in the respective area which collects a rate for the service.

Waste.

Waste management is the responsibility of the municipalities, however the Ministry for the environment and the Environment Agency monitors the field and the state provides the regulatory framework. Municipalities have increasingly collaboration in the field, due to increasing costs, stricter regulatory framework and it has sometimes proved difficult to find new sites for landfills because of general opposition among citizens, landowners and local governments.

Much progress has been made in recycling and there are special funds for reclaiming both valuable and harmful materials and for recycling. This has been especially successful among some municipalities or collaborations of municipalities. According to a survey in 2008, 91% of Icelanders recycle household waste in one way or the other. This ratio increased from 84% in 2006¹. The share of materials that are recycled was 51% in 2007 and 41% goes to landfills. In a few locations there have been incinerators which have not fulfilled emissions standards and these have been closed recently. Due to higher costs and less waste, garbage is usually collected less frequently from homes, often with two weeks interval instead of weekly previously.

Sewage.

Similar to waste disposal the sewage system is the responsibility of municipalities. The Ministry for the environment monitors the field and the state provides the regulatory framework.

Municipalities have made considerable effort in upgrading their systems to clean up coastal areas and protect health. These are however very expensive projects for most municipalities and in recent years there seems to have been made less progress than there was during the last decade of the millennium. That relates to the fact that in 1994 stricter regulation was introduced². Less progress in recent years in upgrading the system may probably be linked to worse economic conditions, especially in the wake of the credit crisis. It is estimated that 70% of inhabitants in Iceland now live where sewage is treated, the situation in this regard is best in the capital area.

Electricity. Since 2005 production and distribution of electricity has been separated in Iceland. At the same time, distribution of electricity in rural and urban areas was separated. Electricity is distributed to homes by several companies and these are owned by the state, municipalities or companies owned by municipalities. In rural areas there are cases where electricity is produced in small hydro power stations, however all or nearly all homes are connected to electrical grids. The main distribution network of electricity, connecting all regions and smaller power grids is owned by the state and was until 2005 a part of the national power company Landsvirkjun which produces most of electricity in Iceland.

Nearly all electricity is produced with either hydropower stations or geothermal power stations. Future possibilities for sourcing electricity from relatively nature friendly sources such as hydropower or geothermal power are plentiful compared to the size of the population.

¹ http://www.umhverfisraduneyti.is/media/PDF_skrar/umhverfiogaudlindir2009.pdf

² http://www.umhverfisraduneyti.is/media/PDF_skrar/umhverfiogaudlindir2009.pdf

Transportation and postal services. Domestic transportation of goods is for the most part provided by a number of private transportation companies but two of these are by far largest. Despite of the fact that Iceland is an island, nearly all domestic transport of goods is carried by trucks since 2004. Domestic collective passenger transport is by planes, busses and ferries (there are no trains). For regions located in more than approximately 3 hours driving distance from Reykjavík, air transportation is very important. In some remote areas where air transport is not economically feasible, the state provides support for the service. Bus services are provided to most of Iceland but it appears that the density of the network and service has somewhat decreased at least compared to other types of transportation. Also there are indications that the system is increasingly designed for the needs of tourism instead of the general citizen of Iceland. This needs to be further studied in the project. The state has provided support to maintain bus service to remote regions. This has in some cases been connected to air transport to and from these locations since destinations for air transportation have gradually become fewer. Five ferries for transporting goods and people are operated in Iceland connecting islands to the mainland. This service is organized by the Public Roads Administration but is operated by private companies and subsidised by the state. The eight associations of municipalities were in 2011 involved in organizing the bus service network.

International transport is not a focus of this study but due to distances, international transport of passengers is primarily by air and there is a variety of destinations in Europe and North America due since the airport in Keflavik SW Iceland is hub for air traffic between the continents. One ferry provides connection to mainland Europe (Denmark via the Faroe Islands). Freight transport is mainly provided by Icelandic shipping companies and the airlines and their subsidiaries.

ITC. The ITC system, including the telephone system is entirely provided by private companies. However, until 2005 the largest telephone company in Iceland was owned by the state but privatized that year. There appears to be considerable competition on the market. The number of internet connections per capita in Iceland is among the highest in the world³. However, in rural communities high speed connections are lacking due to limitations of the infrastructure (telephone system). This is among the complaints raised frequently by inhabitants of rural areas and is one of the handicaps associated with such a small population compared to the size of the country.

Data compiled by the Organisation for Economic Co-operation and Development (OECD) shows Iceland with:

- 83.2% of households having broadband Internet access in 2009 (2nd place out of 34)
- 99.5% of businesses using the Internet in 2009-2010 (2nd place out of 31)
- 91.5% of the broadband access being DSL in 2010
- 8% of broadband connections using optical fibre in 2010

The Global Information Technology Report 2010–2011 by the World Economic Forum ranked Iceland:

- 1st out of 138 in terms of Internet users (93.5% of the population used the Internet in 2009)
- 1st out of 138 in the use of virtual social networks (a score of 6.8 in 2009-2010, where 1 is not at all and 7 is widely)
- 1st out of 138 in terms of Internet access in schools (a score of 6.76 in 2009-2010, where 1 is very limited and 7 is extensive)
- 1st out of 138 in accessibility of digital content (a score of 6.62 in 2009-2010, where 1 is not accessible at all and 7 is widely accessible)
- 1st out of 137 in the number of secure Internet servers (1,711.3 servers per million population in 2009)

The optic fibre network is an essential part of the ICT system. It covers the whole of Iceland and there are two subsea cables to Europe and two to America, Cantat-3 from 1994, Farice-1 from 2004, Greenland connect to Greenland and Canada and Danice to Denmark.

³ 93% per cent of households had internet access in 2011 (www.statice.is)



Figure 2. The Cantat 3 cable

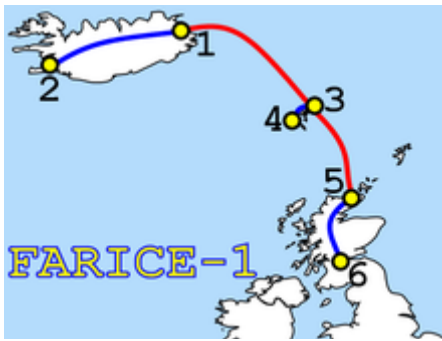


Figure 3. The Farice-1 cable

Mobile telephones. The mobile telephone network has been upgraded much and its coverage has continuously increased. However the mobile phone network is not accessible in some rural areas. The map below shows the coverage for the two main telephone companies, the former state owned company Siminn and Vodafone:

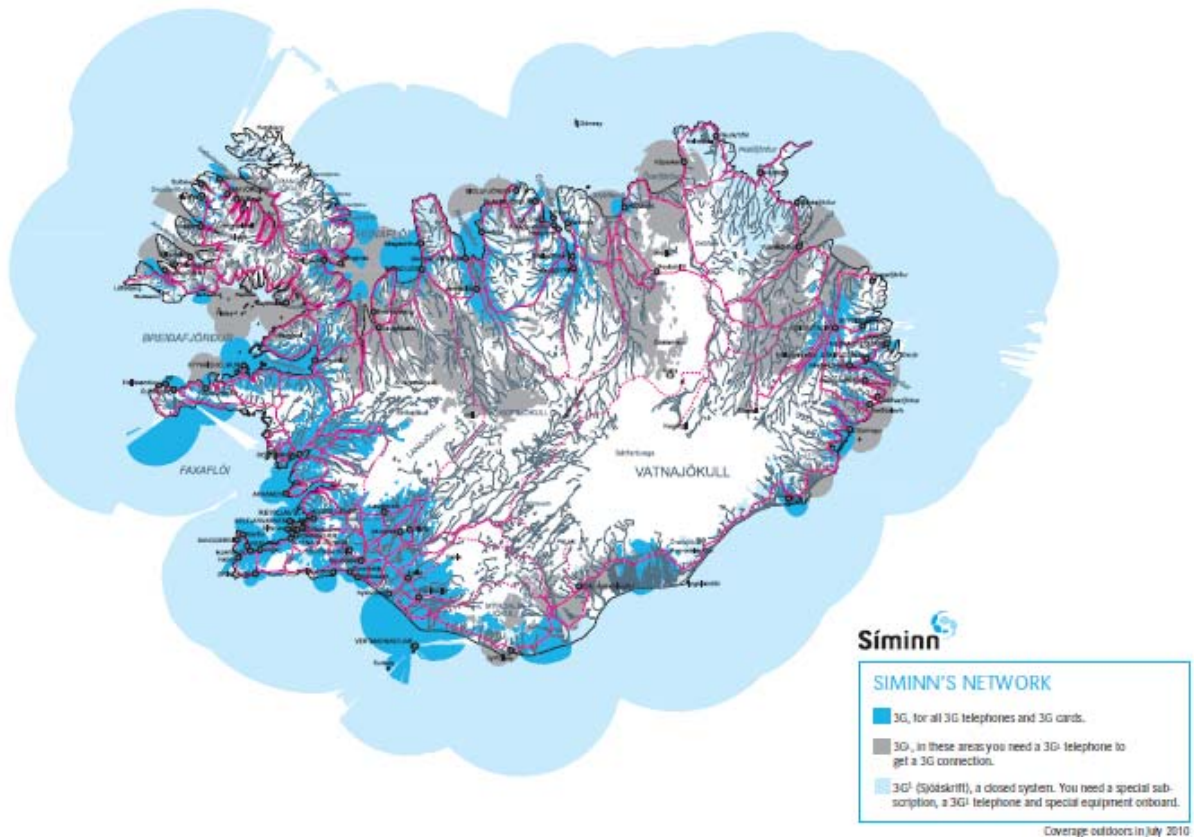


Figure 4. Siminn's network coverage (July 2010)

