NÝSIR LTD. CONSULTING SERVICES

A STUDY OF THE SOCIO-ECONOMIC IMPACT OF THE PROPOSED ALCOA ALUMINUM PLANT IN REYÐARFJÖRÐUR, ICELAND

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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The proponent of the proposed aluminum plant in Reyðarfjörður is Alcoa, that is the world's leading producer of aluminum. The headquarters are in the United States. Alcoa is located in 400 communities in 38 countries and the employees are 129 thousand.

The plans of Alcoa are to build a plant with a capacity to produce 322 thousand tons of primary aluminum a year. It is assumed that the construction of the plant will commence in 2004 and production begins in 2007. The plant will be built on an industrial site on the northern shore of Reyðarfjörður. The site is not visible from the towns of Reyðarfjörður and Eskifjörður, natural conditions for the harbor are favorable and land plentiful. Two 400 kV transmission lines will be built from Fljótsdalur to the plant and a harbor will be constructed at the site.

Electricity will be supplied to the plant from the Kárahnjúkar hydropower plant, which the National Power Company (Landsvirkjun) is planning. The Kárahnjúkar hydropower plant, with a tributary water from Jökulsá in Fljótsdalur, is about 630 MW in size and can produce about 4,470 GWh/year of electricity. It is of an appropriate size to provide power to the plant

It is estimated that the plant will cost about 100 billion Icelandic krónur.
The main facilities will be:

- silos for alumina, potrooms where aluminum is produced from alumina;
- a casthouse;
- a rodding plant;
- the main switch yards and service buildings (repair workshops, storage buildings, cafeteria, research rooms and offices); and
- dry scrubbing facility.

The strongest pollution measures will be applied at the plant, which will be equipped with dry scrubbers.

The market for the production will be primarily in Europe but also in North America. There is a growing demand and shortage of aluminum in both markets.

The plant, with a production capacity of 322 thousand tons a year, is expected to provide 420 permanent jobs. A further 8 per cent labor requirement results from vacation and

other release work, leading to a total labor force of about 454 workers. The plant will create various business opportunities for companies in the East Region and elsewhere in Iceland. It can be expected that the plant will directly and indirectly create about 750 jobs in the Central East Region.

1.2 STUDY OBJECTIVES

The study has five main objectives. It:

- describes the socio-economic characteristics of the Central East Region, where the proposed plant will be located.
- evaluates the socio-economic impact of the construction and operations of the proposed aluminum plant in Reyðarfjörður.
- proposes development planning initiatives in the East Region if the aluminum plant is built.
- assesses future socio-economic development in the East Region if the plant project does not proceed.
- assesses the cumulative effects of all planned projects that will be implemented concurrently in the region. This includes the different components of the project: the Kárahnjúkar hydropower project, two high voltage transmission lines from Fljótsdalur to Reyðarfjörður, and the harbor at the plant site. It also considers the cumulative effects of highway developments, including the proposed road tunnel between Reyðarfjörður and Fáskrúðsfjörður.

1.3 ASSESSMENT BOUNDARIES

The **Impact Area** is defined as the Central East Region, within which the inhabitants can suitably commute to the proposed aluminum plant after operations begin. While construction is in progress the impact will be felt over the entire East Region. The report does therefore also consider possible impact for the entire East Region, as appropriate. The delimitation of the impact area will always be inadequate. It can, as an example, be expected that the impact of the plant construction and the Kárahnjúkar power plant on economic development and businesses will be greater in Akureyri than Hornafjörður, simply because Akureyri is a much larger town with a large number of qualified tradesmen, contractor and service companies.

For the purposes of this study, the **East Region** is defined as the former electoral district that extends from Langanes in the north to Skeiðarársandur in the south. There were about 11,800 people living in the East Region on December 1, 2001.

The **Central East Region** is defined, for this study, as the area stretching from Fljótsdalshérað and Borgarfjörður in the north to Breiðdalur in the south. The northern boundary is clearly marked by the mountain range of Smjörfjöll and Hellisheiði, but that to the south is functional rather than physical. It is defined as the boundaries between the municipalities of Breiðdals-hreppur and Djúpavogshreppur. From Breiðdalsvík, the southernmost community, are about 105 km by road to the proposed plant site in Reyðarfjörður, but this will be reduced to ca. 71 km if a road tunnel is built between Reyðarfjörður and Fáskrúðsfjörður. There were 8,060 people living in the region on December 1, 2001.

1.4 METHODOLOGY

The study methodology is based on that used for impact assessments in other countries, as per the reference list. These are designed to assess the prospective social, economic and biophysical effects of proposed resource development and other projects and see whether they are in the public interest. However, they are also planning exercises, in that they seek not simply to assess the costs and benefits of the proposed project, but also to involve all stakeholders in an informed process of seeking to optimize its impacts. This sees attempts to minimize or prevent the negative outcomes and create or enhance the positive ones, of proposed projects. It may also, in the case of anticipated negative consequences, involve the design of compensatory mechanisms.

In the case of a socio-economic assessment, there are normally three main components:

Baseline Description. This describes the current socio-economic environment and recent trends, including discussion of the: economy; labor force; population; housing stock; personal services and infrastructure; public, commercial and industrial services and infrastructure; land and resource use; and culture and way of life of the area likely to be affected by the project. Particular attention is usually paid to the capacity of infrastructure and services to absorb, or governments or the private sector to respond to, any additional demands.

Project Description. This provides an outline description of the project being introduced into this socio-economic environment, with particular emphasis on those characteristics that are likely to have significant impacts, as determined through review of the literature, professional knowledge and key informant interviews. The project description is not solely concerned with the physical aspects of the proposed undertaking (e.g. its site, location, capacity and labor force requirements), but also includes consideration of approaches, policies and practices that will influence the effects of individuals, families and communities in the impact area.

Impact Assessment. This sees an evaluation of the likely socio-economic impacts, based on sociological, economic and geographical analysis. This again sees the use of literature reviews, professional knowledge and key informant interviews, and draws on comparative analysis of similar projects and circumstances. Key to the assessment is an understanding of the ability of government, private sector and others in the region to absorb or respond to the

new demands resulting from the project. Particular concern is usually given to the identification of any critical capacity problems, leading to an investigation of how these might be addressed.

However, the research process for such an assessment was not simply sequential, but involves an interactive feedback mechanism, with issues and concerns emerging through the early stages of the analysis leading to further baseline data collection and a reconsideration of aspects of the project description.

This assessment of the proposed aluminum plant in Central East Region of Iceland follows the same general pattern as discussed above. The baseline information was gathered through a number of mechanisms. These included:

Primary Research. Field surveys allowed the research team to familiarize itself with the local communities and their setting:

- The Social Science Research Institute at the University of Iceland undertook for Reyðarál hf. in 2000 comprehensive surveys of (i) people aged 20-49 years who had left the region over the last five years (Appendix III) and (ii) the people in the region aged 18-28 years (Appendix IV)

Secondary Research. This included the collection of statistical data from a wide range of primarily governmental sources including Statistics Iceland, the Land Registry and the Institute of Regional Development. The assessment was also informed by a review of the literature and other information about the impacts of plants and other industrial projects in Iceland, Norway, Canada and elsewhere.

Key Informant Consultations. Baseline information was also collected through interviews with key informants from municipalities, government offices and institutions, business people and labor unions, and through meetings with small groups of municipal leaders, business people and union leaders. These consultations also permitted an identification of stakeholder concerns respecting the projects impacts, and their ideas about how these might be addressed.

1.5 STUDY TEAM

The study was co-ordinated by Sigfús Jónsson of Nýsir Consulting Services, in Reykjavík, but involved also Guðrún Ýr Sigbjörnsdóttir, consultant at Nýsir. A number of consultative meetings were held with an advisory committee set up for the Reyðarál study as well as this study. Its members raised various important issues and provided critical comments for the study. They were representatives from the municipalities affected most strongly by the plant and the hydropower project, as well as from Alcoa, Landsvirkjun, Invest in Iceland – Marketing Division, and the Ministry of Industry and Commerce. Representatives of Alcoa

and the EIA project manger for the plant, Eyjólfur Árni Rafnsson of Hönnun engineering services, made important contributions to this study.

The Social Science Research Institute conducted in a professional manner two surveys for the Reyðarál study two years ago. The assistance of the Municipalities in the Central East Region with providing wide-ranging information is appreciated, as well as the assistance from the Institute of Regional Development, Statistics Iceland, the Land Registry, Public Roads Administration, the East Region Tax Authority, the East Region Health Authority and the various educational institutions.