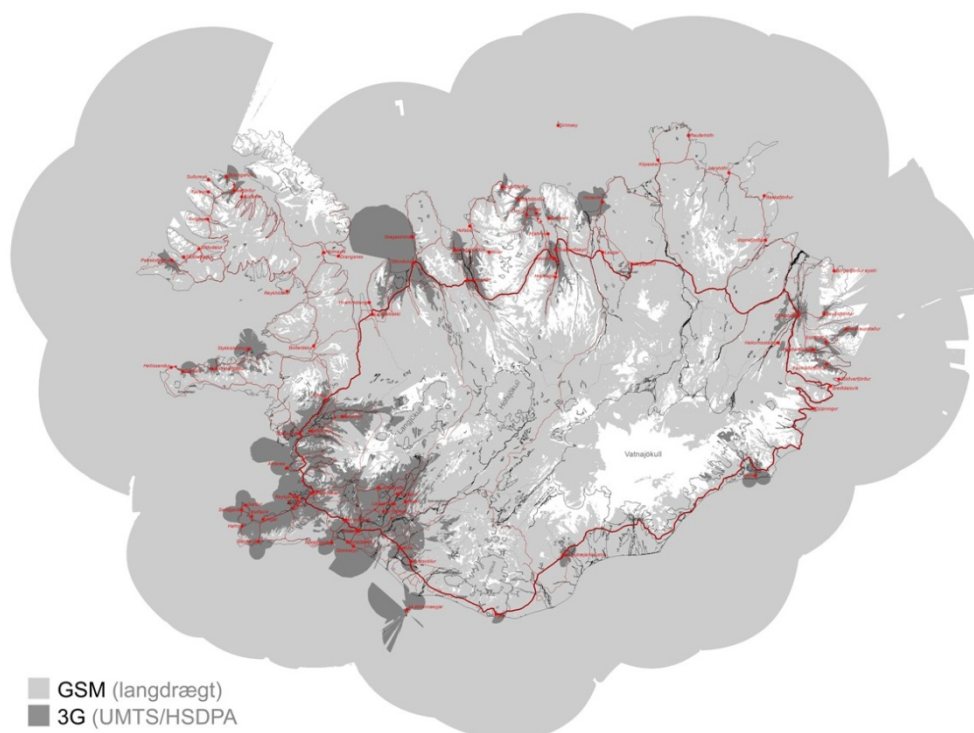


Figure 5. Vodafone's network coverage (Sept 2011)

Sept 2011

2.2.2. Social services of general interest

Education. The education system is divided between the municipalities which provide pre-primary education and the compulsory education. The state is responsible for upper secondary schools (gymnasiums) and most of the university education.

Table 2. Students at different school levels 2000, 2005 and 2010.

	2000	2005	2010
Pre-primary level	14,574	16,864	18,961
Compulsory school	43,644	44,336	42,539
Upper secondary level	20,332	23,345	25,090
Post-secondary non-tertiary education	342	784	990
First stage of tertiary education	10,076	15,686	18,391
Second stage of tertiary education	50	156	478
Total	89,018	101,171	106,449

Source: Statistics Iceland (www.statice.is)

Pre-primary level. Most preschools are run by the municipalities but a few are run by private bodies. However, these private schools get a certain share of their funding from the municipalities. Children enter pre-schools at different age usually 1,5-2 years of age and stay there until 5 years old. Before pre-school many children are with day care parents. Parents pay only partly for pre-school service as it is subsidised and most municipalities charge less than is allowed by law. This service is regarded as a basic service. When parents have more than one child in pre-school relatively less is charged for the service of the subsequent children. Preschools are located in more places than compulsory schools and may be regarded as more of a local service, thus there have not yet been similar changes in the system, i.e. merging of the smallest units as is the case with the compulsory schools.

Compulsory schools are run by the municipalities since 1996 when the responsibility for the service was transferred from the state for the ages 6-15 years old (10 grades). Since 1996 there has been considerable change in locations of compulsory schools, especially in rural areas and this has been

associated with changes in the municipal structure, cost to run the service and changes in the population size of municipalities. Many municipalities have been merged in recent years and because of that and the shrinking population in rural areas along with better road network, schools are continuously fewer and serve larger areas. The number of compulsory schools is 175 and there is very good information about the compulsory schools at the ministry of education, the association of municipalities and at Statistics Iceland.

Upper secondary schools are run by the state in most cases. The duration of study is usually 4 years after compulsory school (16-20 years). There are 34 upper secondary schools in the country. In recent years upper secondary schools have been established in a few relatively remote locations where students previously had to move away from their homes during the winter to pursue studies. The largest school has around 2,500 students but many have 1,000-1,500 students. Remote teaching is available in many of these schools and evening courses as well. Musical schools and other specialized schools also belong to this school level. The number of students by different categories in autumn of 2010 can be seen in the table below. Education offered by some of these specialized schools probably can be termed as post secondary non tertiary education.

Table 3. Students at upper secondary schools 2010.

	Total	Day courses	Evening courses	Distance learning	External students
Upper secondary level: Total number of students	27,351	22,643	879	3,829	0
Comprehensive schools: Total	16,598	13,399	496	2,703	0
Grammar schools: Total	6,578	6,015	258	305	0
Specialised schools at upper secondary level: Total	3,612	2,666	125	821	0
Music schools at upper secondary level: Total	563	563	0	0	0

Source: Statistics Iceland (www.statice.is)

First stage of tertiary education is offered by seven institutes at the university level. Three of these universities are run by private companies but all of them get the same basic funding from the state according to a certain financing model. Furthermore, there is operated a students' loans fund which offers subsidized loans for subsistence and also for tuition fees at private universities. The number of universities has been increasing during the past years and also competition between universities, reflected e.g. by the establishment of similar (popular) lines of study in several universities. This development took place when the economy of the country was stronger than it has been after the credit crunch in 2008. There is increasing pressure to rationalize the university level after the credit crunch to save public funds. One example of this is a cooperation network between the four public universities primarily aimed at coordinating their operations and saving tax payers money.

Table 4. Students in tertiary education 2007 and 2010.

	2007	2010
Háskóli Íslands – Univerity of Iceland	9,581	13,600
Háskólinn á Akureyri – University of Akureyri	1,305	1,483
Háskólinn á Bifröst – Bifröst university (private)	581	468
Háskólinn í Reykjavík – Reykjavík university (private)	2,495	2,478
Hólaskóli/Háskólinn á Hólum – Hólar university college	11	143
Landbúnaðarháskólinn á Hvanneyri – The agricultural university of Iceland	191	232
Listaháskóli Íslands – Iceland academy of the arts (private)	379	465

Source: Ministry of education (www.menntamalaraduneyti.is) and Statistics Iceland (www.statice.is)

The table above shows that in recent years the number of students has increased much, not least after the economic collapse but this development has been taking place over a longer period.

Second stage of tertiary education is an education level which has been attracting more students in recent years. Doctoral studies used to be primarily pursued in universities abroad. In recent years it has increased domestically but is primarily available at the University of Iceland. The table below shows the development in the number of enrolled doctoral students in recent years.

Table 5. Students in Ph. D studies 2007-2010

Doctoral studies (Ph.D.)	2007	2008	2009	2010
Háskóli Íslands	247	280	306	463
Háskólinn á Akureyri				
Háskólinn á Bifröst				
Háskólinn í Reykjavík			5	16
Hólaskóli/Háskólinn á Hólum				
Landbúnaðarháskólinn á Hvanneyri		3	3	3
Listaháskóli Íslands				

Source: Statistics Iceland (www.statice.is)

Changes in the legal framework impact increasing demand for higher education. Examples are teaching in compulsory schools that will demand master's degree and teaching at university level will demand a doctoral degree.

Labour market services is the responsibility of the Directorate of Labour (Vinnumálastofnun) which manages the employment service and Unemployment Benefit Fund, the Wage Guarantee Fund, the Childbirth Leave Fund and payments to parents of children with long term illness. The institute's main office is located in Reykjavík but there are eight offices in the regions around the country and also three smaller outposts. These offices offer general services to employment seekers such as registration, estimate of skills, consultation, resources and serve as employment agencies. There is also cooperation with other institutes and bodies which provide services to the clients of the service regarding resources and employment measures. After the credit crunch in 2008 there has been huge increase in unemployment which was 6.6% in July 2011. In the winter of 2009-2010 the unemployment rate reached a high of 9.3% but in some regions it was even higher. Prior to the credit crunch unemployment was almost non-existent or 1.1% in 2008.

Public administration and defence. Public administration has to a large degree been concentrated in the capital region, especially the capital itself Reykjavík where the parliament, the ministries and most institutes are located.

Defence is however a small field in Iceland as the country does not have an army of its own. Until 2006 there was a US army base located at Keflavík airport some 45 km distance from Reykjavík. Iceland is a member of NATO and through that cooperation the airspace has been guarded since 2006 by other member states in cooperation with the Icelandic government. The ministry of foreign affairs is responsible for the field of defence. The coast guard service also serves defence related tasks for the government.

There are special rescue teams in Iceland run by independent associations⁴. Thousands of volunteers dedicate themselves to work for these rescue teams, accident prevention divisions and youth sections.

Cultural and recreational services. As this is a very broad category of services they are offered by various actors and bodies, private as well as public.

Diverse cultural services are financed or partly financed by the state and below is a table listing some of the major institutes in the field which are of national interest. The location of these institutes is interesting as all of them are placed in the capital city or its immediate surroundings.

⁴ <http://www.icesar.com/category.aspx?catID=277>

Table 6. Major institutes of national interest

Institute (of national interest)	Location
Fornleifavernd ríkisins (the archaeological heritage agency of Iceland)	Reykjavík
Gljúfrasteinn (museum)	Mosfellsbær
Húsafríðunarnefnd (the national architectural heritage board)	Reykjavík
Íslenski dansflokkurinn (the Icelandic dance company)	Reykjavík
Kvikmyndamiðstöð Íslands (the Icelandic film centre)	Reykjavík
Kvikmyndasafn Íslands (national film archive of Iceland)	Hafnarfjörður
Landsbókasafn Íslands - Háskólabókasafn (the national library)	Reykjavík
Listasafn Einars Jónssonar (art museum)	Reykjavík
Listasafn Íslands (national art museum)	Reykjavík
Náttúruminjasafn Íslands (museum of natural history)	Reykjavík
Ríkisútvarpið ohf. (the Icelandic national broadcasting service)	Reykjavík
Sinfóníuhljómsveit Íslands (the national symphony orchestra)	Reykjavík
Stofnun Árna Magnússonar í íslenskum fræðum	Reykjavík
Þjóðleikhúsið (the national theatre)	Reykjavík
Þjóðmenningarhúsið (national theatre, the national centre for cultural heritage)	Reykjavík
Þjóðminjasafn Íslands (the national museum)	Reykjavík
Þjóðskjalasafn Íslands (the national archives)	Reykjavík

Source: The ministry of culture and education (<http://www.menntamalaraduneyti.is/stofnanir>)

Apart from these institutes there are diverse small institutes and initiatives, such as museums around the country run by individuals, associations and municipalities which are partly financed by the state.

Furthermore, municipalities are responsible for many services in the field of culture. Cultural centres and diverse museums are run in whole or partly by municipalities. In each of the regions in Iceland there have been established cultural centres according to contracts between the state and the associations of municipalities in the regions. A noteworthy cooperation between the state and these associations are so called cultural contracts designed to provide grants to cultural activities in each of the regions in the country.