1.6 REPORT STRUCTURE

The report is divided into four main sections, in addition to this introductory chapter. Chapter 2 provides a baseline description of the main socio-economic characteristics of the East and the Central East Regions. Chapter 3 describes a future scenario for the East Region without the plant project. Chapter 4 provides assessment of the estimated socio-economic impact of the plant, as well as the socio-economic impact of the entire project in the Central East Region during the construction period.

2. SOCIO-ECONOMIC CHARACTERISTICS OF THE CENTRAL EAST REGION

2.1 THE EAST REGION AND THE CENTRAL EAST REGION

For the purposes of this study, the East Region is defined as the former electoral district of East Iceland, extending from Langanes in the north to Skeiðarársandur in the south. The Central East Region is defined as the region extending from Fljótsdalshérað in north to Breiðdalur in south. It excludes four municipalities in the East Region: Bakkafjörður, Vopnafjörður, Djúpivogur and Hornafjörður.

2.1.1 INTRODUCTION

Close to 11,800 people live in the East Region. The settlements are widely spread. About three-quarters are in coastal communities and about one quarter in Fljótsdalshérað. There are 12 towns and villages on the coast and two neighboring towns in Fljótsdalshérað.

The employment situation is reasonably good for the region at large, but varies between communities. While the average income per capita is below the national average, it is particularly low in the farming districts but substantially higher in the fishing towns. There are about 400 farms in the East Region, but farming activity has been declining rapidly over the last few decades. There are a few strong fishing companies in the region and the regional fishing industry is in a generally healthy state. Tourism is growing in the region.

The main weakness of the regional economy is the limited range of employment opportunities, high proportion of low paying jobs and depopulation due to higher out-migration than in-migration. There are quite a few seasonal jobs for unskilled people available, for example in fish processing, tourism, construction and slaughtering. These jobs are not attractive to the young people, and especially young women, who move in large numbers to the Capital Region, attracted by the opportunities it presents for study and work. This out-migration of young and skilled people has a negative effect on the local communities, causing an imbalanced age structure and sex ratio. As a consequence there is a shortage of skilled entrepreneurial people to start up new companies in the region.

The regional transport system is generally of good standard. Egilsstaðir and Hornafjörður airports have scheduled domestic services, with the former having facilities for international flights. Harbor facilities in the region are generally adequate and shipping routes to and from Europe are shorter than those to and from other parts of Iceland. This includes a summer ferry service between Seyðisfjörður and the Faroe

Islands, Denmark and Norway. Most of the highway network is paved and the main road between the East Region and Akureyri has been upgraded and is open year around. A road tunnel between Reyðarfjörður and Fáskrúðsfjörður is being planned.

Public services, such as health and educational services, are satisfactory. Social services, recreational and cultural activities are also adequate. The municipalities are generally of good financial standing and, in Fjarðabyggð, Austur-Hérað and Hornafjörður, smaller units have amalgamated into larger ones. However, the provision of public services tends to be costly because of the small and dispersed population.

Low market price for real estate and limited opportunities to sell houses, as well as high interest rates, have caused a virtual standstill in construction of new houses over the last ten years in the East Region, except in Egilsstaðir.

2.1.2 POPULATION

The changes in the number of inhabitants in the region between 1990-2001, both for the East Region and the Central East Region, are outlined in Figure 2.1.

There were 11,798 inhabitants in the East Region on December 1, 2001. This is about 4.1% of the national population. There were 424, or 7.5%, more men than women in the region.

On the same date, 8,060 people, or nearly 2.8% of Iceland's population, lived in the Central East Region. There were 250, or 6.4%, more men than women in the region. The largest towns in the Central East Region are Egilsstaðir-Fellabær (in two separate municipalities), Fjarðabyggð (Neskaupstaður, Eskifjörður and Reyðarfjörður), Seyðisfjörður and Fáskrúðsfjörður. A total of about 500-550 people live in the adjacent villages of Breiðdalsvík, Stöðvarfjörður and Borgarfjörður eystri, while a further 1,100-1,200 people lived in the farming districts.

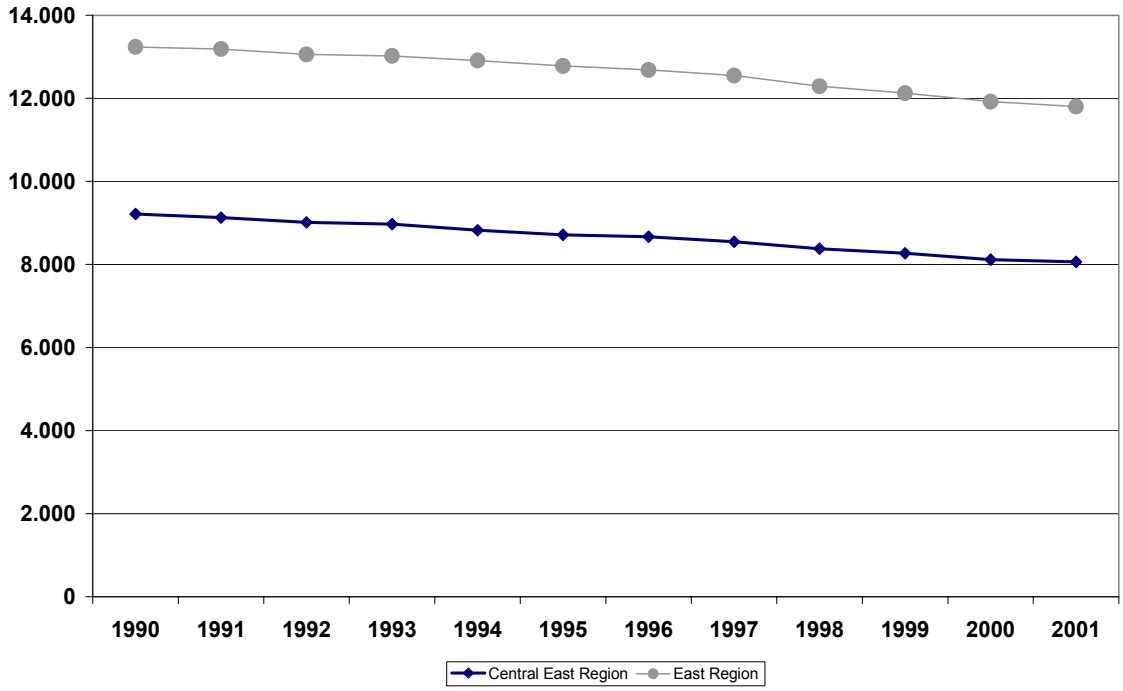
There were 8,247 residents in the Central East Region in 1971. Thirty years later the population had declined a little. However, over the same 30 years period the national population grew by over 30%, or about 1% a year. This period can be divided into three sub-periods with regard to population changes in the Central East Region:

1971-1979 - Growth. The population grew about 10%, from 8,247 to 9,080.

1979-1990 - Stagnation. The population grew only by 1.5%, from 9,080 to 9,215.

1990-2001 - Decline. The population declined from 9,215 to 8,060, a decline of 14.2%, or nearly 1.3% a year.

Figure 2.1 Number of Inhabitants in the East Region and the Central East Region 1990-2001



Source: Institute for Regional Development, Data Bank, 2002

This regional pattern masks marked intra-regional variations. The general trend has seen growth at Egilsstaðir-Fellabær, stagnation or decline in the coastal communities, and heavy depopulation in the farming districts.

2.1.2.1 Age distribution

Figure 2.2 shows the age distribution in the Central East Region respectively. It also provides a comparison with the age distribution of the nation as a whole.