Recreational services. According to law on sports activities, the ministry of culture and education has supervision of the field and gathers data on participation and facilities and supports research on the field.

The municipalities either offer or support to a large degree facilities for diverse sports and for the operation of sports clubs in various fields. In many municipalities children receive invoices to use for partly pay for participation in organized sports or other recreational activities. For the purpose of this concise outlining of services on a national basis it was decided here to only very generally describe the services as they are very dispersed and carried out by so many bodies both private and public. However, a common denominator is that public entities, especially the municipalities support the activities. Furthermore private companies have been very active in supporting sports and recreational activities. After the economic collapse in 2008 there are however strong indications that it is more difficult to get such support than it used to be. An important source of finance for sports and recreation that is worth mentioning is lotto and similar fund raising activities.

Health care is primarily the responsibility of the state, i.e. hospitals, health clinics, elderly homes and other related institutes. The map below shows location of health clinics and the division of the country into administrative areas in the field of health care. The case study area, Northeast Iceland does not coincide with this division⁵.

⁵ In fact it is very common that various service or administrative areas do not coincide with each other in Iceland and this is probably related to the fact that there are only two government levels, the state and the municipalities while the regional level is very weak.

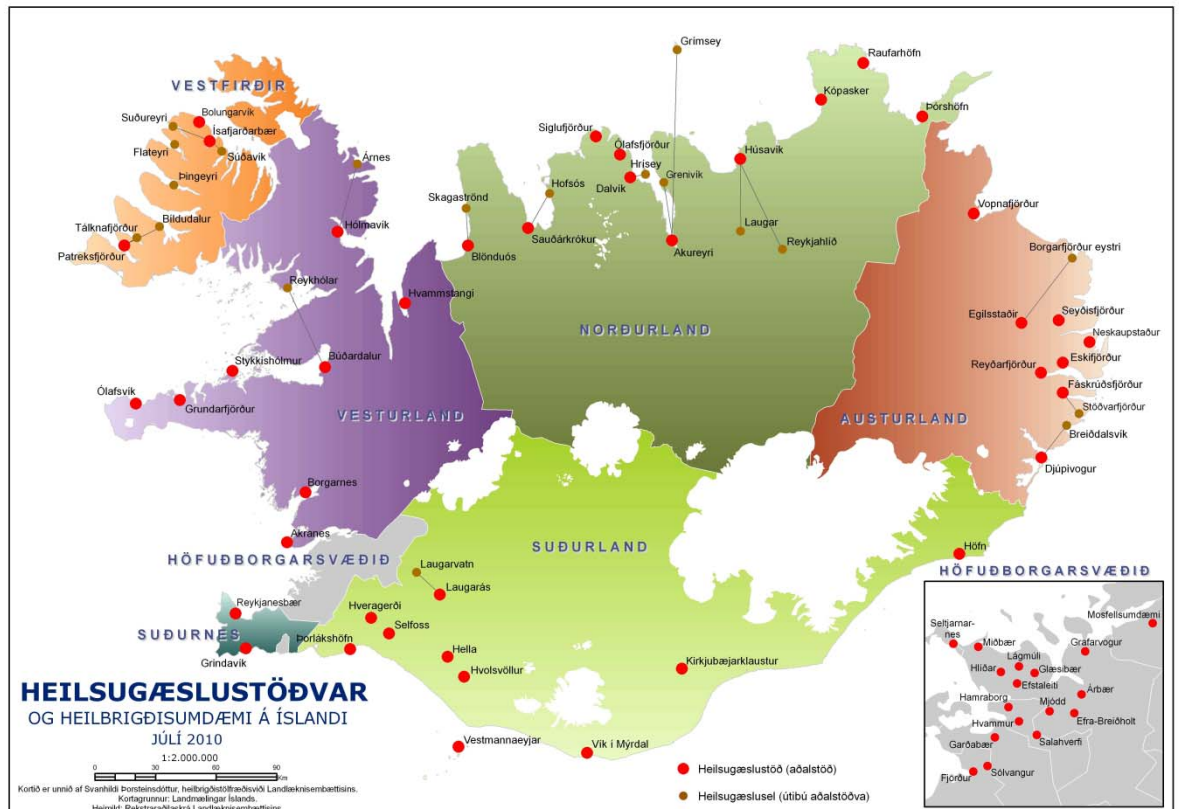


Figure 6. Health clinics and health administrative areas.
 Source: Directorate of health (www.landlaeknir.is)

There are two hospitals (classified as such) in Iceland; in Reykjavík and Akureyri in the northeast and then there are 12 smaller hospitals/health institutes in 12 locations in the country. There has been pressure by the state to merge health care institutes in the country and enlarge their service areas in order to save public funds.

Child care is a service function which is the responsibility of the municipalities. Preschools are located very widely and thus accessible for the users apart from very remote rural areas. Parents pay only partly for the real cost of the service which is subsidized by the municipalities. For parents in rural communities there can be considerable driving involved but in some cases school busses are used for children at preschool as well as older children.

Social care is a service function which is primarily carried out by the municipalities. In some cases, several municipalities collaborate on these services over larger areas. Among common tasks carried out by the municipalities is consultation on social and financial matters, housing (assisting the elderly and handicapped at home, housing of handicapped, social housing, travel needs of handicapped and elderly, house rental benefits and home delivery of food). To help people to become or remain active is yet another task, such as providing handicapped with suitable jobs and the elderly with recreational activities. Finally, protection of children against negligence and similar is an important task of these departments of municipalities.

Social housing is primarily provided by municipalities and those who need such solutions can apply for assistance at the social care offices and are provided with solutions according to certain rules.

Compulsory social security is primarily provided by the state. Social Insurance administration in Iceland is financed by the State treasury. Employers pay premiums for individuals' social insurance to the State treasury on all paid wages. The funds collected in this way are used, among other things, to finance social insurance. People who have been legally resident in Iceland for a certain period of time automatically become members of the Icelandic social insurance system. However, certain conditions must be met to become entitled to benefits, for example regarding age, disability and time of residence. Income and family circumstances can also influence entitlement.

2.3. Analysis of the national context.

(What are the wider development trends and events impacting on the country and on the provision of SGI? (e.g. world economic crisis, main development policies of the country, closure of nuclear power plants, etc)).

The economic crisis which hit Iceland particularly bad in October 2008 has impacted services in the country. As the government has had to cut costs to finance the huge loss of the state due to the bankruptcy of private banks this has made service provision more limited. However, the government's aim has been to protect basic services despite of the economic situation and received assistance, especially in the form of loans from the IMF and other countries after the onset of the crisis.

“The impact on solidarity of the current recession is potentially injurious. The IMF reports that Iceland's progress is ‘broadly in line’ with the recovery plan (IMF, 2009) but the unemployment rate, which peaked at 5 per cent in 1995, rose from 2.5 to 7.1 per cent between 2008 and 2009. In addition, spending on social security and welfare increased from 4.4 per cent of treasury expenditure in 2008 to 46.5 per cent in 2009” (Irving, 2011, p. 237) ⁶.

The cooperation plan with the IMF finished in August 2011.

Regarding future prospects, Iceland is considered in a relatively good position in many ways. One of these is the availability of domestic renewable energy. Iceland has yet harnessed a part of the potential energy supplies of hydropower and geothermal power.

Clearly, one of the major handicaps of the country regarding provision of services is the low population density and the fact that in many rural areas and small villages out-migration and changes in the economy, such as rationalization of companies and increased automation has left these areas with ever smaller population size and maintaining good service level is becoming increasingly difficult. This is to some degree similar to the future competitiveness scenario outlined in the ESPON 3.2 project.

3. Regional analysis of SGI

3.1. Economic SGIs

The northeast region has a relatively high degree of services compared to other regions outside the capital region. The main reason is that the population of the region of Northeast Iceland (around 29,000) and the regional centre Akureyri (18,000) is relatively high compared to other regions outside the capital region. Furthermore, due to distance to the capital region this region has to rely on various services within the region instead of relying on services in the capital region as its adjacent regions are able to do to a certain degree.

Geothermal energy (instead of gas). Being on and near the main geothermal zone which crosses Iceland diagonally SW-NE most inhabitants have access to geothermal water. It is not accessible in some rural areas (farms) due to distances and cost of building the geothermal grid.

⁶ Irving, Z. (2011).

Geothermal fields

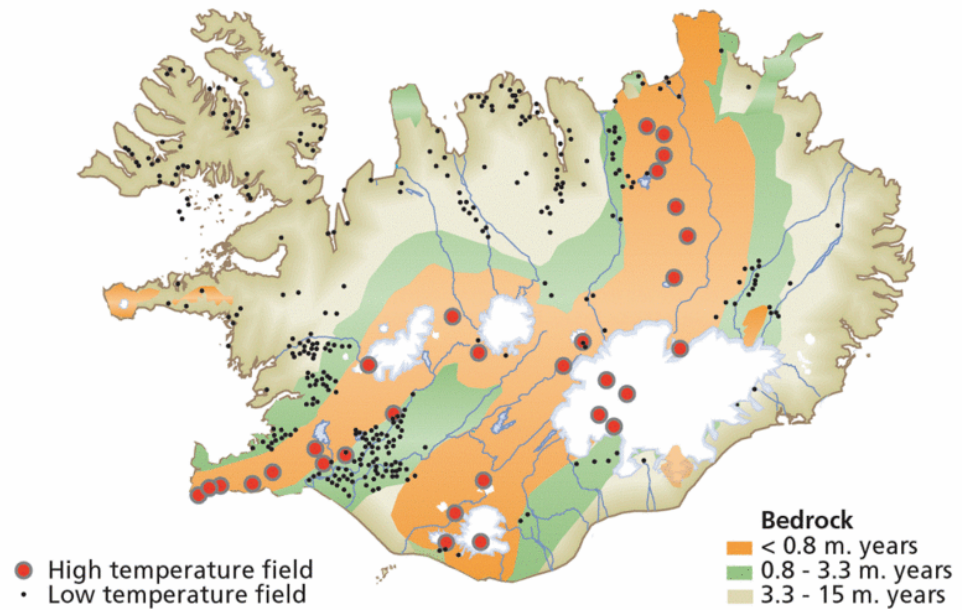


Figure 7. Geothermal fields in Iceland.
Source: National Energy Authority (www.os.is)

A part of the high temperature zone crosses the northeast region and thus this energy source is very accessible in the region. This applies to both low temperature suitable for heating houses, swimming pools and such as well as high temperature (steam power) which can be harnessed e.g. to run turbines for electricity production.

Water is very similarly accessible in the northeast as in other regions of Iceland described in chapter 2.2.1 and there do not seem to be problems associated with sourcing and delivering high quality and abundant water.

Waste management. There is increasing cooperation between municipalities on waste management and channelling of waste into different directions. Landfills are fewer and less waste being dumped on the landfills. Recycling has increased very much and paper, cardboard, plastic, metals and more are being exported for cycling. There is a large composting station for Akureyri and neighbouring municipalities which has much impact in lessening amount of waste. An incinerator is located in the town Húsavík 90 km east of Akureyri which burns a part of the waste such as non-recyclable plastics the heat energy is used for electricity production. There is increasing environmental constraints on burning of waste so that some these sites have been shut down in recent years. The location of waste disposal sites can be seen in the figure below.

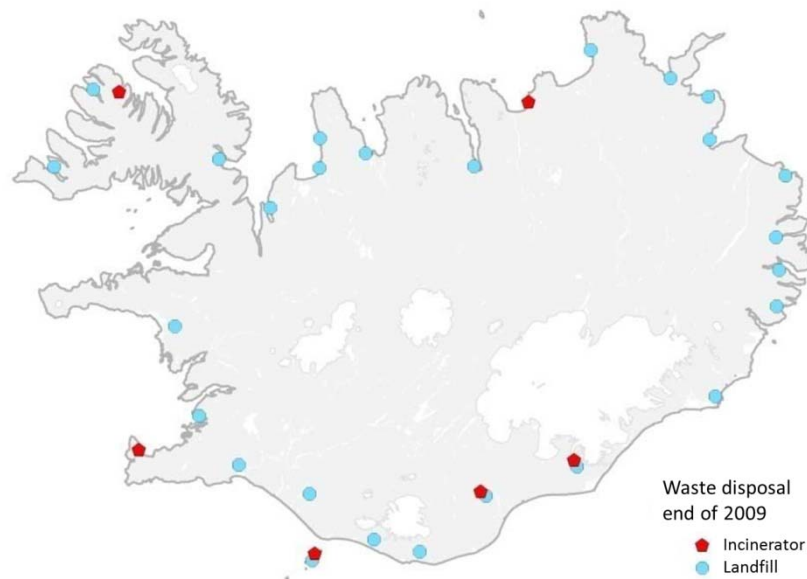


Figure 8. Waste disposal in Iceland 2009.
Source: Environment Agency (ND).

The cooperation in waste management over large areas can be seen in the map below which is from a draft report for a national plan for waste management 2010-2022. According to that plan, there should be cooperation between municipalities in northeast Iceland on waste management.



Figure 9. Proposed service areas for waste disposal according to national plan for waste management 2010-2022
Source: Environment Agency (ND).

This cooperation has in fact materialized in northeast Iceland and in fact there is also cooperation with municipalities in northwest Iceland as there is a landfill site 150 km west of Akureyri used for most of north Iceland.

Electricity. The state of electricity services in the northeast is similar to other parts of Iceland, in rural areas the cost of distribution has increased after changes in the legal framework as a result of adapting EU/EEA regulations in the field. In some remote farming areas single-phase electric power can hamper use of electricity in farms.

Transport. There is limited overland collective transport as in many other parts of Iceland. The road network and servicing has improved much in recent years but there are a few bottlenecks such as bridges and a road tunnel that need to be constructed to meet demands. Air transportation is generally good in the region as there are frequent flights from Akureyri to Reykjavík and there are scheduled flights to three more remote villages in the region.

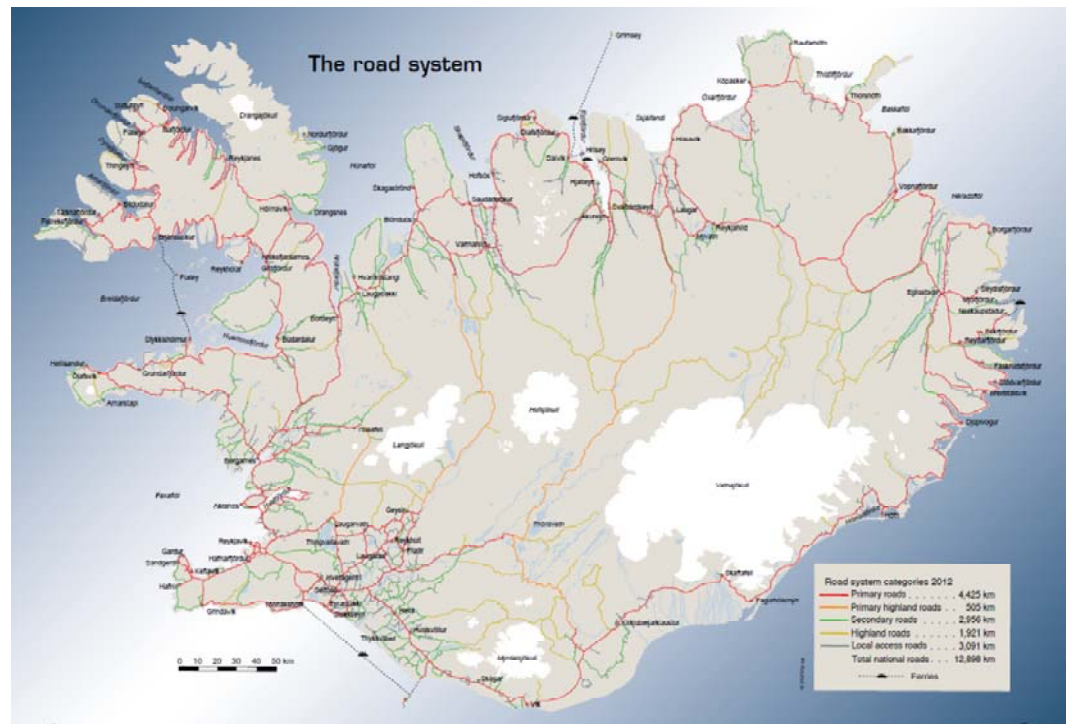


Figure 10. The road system in 2012.
Source: Icelandic Roads Administration

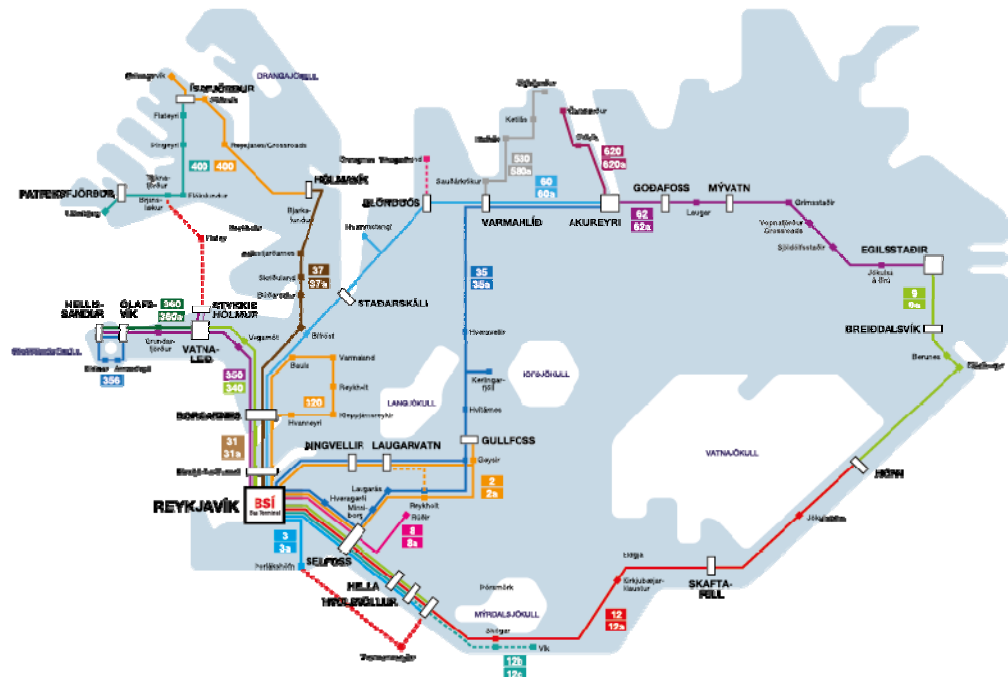


Figure 13. An example of the transportation network, the schedule of one of the major bus companies, summer 2012.
Source: www.sterna.is

Even if not shown on this map, the far northeast corner of the country is served by bus and air transportation.

Postal services are similar to other parts of Iceland but postal offices have closed in rural areas and have also merged with small bank branches or retail shops to maintain some level of services.

Internet. In urban centres the access to high speed internet (XDSL) is very good but further away from main nodes in the telephone system this is not accessible. Instead there are options such as 3G GSM connections for computers in most areas and special wireless internet connections for occasional rural areas. Cost and limited access to high speed internet has however been complained about in rural areas.

Mobile phone. The GSM network has gradually been upgraded and the coverage has increased gradually. However in some rural areas there are still areas with no GSM connections.

3.1.1. Detailed Analysis of selected economic SGIs in the region

3.1.1.1. Sewage systems & sewage treatment facilities

Municipalities have the duty of establishing and maintaining sewage systems and sewage treatment facilities. There are different demands in urban and rural areas. Due to the small region and population size it is difficult to adhere to the frame for the detailed analysis of the service in the region. There is no quantitative information about density, range of services or the accessibility. Instead there will be relatively more emphasis placed on descriptive analysis, interviews and the survey carried out among the municipalities in the region.

One of the interviewees in northeast Iceland is the manager for the Public Health Authority of the region. According to him, smaller and more remote municipalities have troubles fulfilling their duties in sewage systems and treatment. However in some larger urban municipalities there is greater need to take action and improve these systems. Geographical conditions in the region are however usually favourable as the receptor is very often open sea and the dilution of sewage is a fast process.

An interesting finding in the survey carried out among the municipalities is that both quality of sewage systems and accessibility got a high grade by the respondents, see figures in chapter 3.3. These findings are not in line with the interview with the manager of the Public Health Authority above.

3.1.1.2. Transport (including urban and suburban)

Due to the low population density of the country and region there is less availability of public transport than in most regions of Europe. Railways do not exist but bus transport is available in the region both between towns and within the town of Akureyri.

The busses between towns and to other regions of the country are operated by private companies but partly managed by the association of municipalities in the region and some routes get financial subsidy from the state.

The bus system in Akureyri is run by the municipality and is free of charge. As a rule of thumb, the maximum walking distance to the next bus stop should not exceed 300 metres.