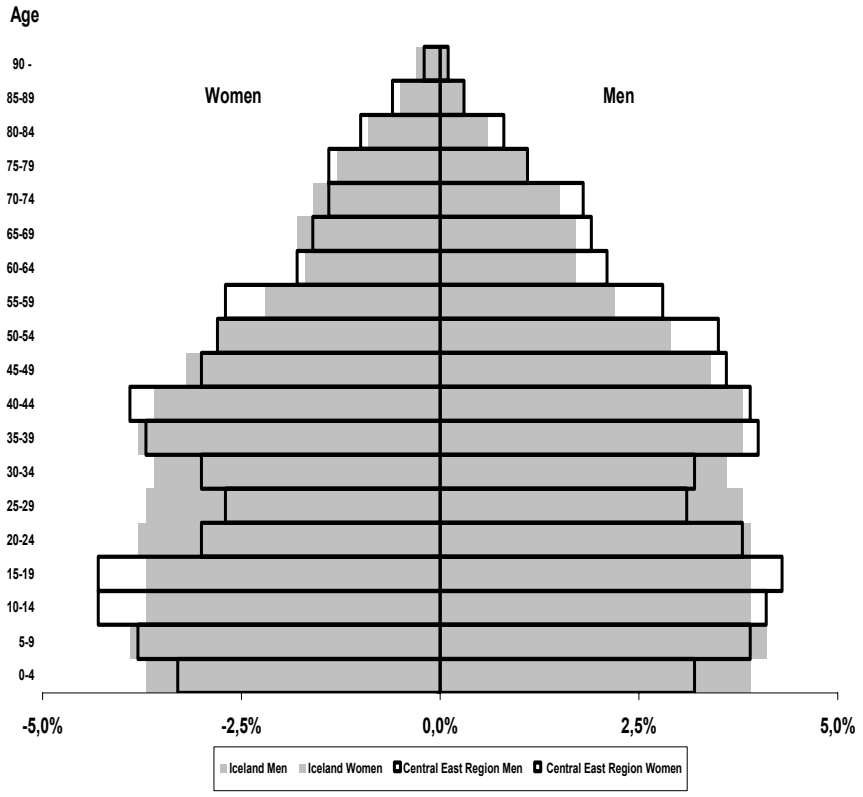
The age distribution of the population in the Central East Region has the following main characteristics:

- There are small cohorts of people 50-70 years of age. This is characteristic of the whole nation and is a result of low birth rates during the 1930s and the Second World War. On December 1, 2001 there were 529 45-49 year old people in the region, but only 445 55-59 year olds. The implication is that over the next 10-15 years, the number and proportion of 50-65 years old people on the labor market will increase substantially.

- The number of children 0-4 years old is lower than the number 5-14 years old. The year class of 0-4 years old children is on average 104 individuals and the year class of 5-14 years old 130 individuals.

- The number of women 20-34 years old and men 25-34 years old is lower than for the nation as a whole. Therefore, the number of children 0-4 years old is also lower than for the nation as a whole.

Figure 2.2 Age Distribution in the Central East Region and in Iceland on December 1, 2001



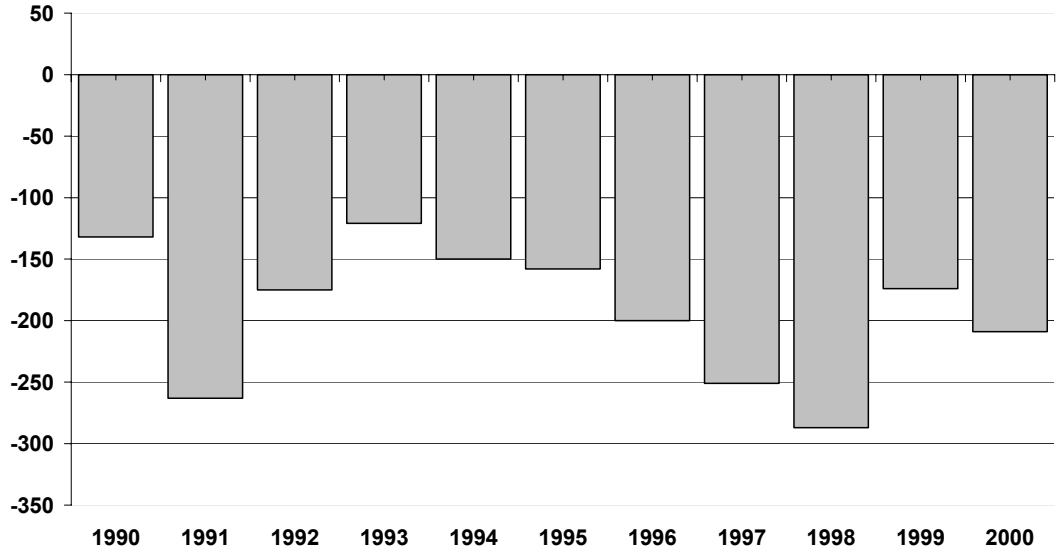
Source: Institute for Regional Development, Data Bank, 2002

2.1.2.2 Migration

Between 1971 and 2000, the Central East Region experienced a net loss to other regions of Iceland of 2,768 individuals, or on average 95 persons a year. This is an average annual loss of 1.0%. The annual loss is accelerating: it averaged 0.6% in 1971-1980, 1.0% in 1981-1990 and nearly 2.2% in 1991-2000. The net out-migration from the Central East Region in 2000 was 209 individuals, or 2.6%, mainly towards the South West Region.

The migration statistics are based on municipal units. Over the period 1971-1999 a total of 16,238 persons left their home municipality in the Central East Region, but the return migration over the same period was 13,445 persons. Of those who moved, about one-third moved to another municipality within the region. It can therefore be estimated that about 10,800 people left the Central East Region in 1971-1999, but nearly 9,000 moved into the region. Some people were involved in both in-migration and out-migration over this period.

Figure 2.3 The Number of Out-migrants in Excess of In-migrants in the Central East Region 1990-2000



Source: Institute for Regional Development, Data Bank, 2002

Figure 2.3 shows the net number of out-migrants from the Central East Region over the last 11 years. A total of 2,120 moved over this period, with the rate of loss being highest in 1991, 1997 and 1998.

In November 1997 the Institute of Regional Development published a report of a large research project on the causes of migration in Iceland, conducted by professor Stefán Ólafsson at the Social Science Research Institute, University of Iceland.

The study concluded that only 50.5% of people who were born in the East Region lived there in 1992, 3.7% were living abroad and 31.8% in the Capital Region. These figures show that, notwithstanding the satisfaction of residents in the Central East Region with the local climate, health care, kindergartens, elementary and junior-high schools and services for the elderly, the continuous economic development of the Capital Region has strongly influenced them when they have evaluated the costs and benefits of migrating.

As a part of the study a survey was conducted of 1,800 people all over Iceland. They were asked about their living conditions, under the assumption that those who were dissatisfied were the most likely to want to move. The survey showed that those exhibiting the most widespread discontent were farmers, fishermen, fish-processing workers and people 18-24 years old. The study showed furthermore that people in large population centers were much happier with their living conditions than were the residents of smaller communities. People living in towns and villages with 200-1,000 inhabitants, expressed dissatisfaction with their local living conditions, complaining about the high costs of electrical heating, goods, services, and the limited opportunities for employment, college level education, leisure and recreation. They also complained about low and declining property prices, which are of course a constraint to out-migration. People living on farms were generally more pleased with their living conditions.

About 20% of the respondents in the East Region had considered a move out of the region during the previous two years. They were generally satisfied with the climate in the region, in comparison with that of other parts of Iceland. They were also very pleased with the regional health services, kindergarten services, elementary and junior-high schools and services for the elderly.

As a part of the Reyðarál study two years ago, the Social Science Research Institute at the University of Iceland conducted a postal survey of out-migrants from the East Region in late 2000. It surveyed 20-49 year old people who had moved out of the Central East Region in 1995-1999. They did not rate the employment situation in the East Region highly in comparison with the communities where they were presently living. When comparing the East Region with their present communities about 73% were rather or very unhappy with the lack of diversity of employment opportunities, and about 62% were rather or very unhappy with income prospects. Job security was however considered quite good in the East Region in comparison with the present home community. The main reasons people gave for their move from the East Region were the desire to seek higher education or because employment opportunities were too limited in both numbers and variety. Many also cited personal reasons.

Migration studies in Iceland have tended to focus on push factors, i.e. on the weakness of the communities that people are departing. International research shows that pull factors are as important, i.e. the attractiveness of the community of destination. It is evident that,

in Iceland, out-migration rates are as high in thriving fishing communities with stable employment as in communities with stagnant or declining employment. Prosperous East Region communities such as Neskaupstaður, Eskifjörður and Fáskrúðsfjörður, have experienced high rates of loss. Strong fishing communities elsewhere in Iceland, such as Súðavík, Hólmavík, Skagaströnd, Siglu-fjörður, Þórshöfn and Vestmannaeyjar have also experienced high rates of out-migration.

The Capital Region, a thriving urban area of over 180,000 inhabitants, has an immense competitive advantage over such fishing towns with their small populations and limited employment, education, leisure and other opportunities.