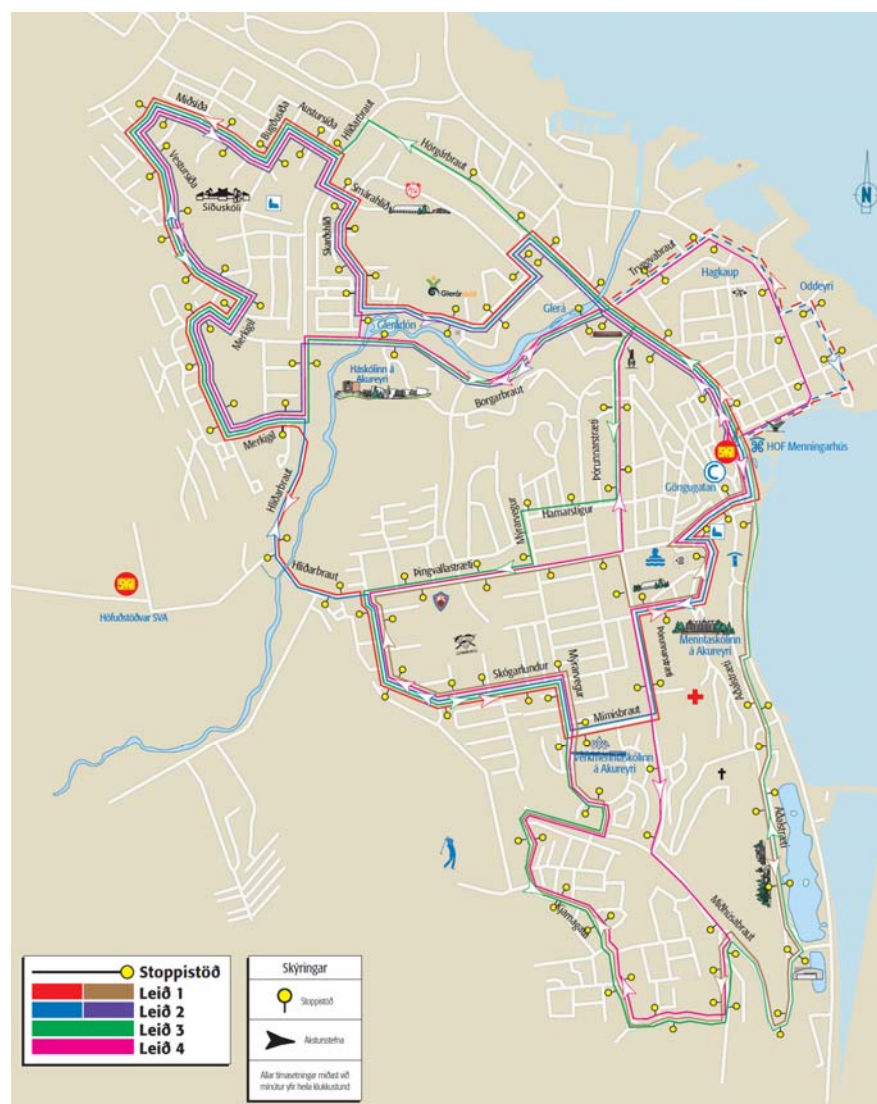


Figure 14. The bus system in Akureyri
Source: www.akureyri.is

There are two islands in the region, Hrísey (pop. 165) and Grímsey (pop. 76), both of them in Eyjafjörður fjord and belong to Akureyri municipality. The ferry trip to Hrísey only takes 15 minutes and is very frequent. The ferry trip to Grímsey island 40 km off the coast takes 3 hours, it is offered three times a week. Furthermore there are flights three times a week during the winter and every day during the summer.

According to an interview with the director of the association of municipalities in northeast Iceland the bus transport system is being developed and there is cooperation between associations of municipalities in regions across the country to coordinate the bus system. Distributed settlement in the region and low population number is a major reason for that the bus system is not advanced. Lack of public transportation is particularly difficult for accessibility for older people and children.

The price for the service, i.e. fares with the busses that are organized by the associations of municipalities is decided mostly depending on the money that the state pays for each route. The main rule is that fares should not be higher than the average fuel costs for each route. However the funds directed to public transport are in the opinion of the interviewee not in line with policies and general discussion about the importance of this service.

Due to the lack of public transport in many rural areas there has been discussion if it would be possible to share existing transport such as the school bus system or even postal services. This has however not succeeded due to e.g. regulations and complexity.

According to an interviewee the main driving forces for transportation is the demand, not least by tourists. Then laws and regulations are important i.e. The policy framework for the Policy Iceland 2020 is also important as there is emphasis on improving public transport.

The back bone of the transport system in the region is the road network. The survey among municipalities indicates that the quality of the network leaves something to be desired. This along with internet access got the lowest score or 3.8 out of 5 regarding the quality of technical infrastructure. Local and main roads were also the type of infrastructure that most respondents indicated that was in need of refurbishment or renovation.

The main challenges for the future are improving the service, and meeting demands of the customers e.g. regarding schedule. Also a challenge is the increased distribution of power by moving decision power over the service to the regions.

3.1.1.3. Broad-band/Internet

Access to broadband or the internet is most different between the rural areas of the region and the urban clusters. In the survey this type of service is the one that is considered to be least accessible by respondents (see figure 15). In urban areas the service is of a very high standard and very accessible, for example there are public places such as cafés, libraries and restaurants with free internet access for guests. On the other hand in some rural areas there is still only ISDN connection available, in some places there is also wireless access available, such as 3G. There is however not available data to indicate differences between individual regions such as the northeast. However the difference between the capital region and other regions can be seen in the table below.

Table 7. Percentage of households with different types of Internet connection (2010).
Source: www.statice.is

	Capital region	Other regions
Dial-up/ISDN	1	2
ADSL or other xDSL	84	80
Wired fixed	11	6
Fixed wireless	1	3
Wireless connection via 3G modem	6	8
Mobile connection 3g or faster
Slower connection than 3G mobile or laptop
Other internet connection/Don't know	1	2
Access device - computer	100	99
Access device - desktop computer	56	58
Access device - laptop computer	85	80

Access device - palm top	5	3
Access device - digital TV/set top box	8	6
Access device - mobile phone	26	22
Access device - games console	8	8
Access device - other/don't know

3.2. Social services

Education. Access to primary schools is in general very good but due to lower population in rural areas the number of students has been decreasing and in few cases schools have been merged. This results in longer driving distances to school. Secondary schools are located in four places in the region so accessibility may be considered good. A university is located in Akureyri and has around 1500 students.

Labour market services. Offices for labour market services are located in Akureyri and Húsavík. However these services are very accessible through the internet.

Public administration. Most government offices are located in the capital Reykjavík so that direct access is limited however access to e-governance is considerable. There are district magistrates; offices that provide many services of the state in the same office. These have however been merged and people have to go to the larger towns; Akureyri and Húsavík to access the services.

Recreation and cultural services in the region are very accessible and diverse. As an attractive tourism area this helps in maintaining a high level of services of this kind.

Health care. There is a regional hospital in Akureyri with close to 500 full time positions which is also a backup hospital for the main hospital in Reykjavík. A smaller hospital is located in Húsavík 100 km east of Akureyri and Siglufjörður 75 km north of Akureyri. Healthcare centres are located in most towns and villages but opening hours are longer in the larger centres.

Social services. The municipalities have a large role to play in social services, which are assistance to individuals and families with special emphasis on children and youngsters, the disabled and the elderly. Service to people in their home is a keyword and municipalities shall social advice, home service and support in housing problems, drug abuse and financial problems. Akureyri being the largest town in the region serves a larger area in this regard with cooperation agreements with smaller municipalities. Two municipalities have collaboration on service to disabled persons with municipalities in the adjacent region to the west. The Ministry of welfare monitors that these services are carried out according to law. Akureyri has a larger role than other municipalities in the region since it also operates its own health care centre, service to disabled persons and elderly homes according to a special contract with the state. This has been since the mid 1990's as a part of a project of experiment to let a number of municipalities take over some of the tasks of the state. Due to good experience with this arrangement this experiment continued and similar arrangement has been taken up with more municipalities or collaborations of municipalities.

Social housing. In the field of social housing the municipalities provide information and counselling, distribute house rent benefits and process applications for service apartments and nursing accommodation. Social housing is however very limited in Iceland as private ownership has for long time been important among Icelanders.

Compulsory social services. As said in chapter 2.2.4. the state is primarily responsible for compulsory social security.

3.2.1. Detailed Analysis of selected social SGIs in the region

3.2.1.1. Secondary education

Several obstacles make it problematic or impossible to present and analyse data on secondary education as is outlined for the case study reports in general. See below:

- Number of schools of general secondary education (per km² and per 100.000 children aged 12 to 19)
 - Large areas of Iceland are uninhabited and thus a number of students per km² does not render a meaningful outcome.
 - The number of students per 100,000 inhabitants aged 16-19 is 61,830. However it has to be noted that the schools in the region serve a larger area, especially the larger ones as students also come from other regions and some are distance students.
- Staff in general secondary education (per 1000 children aged 12? to 19?) (map)
 - This data is not readily available for the region.
- Average (walking/driving) distance to general secondary schools (in km and in minutes)
 - This data is not readily available.

There are five secondary education institutes in the northeast region, two of them in Akureyri, one in Fjallabyggð 62 km from Akureyri, one in Húsavík 91 km from Akureyri and one in Laugar 60 km east of Akureyri.

Table 8. Students in secondary schools in the northeast region (autumn 2011).

Source: www.statice.is

	Total	Distance learning
Framhaldsskólinn á Húsavík	167	
Framhaldsskólinn á Laugum	120	
Menntaskólinn á Tröllaskaga	91	
Verkmenntaskólinn á Akureyri	1756	453
Menntaskólinn á Akureyri	740	
	2874	

The table shows that a large share of the students in the largest school is distance learning students. Three of the schools are at least partly boarding schools and thus a considerable share of the students comes from other regions.

3.2.1.2. Tertiary education

Similarly to secondary education the only tertiary education institute in the region; University of Akureyri serves a much larger area than the northeast region. Also there are the same reasons why it is not possible to compare with size of the region, i.e. vast uninhabited areas.

- Number of schools of tertiary education (per km² and per 100.000 young adults aged 20 to 24) (map)
 - Large areas of Iceland are uninhabited and thus a number of students per km² does not render a meaningful outcome in Iceland or this region.
 - The number of students in tertiary education institution in the region (university of Akureyri) per 100,000 inhabitants 20-24 years old is 68,360 in 2011. However, the schools in the region serve a larger area as students also come from other regions and there is a large share of distance students.
- Staff in tertiary education (per 1000 young adults aged 20 to 24)
 - The number of staff per is young adults 20-24 years is 76. However, the University of Akureyri serves a larger area, as there is both much distance education and many students come from other regions or from abroad.
- Average (walking/driving) distance to tertiary schools (in km and in minutes)
 - This data is not readily available.

3.2.1.3. Healthcare - Hospitals

One of the interviewees was the director of the regional hospital in Akureyri. According to him the special status of the hospital is the relative size of the hospital but through that there is more diversity of services than in smaller healthcare institutes in the region and more advanced equipment. The hospital is a back-up hospital for the main hospital in Reykjavík.

- Hospital beds (per 100.000 inhabitants) (map)
 - The hospital serves a larger area and to some degree the country as a whole. Usually, hospital beds are not used as a measurement of services of the hospitals in Iceland. More common is to use data on number of hospital visits, length of stay, number of outpatients and so on. However, there are 120 hospital beds in the region or equivalent to 414 per 100,000 inhabitants.
- Staff in hospitals (per 100.000 inhabitants) (map)
 - The hospital serves a larger area and to some degree the country as a whole but staff of 450 is equivalent per 100,000 inhabitants is 1,555.
- Average (driving) distance to hospitals (in km and in minutes)
 - This data is not readily available but during winter, mountain roads can become closed due to snow which can make the service temporarily inaccessible for areas east of Akureyri.

Specialists from the regional hospital visit health care centres in other parts of the northeast region and thus compensate for lack of local services. Furthermore there are offered distance health services from the hospital.

According to an interview with the director of the hospital, the main challenges is hiring people with the right knowledge to meet demand for service in the region and if enough money will be to hire these people. Skilled people in all disciplines are the key to success of an institute like this hospital.

Regarding changes and adjustments the interviewee said there were no big changes foreseen. Adjustment to changed economy has been met by redesigning processes. The operation of departments servicing outpatients has been strengthened and this lessens the pressure on departments in which patients are checked into the hospital. This has to do with changed technology and attitudes in society, both economic and social. Specialist fields are more and more specialized and the same applies to equipment and knowledge to use it. This is a considerable threat to service in small places. The attitude to medical services has changed much, e.g. so that time spent at hospitals is getting ever shorter and people are sent home sooner after operations. This last item shows that a measurement of hospital services in terms of counting hospital beds does not reflect level of services.

Price for services at the regional hospital is decided with a regulation, i.e. general price for visits. Foreign patients pay fully for service and operations according to special DRG system (Diagnosis Related Groups). The system is from the US and is very popular. It is meant to define the operation of hospitals in the form of products and keep track of all costs for each operation. It is based on classification of patients by analysis of diseases, operations and treatments, gender, age and more in 500 types of payments. The purpose is to see exactly how the money of the hospital is spent and in the process there is created a certain price list.

An interviewee mentioned that possible hindrances to access of services were primarily related to finances and fees that patients pay for services, i.e. the services that are based on the income available. Distance from the hospital and social circumstances could also have impact, but emergency services are usually done regardless of financial status, social status or geographical location. According to an interviewee who works for the consumers association in the region complaints concerning to increase in charges for health service are very common but these have been increasing in the past years, especially after the financial crisis of 2008.

3.2.1.4. Housing

Social housing is very limited in the region and in Iceland in general. There is not available data on number of social housing and in recent years

- Number of social housing per each 1.000 inhabitants (map)
 - Data does not exist.
- Number of social housing dwellings built annually in a determined period per each 1.000 inhabitants (map)
 - Data does not exist.

Summary of the general results of questionnaire survey

A survey was carried out in the 13 municipalities of the northeast region and the answer rate was 100%. Due to the low number of municipalities this was by the Icelandic team considered a necessity to get as relevant information as possible. The survey used the standardized questionnaire for this activity of the Segl project prepared by the TPG and finalized by the activity leader. The questionnaire was translated and sent by mail to the municipal offices, and in the days following, the municipal offices were contacted by a researcher by phone. The list was generally answered by the director/mayor of the municipalities or the chairman of the municipal board, i.e. someone who has a good overview of the services in the municipalities. Some of the SGIs in the original questionnaire did not apply to Icelandic conditions and were omitted.

- Presence and accessibility issues,

Regarding the question about how good accessibility to SGIs was for homes in the municipalities it was generally considered good, usually on average between 4 and 5 on a scale 1-5 for each municipality (see figure below). The services which got the lowest score were in many cases those which are primarily found in urban areas due to their nature (large scale or specialized), such as large shops and tertiary education. One particular type of services, i.e. internet services got the lowest score or 3.8 on average out of 5. This service appears to be the one which is most different between urban and rural locations. In rural locations there is complained both about its accessibility and the price for the service and this was supported by interviews.

Very few cases were mentioned where certain social groups were considered to have less accessibility to services than the average population.

Regarding the question where the respondent was to *“estimate the share of households, individuals and businesses in the locality that do not have access to certain types of services”* In all municipalities all were believed to have some access with only one exception; not all inhabitants in one municipality were believed to have internet access.

Answers to the question *“Please estimate desirable share of population (individuals) and businesses that should have access to the services listed below in your locality”* were very definite. In all municipalities respondents answered that all households should have access to all the services mentioned.

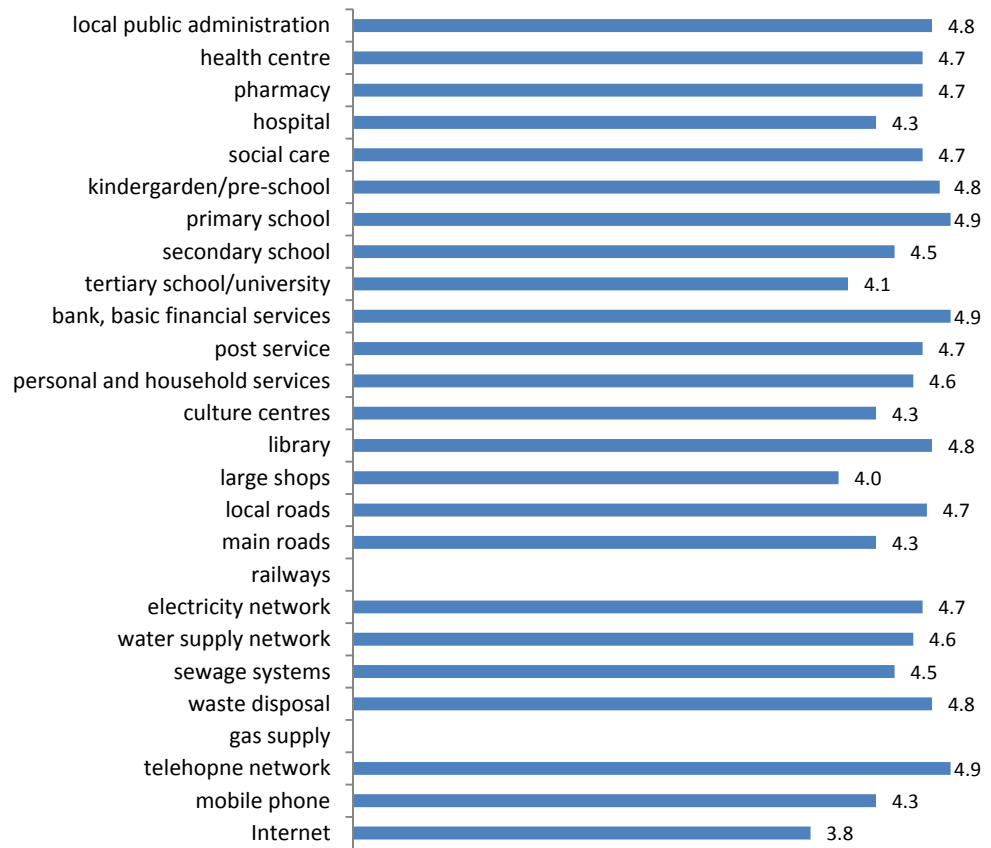


Figure 15. "Please evaluate accessibility to basic services of general interests within your locality" with values 1-5 (for homes).

- State of development of services

One question sheds a light on the current status of the different types of services or infrastructure, i.e. "Which of the types of infrastructure identified below in your locality should be provided, expanded or renovated?" The results can be seen in the next figure.

There are several types of infrastructure that need to be renovated or refurbished in the municipalities but the road network appears to be in most need. The road network is also the *only* case where the answer option is used that the infrastructure needs to be built up from scratch.

The telephone system appears to be in best shape of all technical infrastructure as most respondents answer that there is no need for new investment. Similarly waste disposal is a field where most answer that the current situation is good; 9 municipalities say that there is no need for further investment but in 4 municipalities it is indicated that the system needs either to be expanded or refurbished. There has been much work done in reorganizing the waste disposal in most municipalities in recent years so that this does not come as a surprise.

Just less than half of the municipalities answer that there is no need for further investment in sewage systems. This is however not quite in line with information from an interviewee working for the Public Health Authority of the region. Judging by that interview, much improvement has to be done in many municipalities.

Two types of infrastructure are in greatest need to be expanded; these are the internet and the electricity network. The internet appears to be the single most important infrastructure to be expanded.

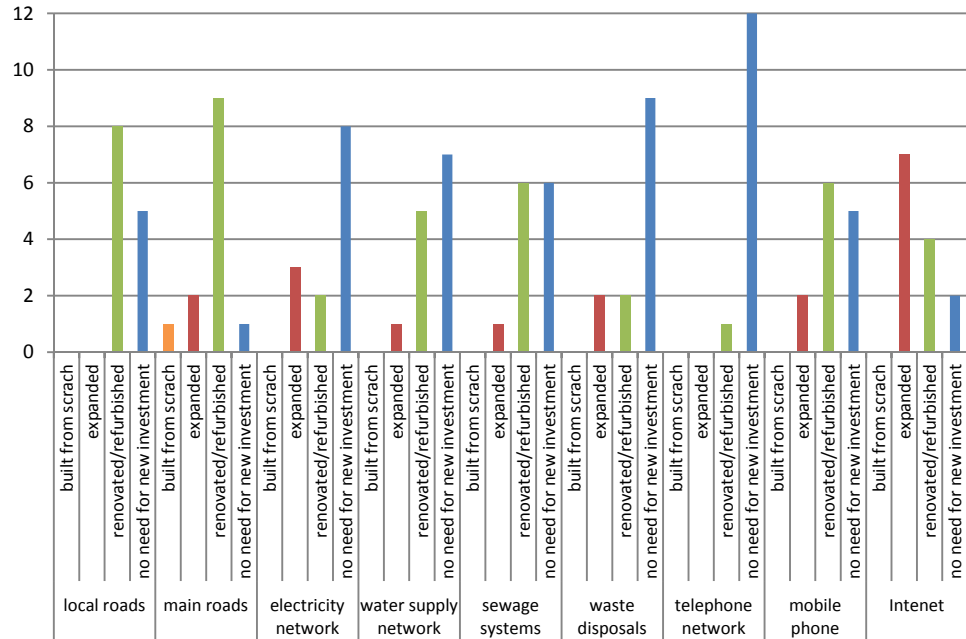


Figure 16. "Which of the types of infrastructure identified below in your locality should be provided, expanded or renovated?"