2.1.3 ECONOMY

In 2001 there were about 139,000 person-years of employment in the national labor market, of which 83,000 were in the Capital Region and 56,000 elsewhere in Iceland. The Central East Region is characterized by a stronger reliance on the primary and secondary sectors than for the nation as a whole. The employment structure of the region and Iceland, in 1986-1997, is shown in Tables 2.1 and 2.2 respectively.

Table 2.1 Employment Structure (Person-years) in the Central East Region, 1986-1997

Sector	*1986*	*1997*	*Change %*
Agriculture	577	321	- 44.4
Fishing	433	375	- 13.4
Fish processing	1,096	705	- 35.7
Manufacturing	517	376	- 27.3
Construction	385	320	- 16.9
Retail	526	502	- 4.6
Transport	250	235	- 6.0
Banks etc.	153	192	+ 25.5
Other services	895	1,028	+ 14.9
Total	***4,832***	***4,055***	***- 16.1***

Source: Institute for Regional Development, Data Bank

In the Central East Region in 1997, 17% of person-years were in the primary sector, 35% in the secondary sector, and 48% in the tertiary sector. The comparable ratios for the Capital Region were 2% in the primary sector, 22% in the secondary sector and 76% in the tertiary sector. The Central East Region has a much higher proportion in stagnant or

declining economic sectors, while the proportion in the growth sectors is much higher in the Capital Region.

Table 2.2 Employment Structure (Person-years) in Iceland, 1986-1997

Sector	*1986*	*1997*	*Change %*
Agriculture	8,704	5,209	- 40.2
Fishing	5,576	6,120	+ 9.8
Fish processing	9,592	7,614	- 20.6
Manufacturing	18,509	16,693	- 9.8
Construction	11,183	10,252	- 8.3
Retail	18,477	20,134	+ 9.0
Transport	8,192	8,828	+ 7.8
Banks etc.	8,711	11,544	+ 32.5
Other services	34,367	42,637	+ 24.1
Total	***123,311***	***129,031***	***+ 4.6***

Source: Institute for Regional Development, Data Bank

There are four main companies in the Central East Region. These are Síldarvinnslan Ltd. in Neskaupstaður with c. 280 employees, Hraðfrystihús Eskifjarðar Ltd. in Eskifjörður with c. 200 employees, Kaupfélag Fáskrúðsfjarðar (co-op.) and its subsidiary Loðnuvinnslan Ltd., with 170 employees together and Kaupfélag Héraðsbúa (co-op.) in Egilsstaðir with c.100 employees.

The farming areas have experienced steady population declines and a gradually shrinking economic base compared to other sectors. The farms are generally too small for modern farming methods and the land and climate is marginal in comparison with farms in Europe. Farming incomes have declined gradually as subsidies have been reduced and production quotas introduced for sheep and dairy farmers. Farmers have responded by abandoning their land, commuting to work in nearby towns or using other ways of diversifying the farm income. In Fljótsdalshérað farmers have gone into tourism, forestry and organic farming, but this has not offset the declining income from traditional farming. The number of people living in the farming areas in Fljótsdalshérað is around one-third of what was around 1900.

The region′s coastal fishing towns have had fluctuations in their economies, but some have been more successful than others. The fishing industry is characterized by rapid changes, success by some and failures by others, but no single factor explains why one fishing town prospers while another experiences a slump. The number of inhabitants of the coastal towns is generally similar to what it was about 30 years ago. The most successful fishing towns have been in Fjarðabyggð and Fáskrúðsfjörður. Their incomes are well over the national average and they have a low unemployment rate, leading to a

need to import labor. Despite the economic success of Fjarðabyggð and Fáskrúðsfjörður, their populations have declined slightly over the last five years.

Seyðisfjörður has been going through closures and restructuring of its fishing industry, and the population has declined. The town has benefited from being a terminal for the car ferry that operates during the summer months between Iceland and Northern Europe, bringing in many foreign tourists. In 2000 the ferry carried 7,000 passengers, including about 1,500 Icelanders.

Egilsstaðir and the small adjacent town of Fellabær has been the main growth center of the Central East Region. The economy there is relatively stable, mainly based on public and private services. Agricultural processing, construction, public utilities and the airport are also important for the local economy. The employment there is more diversified and it is easier for educated couples to both find work there than is the case in the coastal communities, except at Reyðarfjörður and Neskaupstaður. There is also an increase commute between Egilsstaðir and other communities, such as Reyðarfjörður.

The main changes in the employment structure for the Central East Region 1986-1997, in comparison with national trends, are as follows:

- Farming employment declined at a similar rate as for the nation as a whole, primarily because of decreased agricultural subsidies and deteriorating lamb markets. Rapid farm abandonment, as well as increases in daily commuting from farming areas to neighboring towns, has been experienced. Many former farmers have kept living on their farms even though they are no longer engaged in commercial agriculture.

- Fishing jobs declined in the Central East Region while they grew for the nation as a whole. The growth sectors within the national fishery have been freezer trawlers and small inshore boats, but these are less significant in the Central East Region where the purse seiner fleet is relatively important.

- Employment in fish processing, mainly in the freezing plants, has declined more rapidly in the Central East Region than nationally. This is because of reduced ground fish landings. A few ground fish plants have closed, and the processing of capelin and herring, which has to some extent replaced such activity, is less labor intensive and more seasonal.

- Manufacturing jobs in the Central East Region declined by 27%, compared to 10% for Iceland as a whole. The sub-sectors experiencing decline were slaughtering, meat processing, clothing (woolen products) and shipbuilding and ship repair.

- Construction employment declined by 17% in the Central East Region but by only 8% for the nation as a whole. The main reason is that there was less economic and demographic growth in the region, and fewer houses and industrial buildings,

and virtually no farms, were built. The main construction activity was repairs to residential and industrial buildings, as well as road, airport and harbor construction. Since 1997 there has been a construction boom in the Capital Region.

- The service sector as a whole (i.e. including health care, education, retail, banking and transport) saw employment grow by 7.3% in the Central East Region and 19.2% nationally. The former figure is quite high when compared with other outlying regions, primarily as a result of growth in public services (education, social and health sectors), professional services and tourism.

In total, there was a loss of about 800 jobs in the Central East Region 1986-1997. This included nearly 400 in fish processing, about 250 in farming and over 200 in manufacturing and construction combined. Over the same period, about 130 new jobs were created in the retail and services sector.

From comparison of all economic sectors, it can be concluded that the Central East Region economy has both:

- A **structural weakness**, as it has a higher proportion of total employment in the declining primary and secondary sectors (52%) than is the case for the Capital Region (24%) or Iceland as a whole (36%); and

- A **locational weakness**, because each sector in the region has seen less employment growth than is the case for the nation as a whole, and the Capital Region in particular.

Structural and locational weaknesses are often inter-related, with the former tending to set off vicious circles of economic decline in less advanced areas.

2.1.4 LABOR MARKET

The Labor Market Statistics in the Statistical Yearbook show that the national labor participation rate, measured in person-years, is about 50% of the national population. It is divided into the following three categories: Full-time employed 40%, part-time employed 8% and foreign workers 2%. Applied to the Central East Region, the size of the labor market there can be roughly estimated as follows, measured in person-years:

Full-time employed	3,200-3,300
Part-time employed	600-700
Foreign workers	100-200
Total labor market (person-years)	**3,900-4,200**

Based on information provided by the East Region Tax Authority for the income year 1999, it can be estimated that about 3,500 persons were in full-time employment, i.e. with income above 1 million ISK. This corresponds with the calculated number of full-time employed and foreign workers in the labor statistics.

There are close to 3,200 persons that received an income below 1 million ISK in the Central East Region in 1999. Of this group are probably 900-1,000 recipients of pensions and social security and c. 800-1,000 students that only work for about 3-4 months of the year on average. Of the remaining 1,200-1,500 part time workers housewives are probably the single largest group. The data from the Tax Authority indicates that part-time work is probably slightly higher than the labor market statistics indicate, or perhaps 800-1,000 person-years. It can therefore be concluded with a fair amount of accuracy that the size of the labor market in the Central East Region was about 4,000-4,200 person-years in 1999.

Each year about 130 new recruits enter the labor market, while about 55-60 persons retire from it. If the effects of out-migration are excluded, the net increase is therefore about 70-75 persons a year. However, the real figure is in reality lower because of out-migration.