There are four types of technical infrastructure that particularly needs refurbishment or renovation, i.e. the main and local roads, the electricity network and the internet, between 20 and 30%. Most municipalities or 10 out of 13 mention the main roads in need for renovation or refurbishment, so that there is a general consensus on the status of the infrastructure.

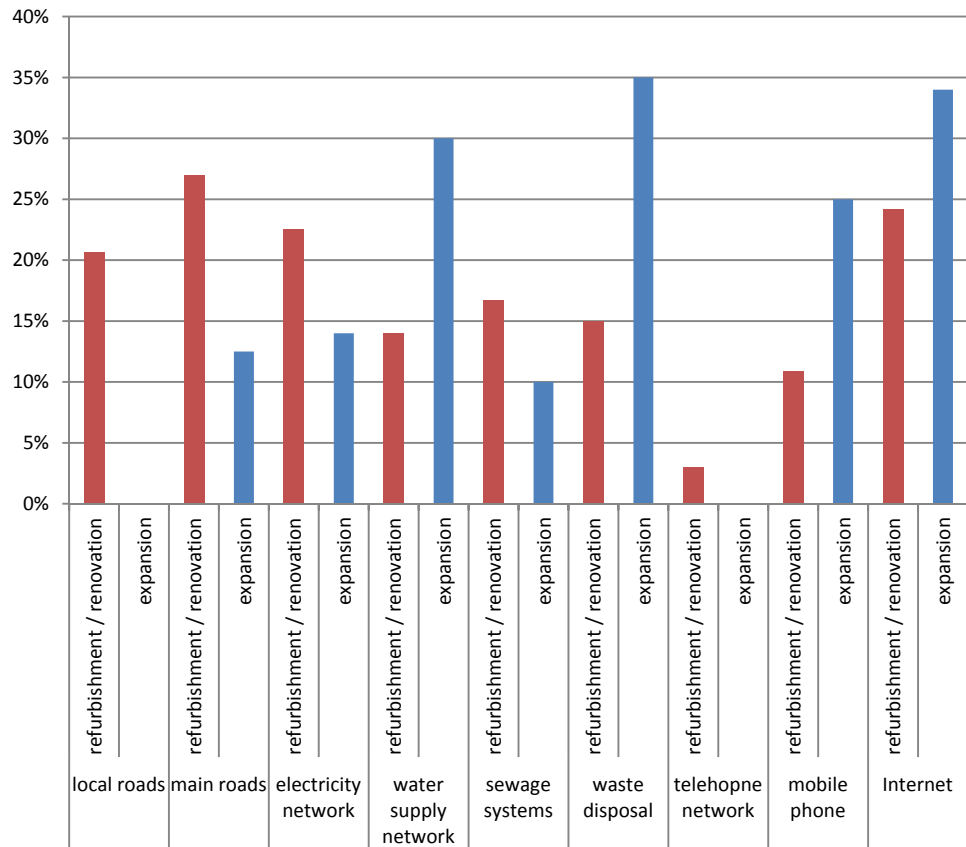


Figure 17. "If any type of infrastructure [from question 5] requires refurbishment/renovation or expansion, please evaluate approximate percentage that needs refurbishment/renovation

or expansion (Figure shows average need for refurbishment/renovation in all municipalities and expansion in %)”

Where there is need for expansion of the infrastructure, it appears to be most needed in four types of infrastructure; waste disposal, the internet, water supply and the mobile phone network. There are however very few municipalities where this is the case, primarily rural areas.

- Quality of services

Similarly as with accessibility, the internet got the lowest value of quality of technical infrastructure or services along with the main roads. This result does not come as a surprise since these two infrastructure types are the commonly criticised parts of the infrastructure in Iceland, especially in rural areas.



Figure 18. “Assess the quality (like durability, reliability, functionality) of the technical infrastructure or services provided in your locality: ...” with values 1-5.

Quality of services, as indicated by the figure below, is generally considered to be very good by respondents. There are no particular services which differ much from the others. The average quality is estimated to be 4.4 to 4.8 out of 5 for all services (figure below).

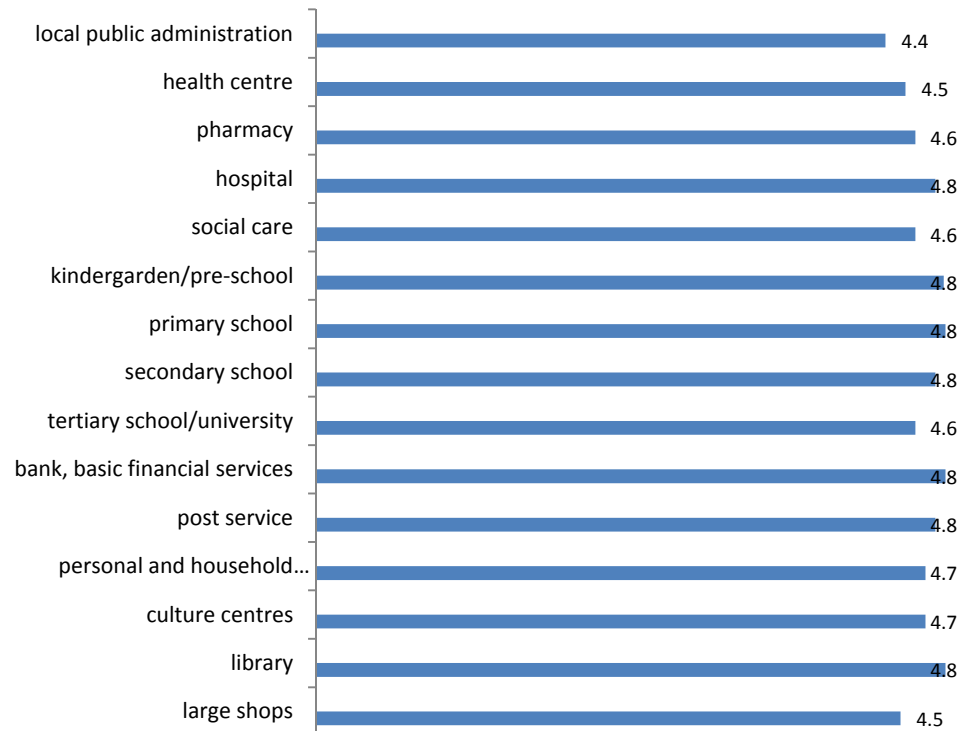


Figure 19. “How would you evaluate the quality of services provided by: ...” with values 1-5.

3.3. Political contextualization of services of general interest in the region

Regarding the methodology used in the survey it is possible that answers given by one person per municipality is challenging the outcome. There is both risk of certain personal or political bias as well as it can be difficult in the case of geographically large municipalities to have the oversight needed for all services. The results from the survey however do not come as a surprise and are largely in line with other information and interviews collected for this case study.

Accessibility to different types of services was generally deemed to be rather good. The major exceptions were some “urban” service functions i.e. large scale and/or specialized. This also relates to another type of service/infrastructure which is the road network. The northeast region is to some extent divided into an eastern and western part where the majority of “urban” type services are located in Akureyri, the service centre of the region while the eastern part of the region has more rural characteristics. Between these two different parts of the region there is a mountain road which can become closed during snow storms in winter and thus hinder access to services in the service centre Akureyri. For several years there have been plans to build a road tunnel (a toll road) under the mountain to ease accessibility, shorten distances and lower accident rate. This proposed road was agreed on by the Icelandic parliament while this case study report was being written⁷. This will change conditions for seeking services over longer distances and probably also result in more centralized services in the service centre of the region; Akureyri.

The type of service which respondents of the survey considered to be least accessible is the internet. The internet appears to need special attention by the authorities and there appears to exist strong polarization between those which have good access in urban areas and those in rural areas who have limited and yet at the same time expensive service. This will be further discussed below. When Iceland telecom was privatized and sold to investors in 2005 it was the intention of the government to use the money to improve infrastructure and various services, e.g. the mobile network and high speed internet connections in rural areas and along the main roads⁸. With the collapse of the Icelandic bank system and resulting loss of the Icelandic state this Act was abolished and these and other infrastructure projects were postponed or altogether removed from the planning and policy documents. This was however probably most noticeable in the road network which is especially challenging in Iceland as further described below.

⁷ June 14, 2012

⁸ Act no. 133/2005, abolished with Act. 173/2008

One of the major findings of the survey is that the road network is a concern to many respondents. To build and maintain a good main road network is costly and a constant challenge in Iceland, a relatively large country with dispersed settlement, mountains and harsh climate. The prioritization of new road projects is very much debated, especially between rural and urban areas since the needs are very different. Rural regions may need basic connections which can be relied on for year round traffic while the urban area around Reykjavík needs roads to allow for ever increasing traffic volumes. The credit crisis and economic collapse of 2008 has further increased this challenge as there is very limited money for new roads and maintenance of the existing network and many projects have been postponed or removed from the planning/policy documents.

The internet network has a polarized development in the country. In urban areas the status of the network is very good but in rural areas the speed is both slow and the service is costly at the same time. As with the road network this is very much linked to the relative size of the country with dispersed settlement. An additional factor contributing to more limited service in rural areas is that the telephone and internet services have all been privatized including the networks. Iceland telecom that owned majority of the network was privatized in 2005 as said before. Areas where there are relatively higher costs involved in delivering the service and creating the network but fewer users are less profitable. Therefore the emphasis by the private companies is placed on areas where business is more lucrative, i.e. a relatively large clientele is accessible and the costs to provide the services are less.

The privatization of services and subsequent demand for increased efficiency and economy has sometimes led to layoffs. According to one interviewee there are more voices raised when this happens in the capital area than in other regions. But usually there is not much complaints about the service itself, except in rural areas, but rather charges for the service.

There is pressure to improve the services in waste management and sewage treatment. According to an interview there are several reasons for this, among other things pressure from regulatory bodies, e.g. the EU, food producers and other land uses, such as recreation. Respondents in the survey appear to recognize more the need to improve the sewage network and that is in line with interviews. Reform in the waste management is more advanced and recycling is relatively advanced in many municipalities as well as collection of organic waste for production of compost. A large compost station, largest in Iceland, is located close to Akureyri which serves most of north Iceland and has a production capacity of 10-12,000 tonnes per year. There are economic as well as environmental reasons for this emphasis on recycling. There are stricter regulations for landfills and emphasis on having fewer and larger landfills according to polices⁹. Therefore waste that goes to landfills has to be transported over longer distances and with ever increasing costs, reducing that part of the waste that has to go to landfills. There is no landfill in the region and the waste that goes to landfill has to be transported some 150 km from Akureyri to a location in the adjacent northwest region.

Quality of services is generally deemed to be of good quality in the survey and this is particularly interesting in the light of general cut-backs in public expenditure after the onset of the credit crisis in 2008. One might have expected to see less satisfaction, not least as there has been much protest against cut-backs for example in health services in the northeast region. Furthermore, the quality of some services is deemed as being good even if some "urban" functions such as tertiary education are considered less accessible.

There was a separation of production of production and distribution of electricity in 2003 and that has contributed to increased electricity costs. This was carried out due to EU regulations for the sake of competition. Iceland's position is however unique due to its location and it is not (yet) a part of the European energy grid.

Influence of European laws and traditions can be observed in the consumer services as was pointed out by an interviewee. There are high demands in Iceland for quality of services. EU runs seminars in how consumer associations can have impact and there is e.g. importance on trans-European consumer protection so that if faulty product is bought in one country you can seek solutions in another country.

According to the same interviewee, the EEA agreement improved the position of consumers as many regulations on consumer affairs were adopted into Icelandic laws and regulations and that generally European regulatory framework was viewed as being more consumer friendly than the Icelandic.

It was mentioned by one of the interviewees that some demands set by the parliament (laws/regulations) have much impact on how things develop and that there is a tendency to

⁹ Environment Agency (2006): Waste Management in Iceland. Updated version, 20 February 2006. (http://english.ust.is/media/skyrslur2006/Waste_Management_in_Iceland_21_feb_06.pdf)

centralization related to increased demands of various kinds which are more easily met in the capital region.

Planning of health services in relation to necessary cut-backs in economic recession was mentioned by one interviewee who said that planning by the government was limited. Planning would come mainly through the financial budget from the state, i.e. how much shall be spent each year. The state did not put forward a definite policy which service should be offered in each place. It entails finances which the parliament avoids. There have been planning proposals set forward in many reports, but usually each institute gets certain money from the state without clearly stating which services it shall offer.

3.4. Conclusions of the regional case & elements of prognosis

The case study sheds a light on several issues that concern the development of services in the region and the challenges that the region is facing. Even if some respondents in the survey and interviewees agree that there are services and infrastructure that might be more accessible and/or in a better condition (and the latter applies especially to certain types of infrastructure), the quality of the services appears to be satisfactory with the majority of respondents.

One of the main challenges the region is facing concerns the development of infrastructure and this is a common concern for many areas of Iceland. Being a relatively large country of 103,000 sq. km with dispersed settlement in all regions except the capital region this is a very costly and difficult task. Network infrastructure such as the roads and the internet network seem to be most affected according to survey and interviews. There is a constant debate among decision makers and the public about prioritization of costly projects, especially in the field of the road network. There has to become more consensus between regions of the country where there are different conditions and therefore opinions on how to prioritize projects. The prioritization has to take into account different purposes of road projects; whether it is to open for all year round access between places, increase capacity of roads, increase road safety, or facilitate regional development policy statements¹⁰. This appears to become more challenging in times of austerity when people from different locations are fighting for fewer possible projects.

Among the objectives of the new communications policy of Iceland (2011-2022) are the following and they have much relevance in the context of the SeGI project¹¹:

- Accessibility and mobility in the transportation system for movement of people and goods within and between regions shall be improved. Conditions will be created for most citizens to access centres of employment and services within one hour.
- Centres of employment and services in the country will be defined in regional planning policies and Iceland's national plan.
- Transportation should support structure and development of service areas in all regions.
- Harbours and airports that shall ensure easy access to and from the country will be defined.

Some of these objectives appear to support some of the concerns that have been brought up in the case study work, i.e. the accessibility to urban functions, the state of the network and in fact to "unify" the region which appears somewhat fragmented today due to long distances and in some places inadequate road network.

One interviewee pointed out that laws and regulations in some fields decide which service shall be provided, e.g. kindergartens and primary schools. The peripheral regions sometimes become left out, in other fields of services i.e. for those who live furthest away from urban settlements where there are most services available. Therefore, where you live very much defines your access to services.

According to another interviewee, probably the services of general interest had become more economical and effective if the municipalities had merged more than was the result, as the smallest municipalities do not have the capacity to maintain a high level of services. This has been of little interest in the project in general and may be of little consequence for many larger regions but in the Icelandic case with a number of very small municipalities this is a real concern.

¹⁰ Jóhannesson, H. and Ólafsson, K. (2003).

¹¹ Proposal for a parliamentary resolution on transportation policy for Iceland 2011-2022. No. 393/2011.

According to the same interviewee there is no long term planning and therefore no guarantee, e.g. from the state. Public transport is one example about ambitious goals but little fulfilments since there is little money put into the service.

Privatization of SGIs has had its impact and is e.g. noticeable in ITC and postal services. According to an interviewee, the process is always the same and the impacts are worse in rural than in urban locations. There is complained about bad services and the prices where market conditions are not at hand. Still it has been tried to combine different services e.g. post offices and banks in rural areas to maintain service levels.

As was pointed out by an interviewee, planning of health services is limited, i.e. a definite policy on service should be offered in each place is lacking and this may also be the case for other services.

4. Conclusions

Based on various data sources, the survey and interviews, services of general interest appear to generally be of a relatively high level in the region even if accessibility is different depending on where you are located. Certain infrastructure however seems to need attention, particularly roads and the internet. It is especially noteworthy that in the survey the quality of services was estimated to be very good by the respondents.

Iceland is believed to have had a relatively special situation among the Nordic or Scandinavian countries regarding its welfare regime. As Irving (2011 p. 235) put it; "Although included within the Nordic family of nations, propinquity to social democratic welfare regimes has not determined the development of welfare arrangements in Iceland" but instead there has been "affinity towards other more liberal 'settler' states (such as New Zealand), and to strong US relations" (ibid, p. 236). This has however been changing after the credit crisis; the present leftist government has placed welfare issues high on its agenda as a Nordic welfare government which has however been challenged by financial constraints after the credit crisis.

The fact that Iceland and its settlement characteristics which are in several ways rather unique in the European context provides an extra element to the question of delivery and accessibility of SGIs. The total population size is only around 320,000, of which over 63% live in the capital city Reykjavík and its surrounding municipalities in the southwest part of the country that together make up the so called capital region. In this one region and parts of adjacent regions the accessibility of services is generally very good while people in other more remote regions are challenged to a different degree.

Somewhat similar situation of different access can be noted in the northeast region where one municipality out of 13; Akureyri has the majority of inhabitants or 62%. The challenge here is to make certain services accessible to the citizens in cases where they are not generally available in various smaller localities of the region. In addition the region is geographically very large or just over one fifth of Iceland, much of the land is however parts of the central highland and other uninhabited areas. Therefore many look towards upgrading of infrastructure to ease access to various services. Most often two types of infrastructure are mentioned in this context; the road network and the internet. However, the existence of Akureyri, a relatively large town in the region makes the service base relatively strong. Therefore inhabitants of the town and the surrounding region have better potential of accessing services of general interest than some of the other sparsely populated regions of Iceland which neither have a strong regional centre nor an easy access to the strong service base of the capital region.

These conditions; where some localities have all or most available services and good infrastructure at hand, while other localities do not, create considerable polarization of development in the regions in the field of services of general interest. This divide can either increase due to continuing lack of good infrastructure notably roads and the internet or conditions and access in various services can improve as a result of improved infrastructure.

Overall, services of general interest in Iceland and the northeast region appear to be in a relatively good condition even if there are definitely challenges such as financial conditions; the state budget, budget of municipalities and individuals, distances, low population density and the transport- and communications network in certain areas. This general finding can be observed both from collection of diverse data from public sources as well as from the questionnaire and the six interviews conducted.

One of the main findings of the survey is that the road network is a concern to many respondents and it is clear that the needs regarding new road projects is very different between rural and urban areas. Rural regions of Iceland often need basic connections which can be relied on for year round traffic

while the capital region and adjacent communities need new or improved roads to allow for increasing traffic volumes at rush hours. Among the challenges for the next years is to find ways to prioritize so that different objectives for building new roads can be taken into account, one of these is often accessibility and that relates to services among other things. Accessibility has however been placed high on the agenda as in the new communications strategy 2011-2022, accessibility to centres of employment and services is one of the main objectives.

In recent years much has changed regarding the main forces impacting services of general interest, as one interviewee pointed out. Which forces are dominating at the moment? Is it for example privatization or regional policy? The demand for economization is to pull various things, including services, from rural areas to urban areas. But on the other hand there are political demands and these are sometimes conflicting. The financial crisis has had much impact on SGIs as it is to a large degree based on the ability of the state to provide money for the services. The boom period prior to the crisis fuelled growth in the capital region of Iceland. Then came the economic collapse and the consequent cut-backs in public expenditure became even worse in the rural regions than in the capital region.

Future challenges are among other things, the question if there will be enough consensus on how to provide SGIs and where. The declining number of people living in rural areas creates uncertainty, e.g. in schools and health care. How to respond to that change is much of a challenge. All people need to have access to services and that is the main challenge, i.e. to put enough money in common funds so that it is possible to provide the services, even it is more costly per inhabitant in rural areas. The financial conditions can impact access and quality of services, e.g. limit the capability of institutes to keep up with technology and if they can provide services without charging excessive user fees. These are also political decisions but individual directors can have much flexibility within a certain frame. As one interviewee said, more supervision by the state could be without it becoming too burdensome.

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Vodafone Iceland, www.vodafone.is

Interviewees:

Alfreð Schiöth, manager for the Public Health Authority

Bjarni Jónasson, director of the Regional Hospital in Akureyri

Brynhildur Pétursdóttir, employee of the Consumers' Association

Gunnar Gíslason, director of the School Administration Office in Akureyri

Pétur Þór Jónasson, director for the Association of Municipalities in the northeast region

Reinhard Reynisson, director of a business development agency in the northeast region