The East Region Tax Authority data show that 6,710 individuals in the Central East Region reported a taxable income for 1999 (Table 2.3). This includes earned income from employment and self-employment, social security benefits, and payments from pension funds.

The persons reporting an income of less than 1 million ISK for the year 1999 are chiefly students, housewives working part-time, sheep farmers, social security recipients and pensioners. The highest income groups include skippers, mates and engineers on the fishing vessels, medical doctors, business executives and senior civil servants.

Table 2.3 Taxable Income, by Income Group, Central East Region, 1999

Income (´000 ISK)	**Number of persons**
<500	1,550
500-999	1,635
1,000-1,499	1,209
1,500-1,999	682
2,000-2,499	515
2,500-2,999	348
3,000-3,499	270
3,500-3,999	169
4,000-4,499	112
>4,500	220
Total	**6,710**

Source: East Region Tax Authority, 1999

There are seasonal variations in the supply and demand for work in the region. During the slaughtering season in fall, there is need for many temporary workers, mostly farmers, their wives and grown-up children. The main capelin and herring fisheries are unstable and cause seasonality of employment in the processing industry. Construction and tourism are sectors that typically have a peak season in the summer.

There is a great difference between the participation of men and women in the Icelandic labor market. Men are 54% of all workers and women 46%, but of those who work full-time men are 64% and women 36%. Women are 79% of part-time workers and men 21%.

Of the total number of men working, i.e. full-time or part-time, 12% work in the primary sector (farming and fishing), 33% in manufacturing (fish processing and construction included) and 55% in services. The story for women is somewhat different, i.e. 86% work in services, 11% in manufacturing and 3% in primary activities. The jobs available in the Central East Region are in general much more suited to the demands of men than women. Young women find it especially hard to find interesting jobs in the region and migrate out in greater numbers than men and generally at a younger age.

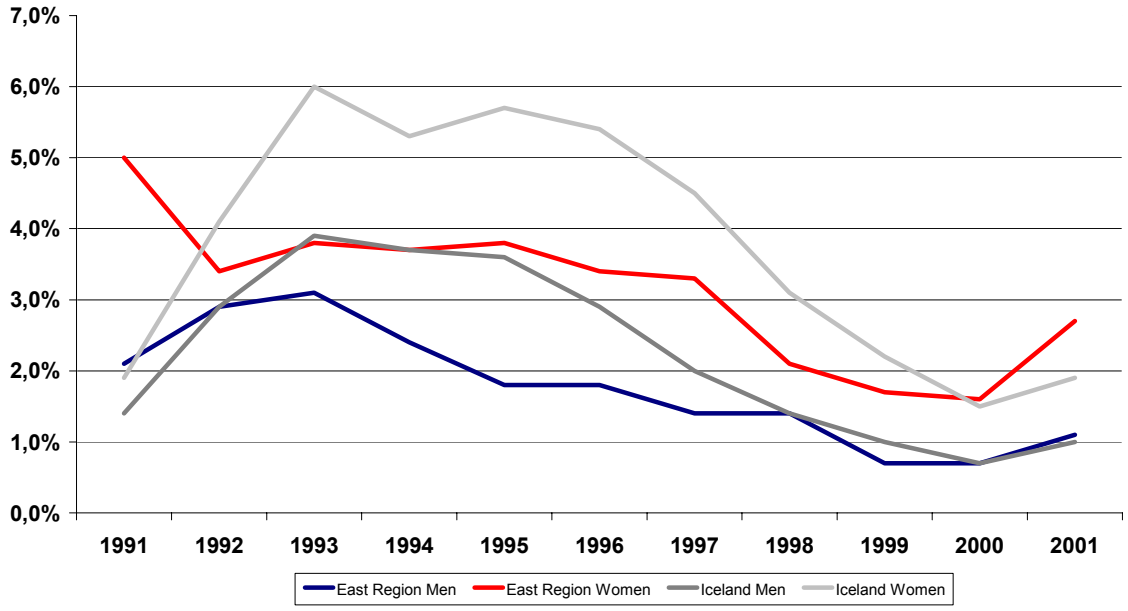
The University of Akureyri conducted a survey of the level of skills and education in the Central East Region in 2000. It reveals that about 53% of the workers are unskilled, 27% are semi-skilled, 11% have college level education, and 9% have university education. This is consistent with information from a 1997 labor market survey and key informant interviews which estimated that unskilled people form at least 55-60%, university-educated people no more than 5-10%, and skilled workers about 30-35%, of the labor force. The last group is diverse, including craftsmen, skippers, mates, marine engineers, cooks, educated farmers, qualified fish processing workers, educated office and retail workers, assistant nurses, and some nurses, kindergarten and elementary and junior-high school teachers. Some of these professions, such as nursing and teaching, now require a university-level education.

During 1991-1998, the region experienced some unemployment, especially over the winter. However, unemployment in the East Region has in the long-term been below the national average and since 1991 it has shown a more encouraging trend than for the nation as a whole. As is shown in Figure 2.4, unemployment was higher amongst women, although the out-migration of young women has made it less problematic than it would otherwise have been. Generally-speaking, the young generation has higher education levels and is more likely to leave the region, thus reducing local unemployment rates. During the last two years the region has experienced growing unemployment, especially amongst women. At present unemployment is higher amongst women in the East Region than amongst women in Iceland. Unemployment amongst men in the East Region is similar to unemployment amongst Icelandic men.

Indeed, over the last three years there has been a shortage of workers in the East Region. In some months there have been 100-200 vacant positions, mostly in low-paid and unskilled work in the service sector and fish processing. The number of foreign workers

has been increasing over the last few years. There are about 100-200 foreign workers in the region. Some can be considered as temporary workers, but others have settled down with their families.

Figure 2.4 Unemployment in the East Region and Iceland 1991-2001



Source: Statistics Iceland, Statistical Yearbook 2001

2.1.5 MUNICIPAL GOVERNMENT

The structure of local government in Iceland is similar to that in the other Nordic countries. Municipalities in Iceland must discharge functions committed to them by law, including:

Social services:

- Social work and poor relief.
- Welfare of children and fostering.
- Services for the elderly.
- Social services, advice and transport for the handicapped.

- Social housing (in co-operation with the state).
- Aid for alcoholics and drug addicts.

Education, recreation, sport and cultural activities:

- Elementary and junior-high schools for children 6-16 year old.
- Music schools.
- Day care for children 2-5 year old.
- Libraries, art and folk museums, cultural centers.
- Support to arts, theatre groups, clubs, volunteer groups etc.
- Youth and recreational centers, leisure activities.
- Sport halls and stadiums, swimming pools, skiing facilities etc.

Infrastructure and environment:

- Streets, sewage, district heating, water works and electricity.
- Building control and planning.
- Fire services.
- Environmental health.
- Harbors.
- Public parks and open areas.
- Waste collection and management.

The boundaries of many municipalities in Iceland were originally drawn around farming communities, and are unsuitable as local service units today. Many municipalities have been amalgamated over the last few years, reducing the total number from about 200 to ca. 120. The main objective has been to develop structures that efficiently deliver local services and strengthens local power. The municipalities have gradually been taking on

new functions, especially ones that were previously a shared responsibility of the state and local governments. Their tax income has been raised accordingly.

There were 20 municipalities in the Central East Region until 1998, when amalgamation reduced this to 12. It is not clear whether there will be further amalgamation, but this topic is being discussed.

The Local Government Yearbook provides a wealth of information about municipal finances and various other statistics. The main source of income for municipal governments in Iceland is the local income tax, which provided 77.8% of total municipal taxes in Iceland in 2001. Property tax contributed 12.5%, the Local Government Equalization Fund 9.5%, and other taxes 0.2%. In addition, municipalities collect various user and service charges such as for public utilities, harbors, kindergartens and sports facilities.

The objective of the Local Government Equalization Fund is to reduce differences in tax income and service load, as well as to supplement school costs. In the Central East Region the equalization payments from the fund are generally higher in the farming district of Fljótsdalshérað than in the coastal communities. Within these coastal communities the contributions tend to decline with increased size of municipalities. For example, the equalization payments are higher than 50% of tax income in Norður-Hérað and Fljótsdalshreppur, about 28% in Austur-Hérað and 20-22% in Fjarðabyggð. As a consequence of the Fund's contributions, the municipal income per capita is highest in the sparsely populated farming districts that have to carry high per capita school costs.

Municipal costs can be divided into operating costs (about 80-85% of the total) and investment costs (15-20%). In 2001, municipal costs were c. 54 billion ISK. Of the total operating costs, 39.3% were allocated to education and 23.8% to social services. Municipal debts vary considerably from one municipality to another. The Local Government Yearbook shows that they are usually higher in the towns than in the rural areas, as the former have had to build up costly infrastructure, e.g. streets, utilities and harbors, as well as municipal buildings.

Municipal debts in the Central East Region for 2001 are similar or even slightly lower than in comparable municipalities elsewhere, and no municipality in the East Region has an unusually high debt ratio. However, a few of them carry a burden from their obligatory purchase of apartments from an owner-occupation scheme for low-income persons. They cannot resell the apartments, although in many cases they can be leased to cover the mortgage payments.

Table 2.4, which is based on information from the Local Government Yearbook for 2002, shows that there is a considerable difference in costs per capita for key sectors between municipalities. In particular, educational costs are higher in the farming districts than in the towns, because of the smaller class sizes and the need for school buses. On the other hand, the provision of social, youth and sport services are more extensive and costly in the towns.

Table 2.4 Municipal Operating Costs per Capita of Selected Sectors in 2001 (ISK)

	Social services	Education	Youth/Sport
Norður-Hérað	17,929	121,439	4,324
Fellahreppur	55,385	109,965	8,002
Fljótdalshreppur	16,415	160,183	2,110
Austur-Hérað	45,833	100,425	12,618
Borgarfjarðarhreppur	22,760	93,767	1,013
Seyðisfjörður	39,881	88,508	29,282
Mjóafjarðarhreppur	258	154,968	0
Fjarðabyggð	38,462	85,195	20,959
Fáskrúðsfjörður (town)	39,192	110,780	10,622
Fáskrúðsfjarðarhreppur (rural)	14,286	112,698	1,905
Stöðvarfjörður	33,156	106,634	12,268
Breiðdalshreppur	29,133	104,185	6,989
Average	**39,337**	**96,695**	**7,215**

Source: Local Government Yearbook 2002

The municipalities in the Central East Region, are the following:

Fjarðabyggð

Fjarðabyggð was founded in 1998 through the amalgamation of the communities of Neskaupstaður, Eskifjörður and Reyðarfjörður. Most of the 3,062 inhabitants live in these three towns. Despite population declines, this is still the most populous municipality in the Central East Region. The economic base of the municipality is fishing and fish processing, but there are also considerable public services. Thanks to the heavy dependence on the fishery, income levels are about 12% above the national average.

Nearly half of the inhabitants, about 1,400 people, live in Neskaupstaður. It is the largest fishing town in the region. Síldarvinnslan Ltd. (SVN) is by far the largest company, employing about 280 people at sea, in processing and in various related services. Neskaupstaður has a technical college (Verkmenntaskóli Austurlands), a mechanical workshop, a net repair workshop, a bus company, a local savings bank and a bank branch, a community hall, a hotel and a sheriff's office. It also has the largest hospital in the region, a small airstrip, a sports hall, a swimming pool, a golf course and skiing facilities at Oddsskarð.

Eskifjörður, with about 960 inhabitants, is a prosperous fishing community with a good harbor. Hraðfrystihús Eskifjarðar Ltd. is by far the largest local company, employing about 200 people. In addition to its fleet, it has a large freezing plant for groundfish and pelagic species, a capelin meal plant and various support services. Eimskip, an

international shipping company, has its regional operations in Eskifjörður. The town has a sports hall, a nine-hole golf course, a sheriff's office, a bank branch, the offices of attorneys-at-law and auditors, a primary health-care center, a nursing home for the elderly and the office of the regional federation of labor unions.

Reyðarfjörður, with about 620 inhabitants, has a diverse economic base. While the fishing industry is relatively smaller than in other coastal towns, it has good port facilities for handling cargo. Other businesses include the Skinney-Þinganes fish processors, a meat processing company, a mechanical workshop, a garage, an engineering company and a local branch from the KHB co-operative. Reyðarfjörður also has the regional branch of the Public Roads Administration (Vegagerð ríkisins) and the Regional School Office (Skólaskrifstofa Austurlands).

Austur-Hérað

Austur-Hérað has close to 2,030 inhabitants, just over 1,600 of them in Egilsstaðir, and is the second largest municipality in the region. Most employment is in private and public services, because the town has developed as the centre for the farming district of Fljótsdalshérað and is the main hub for road and air transportation in the Central East Region. It is the location of the headquarters of the KHB Co-operative (Kaupfélag Héraðsbúa), as well as many private and public services, including the regional offices of the State Electricity Company (Rarik), the Tax Authority (Skattstofa Austurlands), the Administration of Occupational Safety and Health (Vinnueftirlit ríkisins), the Land Registry (Fasteignamat ríkisins), the Regional Business Development Centre (Þróunarstofa Austurlands), the Regional Administration of Services for the Handicapped (Svæðisskrifstofa málefna fatlaðra, Austurlandi), the Regional Employment Services (Svæðisvinnumiðlun Austurlands) and the Regional Court (Héraðsdómur Austurlands). The National Forestry Commission and a tourist company (Ferðamiðstöð Austurlands) have their headquarters in Egilsstaðir.

The town also has the regional airport, a hotel, restaurants, a grammar school, an outdoor swimming pool, a sports hall, a primary health care centre, a nursing home for the elderly, a small hospital, bank branches and agricultural advisory services, arts and crafts company, engineering services, legal services, architectural services, real estate agencies, hair stylists, photographer and cinema. There are a few retail outlets with variety of goods for sale. The average income in the municipality is 5% above the national average and the municipal debts at about similar level as in other municipalities at this size.

Seyðisfjörður

This municipality, which has around 770 inhabitants, is a typical fishing port and has about a third of its labor force employed in the fishing industry. Most work for the SR capelin meal plant, the Gullberg fishing company and a fish plant owned by the Skagstrendingur fishing company. It has a primary health care centre, a small hospital

and the sheriff's office, and is the terminus for the only car ferry sailing between Iceland and Europe. In 2000, the ferry carried 7,000 passengers, including 1,500 Icelanders, making it second only to Keflavík international airport as an entry and exit point to Iceland. The per capita personal income, municipal income and municipal costs are 13% above the national average, and municipal debt similar to other communities of the same size.

Fellahreppur

Fellahreppur has about 460 inhabitants, including about 380 in Fellabær. The local economy resembles that of Austur-Hérað. It is dependent on private and public services. The average income is about 7% above national average. The municipal income is similar to other communities of this size, but municipal costs somewhat lower.

Norður-Hérað

This municipality has about 300 inhabitants living on farms spread over a large area. The municipality was founded in 1998 by amalgamation of three sparsely populated farming communities. Farming is the mainstay of the local economy. The average income in the municipality is low. The municipal finances are, however, of reasonably good standing as it receives a large annual contribution from the Local Government Equalization Fund. The dam of the proposed Kárahnjúkar hydropower project will be located in the uninhabited part of the municipality.

Fljótsdalshreppur

Fljótsdalshreppur has about 80 inhabitants living on scattered farms. Farming is the mainstay of the local economy and the average income is low, at about 50% below national average. Municipal costs are low for other sectors than education as shown in Table 2.4. The power station of the proposed Kárahnjúkar hydro-power project will be located in the community.

Búðahreppur

This is the name of the municipality encompassing the town of Fáskrúðsfjörður. It has about 570 inhabitants. Fishing and fish processing is the mainstay of the local economy. The co-operative, Kaupfélag Fáskrúðsfjarðar, is by far the largest employer in town. The town has a bank, sports hall, swimming pool, nursing home for the elderly, health services, hotel, car repair services, mechanical workshop, carpentry workshop, repair services for fishing gear and a small airstrip. The municipality is carrying a heavy burden of social apartments it has been required to purchase back from previous owners. It has

only been able to lease out a few of them and has to pay the mortgages of the empty units.

Stöðvarhreppur and Breiðdalshreppur

These are two small fishing communities in the southern part of the region. They respectively have about 260 and 190 inhabitants. The municipal income tax and municipal debt are around national average for communities of this size.

Borgarfjarðarhreppur, Fáskrúðsfjarðarhreppur and Mjóafjarðarhreppur

In addition to the municipalities discussed above, Borgarfjarðarhreppur, Fáskrúðsfjarðarhreppur and Mjóafjarðarhreppur are three other small communities, each of which is a municipality. They have 150, 65 and 30 inhabitants, respectively.

In Borgarfjarðarhreppur, usually named Borgarfjörður eystri, fishing and fish processing is the mainstay of the local economy. Municipal income is similar as in municipalities of this size and municipal debt about average. In Fáskrúðsfjarðarhreppur and Mjóafjarðarhreppur the local people make a living from both farming and fishing, in addition to salmon farming in sea cages in the latter community. Municipal income and municipal debt is around average in the former community. In the latter community municipal income is slightly below average, but municipal debt very low.

The largest continuous farming district in the Central East Region is Fljótsdalshérað. About 900 people live on farms in this district and about 2,000 persons in Egilsstaðir and Fellabær. Lastly, there are four towns in the East Region outside the Central East Region. These are Hornafjörður, Djúpivogur, Vopnafjörður and Bakkafjörður, of which the first is by far the largest.

2.1.6 HOUSING

There are about 4,700 apartments in the East Region, of which about 3,190 are in the Central East Region. Fáskrúðsfjörður, Fjarðabyggð, Austur-Hérað and Fellahreppur, which are the municipalities where the greatest impact of the plant on the housing market will be experienced, have about 2,400 apartments. The real estate market in the region has been sluggish and prices low, except in limited parts of the region like Egilsstaðir. The market price for real estate in the Central East is between half and two-thirds of what it is in Reykjavík, depending on community and housing type.

The year of 2002, the total area of all buildings in the Central East Region was just over 720,000 square meters. Residential buildings totaled about 400,000 square meters, including garages, and commercial buildings about 325,000 square meters, excluding

farm buildings (Table 2.5). According to the Land Registry, there are about 40 apartments under construction in the Central East Region, mainly in Austur-Hérað and Fjarðabyggð. Data on the age distribution of the housing stock are presented in Table 2.6, but no information is available about the condition and maintenance requirements of residential housing.

There was large-scale construction of new houses during the 1970s, which was a decade that saw major growth in the fishing industry and balanced population growth between Reykjavík and the peripheral regions. In total, close to 52% of the housing stock in the Central East Region is older than 30 years.

Table 2.5 Size of the Housing Stock and Other Buildings, Central East Region, 2002

Type of houses	Size in sq. m
Residential:	399,816
Shops and offices	47,594
Industrial buildings/factories	126,448
Warehouses	33,721
Specialized buildings:	117,106
-Health care institutions	13,250
-Kindergartens	3,268
-Elementary and junior high schools	18,803
-Senior high schools	5,326
-Sports facilities	12,880
Total:	**724,685**

Source: The Land Registry of Iceland, Databank, 2002

Table 2.6 Age Distribution of the Housing Stock, Central East Region, 2002

Age	Number	Per cent
01-10 years	194	6.1%
11-20 years	453	14.2%
21-30 years	880	27.6%
30 + years	1,663	52.1%
Total:	**3,190**	**100%**

Source: The Land Registry of Iceland, Databank, 2002

There are on average 2.53 persons per apartment in the region. The average size of apartments is 125 square meters, excluding garages. For comparison Reykjavík has 2.6 persons per apartment and the average for the nation as a whole is 2.7.

The East Region has about 500 subsidized housing units. They were initially built for low-income families under a special owner-occupier housing scheme, with low interest rates and a guarantee to buy back by the municipal authority. This scheme has now become a financial burden for some municipalities. They have, over the last few years, had to buy back more than 100 units and not been able to resell them because their market value is lower than their book value. While Fjarðabyggð and Austur-Hérað have managed to lease most such units for a rent that covers roughly the mortgage payments, this has not been possible in Fáskrúsfjörður, which has had to pay for the mortgages out of the municipal fund. Despite the fact that all these apartments are leased out, it is difficult to find an apartment to lease in Egilsstaðir and Fjarðabyggð.

There appears to be an excess of industrial and commercial property in the region, especially buildings previously used by the fishing industry. There are opportunities for renovating older industrial and commercial buildings. There is plenty of zoned land in the region, some of which is serviced industrial land.

2.1.7 SERVICES AND INFRASTRUCTURE

The state is responsible for various public services in the East Region, including the sheriff, police, regional court, health services, social security, employment office, operation of college level schools, services for the handicapped, land registry, tax authority, ship registry, occupational health and safety, roads and airports.

The municipalities also offer a range of services to the public. Their single largest area of responsibility is probably the elementary and junior-high school systems.

Schools

The municipalities in Iceland operate the elementary and junior high-school system for 6-16 year old students, grade 1-10. During the school year 2002-2003, the 13 schools in the Central East Region have nearly 1,300 students. Most of the schools offer grades one to ten, as is shown in Table 2.7.

There is some inter-municipal co-operation in the elementary and junior-high school system, for example between Fljótsdalshreppur and Austur-Hérað and between Búðahreppur and Fáskrúðsfjarðarhreppur. Some of the schools have small class sizes and spare capacity. This causes inefficiencies and an amalgamation of schools is underway in order to achieve the national objectives of a continuous school day and homeroom for each class.

The schools in Austur-Hérað and Fellabær have some spare capacity. If the number of inhabitants in Reyðarfjörður will grow, there will be a need for a new school building. The schools in Eskifjörður and Neskaupstaður are being extended at present. Once completed they will have some spare capacity for more students.

Table 2.7 Number of Students, by School, Central East Region, 2002-2003

Year-class:	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*10.*	*Total*
Seyðisfjörður	13	6	11	18	8	12	8	8	22	11	**117**
Neskaupstaður	21	31	23	12	10	23	21	33	31	20	**225**
Eskifjörður	23	10	16	16	18	12	12	14	14	19	**154**
Brúarásskóli (Norður-Hérað)	2	2	0	2	5	2	7	8	5	6	**39**
Fellabær	12	9	9	9	11	10	10	9	7	11	**97**
Borgarfjörður eystri	1	1	1	0	0	2	3	0	7	5	**20**
Hallormsstaður	6	5	3	4	4	5	9	7	5	6	**54**
Egilsstaðir	27	30	27	37	30	34	25	29	32	21	**292**
Mjóifjörður	1	0	0	0	0	0	1	2	0	0	**4**
Reyðarfjörður	11	12	6	10	15	9	12	12	6	8	**101**
Fáskrúðsfjörður	8	11	8	14	7	14	3	16	9	9	**99**
Stöðvarfjörður	5	5	2	8	3	9	1	5	3	6	**47**
Breiðdalsvík	7	8	3	4	1	8	3	2	6	5	**47**
Total:	**137**	**130**	**109**	**134**	**112**	**140**	**115**	**145**	**147**	**127**	**1,296**

Source: The East Region School Office, unpublished School Registry, 2002

According to the survey conducted by professor Stefán Ólafsson (1997), 94% of the inhabitants in Fjarðabyggð (Neskaupstaður, Eskifjörður and Reyðarfjörður) were pleased with the elementary and junior-high schools in their community. This was the second highest score for the country.

Kindergartens in the Central East Region have 40-50 vacant places, and there are generally no waiting lists except in Neskaupstaður. The situation in individual communities is summarized below:

- Egilsstaðir has two kindergartens under one management. They are fully occupied.
- Hallormsstaður has a small kindergarten that has a few vacant places.
- Eiðar has a facility for 20 children that is not currently in use.

- Fellabær has a two-department kindergarten that has a few vacant places.

- Seyðisfjörður has a two-department kindergarten that is fully occupied but has no waiting list.

- Fjarðabyggð has three kindergartens. Neskaupstaður has a three-department facility that has a waiting list and there is already a need for one additional department facility. Eskifjörður has a kindergarten of the same size and has a few vacancies. Reyðarfjörður has a two-department kindergarten that is full, but it has no waiting list and is relatively easy to enlarge it if needed.

- Fáskrúðsfjörður has a kindergarten with two departments. There are a few vacant places.

College level education (for 16-20 years old) is available in the Egilsstaðir Senior High School and the Technical College at Neskaupstaður. There is also a small domestic sciences school in Hallormsstaður. The operation of college level schools is the responsibility of the state.

Egilsstaðir Senior High School has about 300 regular students, a few external students and some adult students who do not attend day school on a regular basis. Its main objective is to prepare students for entry into university level education. It has a boarding house for 120 students. About half of the students in the Central East Region that finish grade ten attend the school, but some switch to a technical or comprehensive school after one to two years, when they find a line of study that interests them.

The Technical College in Neskaupstaður has close to 200 students, but these numbers vary over the years. It offers courses in technical subjects such as carpentry, electricity, mechanical and metal work, where the students finish as qualified journeymen. Such students generally enroll in a vocational course during the first year and then make a three-year contract with a licensed master. Other technical subjects taught include marine fisheries, marine engineering, assistant nursing and hairdressing. The school also offers literature courses towards senior high school exam. The students attending these courses are mainly from Fjarðabyggð, but those attending technical courses come from all over the Central East Region. This includes some students who start literature courses at the Egilsstaðir Senior High School, but after one to two years change to technical courses at the Technical College. The Technical College administers a special adult education programme that mostly provides short courses for people that want to upgrade their skills, for example in technical and computer courses and courses for office workers and public servants.

The East Iceland Educational Network (Fræðslunet Austurlands) was established in 1998. It is a co-operative venture of higher educational institutes, municipalities and industry. It connects through a formal network of institutions that offer university-level and continuing education for individuals, firms and institutions in the Central East Region. It

introduces, liaises and plans university-level study programmes or courses that individual students or companies in the region require.

It is common for young people from the Central East Region to go to Reykjavík and Akureyri for specialized college level and university education. It is also very common for Icelandic students, including those from the Central East Region, to attend universities in Europe or North America. The Icelandic educational system is of a high standard in international comparison. It is also very international, with most teachers at university-level institutions having been educated abroad.

Social services

The municipalities are responsible for social welfare services to individuals and families. Many of the social problems encountered by individuals and families are rooted in low income or unemployment, abuse of alcohol or drugs, mental illness or long-term disability. Unemployment in the region is, however, rather low. The main support is given by counseling from qualified social workers, financial support and provision of low rental housing. The municipalities are also responsible for the welfare of local children if their parents are unable or are deemed unfit to cater for them.

The basic principle is that the state is responsible for general programs that apply to all individuals concerned, while the municipalities deal with individual cases, e.g. lone parents, people with chronic illness, low-income families, the elderly, people that abuse alcohol and drugs etc.

Municipalities build and operate service centers for the elderly, sometimes in complexes where the old people own their own apartments or rent them from the municipality. In the service centers various day care and club activities take place, as well as personal services. Various home assistance and support is available for the elderly, such as cleaning, bathing and meals-on-wheels.

Municipalities, non-profit organizations and private enterprises operate both nursing homes and residential homes for the elderly. They receive an operational grant from the State Social Security, based on the number of inhabitants. Home nursing is a very important aspect of the services for the elderly. It is a state function provided from the health care centers. Although home nursing and home assistance are services provided by separate government tiers there have been attempts at coordinating the services.

All the largest municipalities in the Central East Region have qualified professional workers and provide social assistance for people in need. Social services for the municipalities in Fljótsdalshérað are operated under an inter-municipal agreement. Services for the elderly are of a good standard. The regional state office provides services for physically handicapped and mentally retarded people.

Public Safety

All municipalities must by law operate fire services. Only the largest municipalities (i.e. Egilsstaðir and Fjarðabyggð) have professional fire chiefs. The firemen are either volunteers or they receive a small remuneration. The cost of operating the fire services is paid by the municipal funds. The fire services are adequate for a region of this size.

The regional health authority is responsible for ambulance services in the region. The sheriffs, that are located in Seyðisfjörður and Eskifjörður, are responsible for police services in the area as well as civil defense and emergency services.

Voluntary search and rescue associations are in most communities in the region. Most of them are well equipped to handle difficult rescue services, for example in the highlands. They have a national network to rely upon when needed. This is of great importance given that the nation has no army to call upon for rescue operations.

The capacity of these services is sufficient for the region. They are able to deal with all common tasks required.

Recreation

Recreational facilities such as community halls, sport halls, swimming pools and sport fields, are found in most communities. The community halls are used for public meetings, clubs, youth activities, chess, bridge, concerts and dances. They are chiefly used in winter, but less so during the summer months. There are also good skiing facilities in the region. Outdoor recreation such as hiking, angling (in lakes, rivers and the sea), hunting (reindeer, ptarmigan and geese), horse riding, berry picking and golfing is excellent in the region. Outdoor recreation is most popular during the summer months, except of course skiing in winter, geese hunting in fall and ptarmigan shooting in early winter.

Health Services

The East Region Health Authority serves the region between Bakkafjörður in north to Djúpivogur in south. Its headquarters are in Eskifjörður. There are primary health care centers in all the towns and villages and resident doctors in all but Bakkafjörður, Borgarfjörður eystri, Stöðvarfjörður and Breiðdalsvík. The Health Authority employs 14 doctors. Three of the primary health care centers are linked to the hospitals in Seyðisfjörður, Neskaupstaður and Egilsstaðir.

The regional hospital in Neskaupstaður is the only one with active surgery and other emergency services. It has over 30 beds, of which 10-15 are in the nursing wing. The hospitals in Seyðisfjörður and Egilsstaðir are smaller and concentrate on long-term care,

especially of the elderly. The Neskaupstaður hospital has small maternity units, and there are nursing homes in Fáskrúðsfjörður and Eskifjörður.

The Regional Health Authority is responsible for ambulance services in the region. Specialized doctors visit the region regularly, but patients do also go to Reykjavík in large numbers for specialist services.

Waste collection and solid waste disposal

Municipalities in the Central East Region must comply with the increasingly stringent waste management regulations. The Ministry for the Environment has developed a national strategy for waste management that has been endorsed in principle by all local authorities. In the Central East Region, the coastal municipalities from Fjarðabyggð to Stöðvarfjörður established SMA (Sorpsamlag Mið-Austurlands), an inter-municipal company responsible for waste management plans and their implementation, in 1995. A few municipalities in Fljótsdalshérað have also formed an inter-municipal company responsible for waste management, named SMH (Sorpeyðing Mið-Héraðs).

SMA contractors collect general household waste regularly from each home. Other household and industrial waste is graded into containers in each community. SMA has a landfill site for solid waste on the southern site of Reyðarfjörður. Management plans for other types of waste will be gradually implemented over the next few years.

Water and sewer

Natural water wells are plentiful in the Central East Region. The annual precipitation, in the form of both rain and snow, is considerable but varies within the region. The water seeps rather easily through the lava layers and sediments into the ground.

All towns and villages have good quality-wells nearby, supplying homes and industries with potable water. Municipalities are responsible for the provision and operation of water works, the construction of which is jointly financed by the Municipal Loan Fund and the municipality concerned. Homeowners are charged a fixed water rate, while industries that use relatively large quantities of water, such as fish plants, pay according to usage. The alluvial plain at the bottom of Reyðarfjörður has rich natural wells with excellent quality water that can be harnessed for industrial purposes.

Sewage is the responsibility of each municipality. Traditionally it has been discharged untreated into the sea, and this is still common in the Central East Region. The Ministry for the Environment has initiated a national program of upgrading sewage in Iceland to international standards, whereby it participates in cost-shared arrangements with municipalities that invest in newer sewage treatment facilities.

Harbors

There is no administrative division between commercial and fishing harbors in Iceland. Most harbors are multi-purpose, serving simultaneously the fishing fleet, ferries and cargo vessels. The Minister of Transport has an overall responsibility of infrastructure, planning, policy-making and supervision of the transport sector, including harbors. It operates the Icelandic Maritime Administration (Siglingastofnun), which is responsible for harbor research, design and planning. It oversees local harbor activities of the various municipalities and co-operates with them on behalf of the central government.

Municipalities in the Central East Region are the owners of the harbors and responsible for their operation. Their harbor funds receive revenues from the users and investment grants from the state for harbor construction. Sometimes the municipalities make contributions from the municipal fund to support the harbor.

The towns of Seyðisfjörður, Neskaupstaður, Eskifjörður, Reyðarfjörður and Fáskrúðsfjörður do all have good fishing harbors. Seyðisfjörður has a ferry terminal and Reyðarfjörður a cargo port. Increasingly trucks with trailers transport cargo overland and the cargo vessels only need to call in at the major ports. Eimskip shipping company uses Eskifjörður as their regional port for international cargo, and nearly 60,000 tons of fish products, liver oil and fish-meal, and about 9,400 tons of other products, were exported from the port in 2000. When Neskaupstaður, Eskifjörður and Reyðarfjörður were amalgamated into one municipality their harbor funds were merged and a single port authority formed. This authority will build and operate the plant harbor at Reyðarfjörður. Tables 2.8 and 2.9 show the transportation of goods to and from four harbors in the region in 2000.

Table 2.8 Cargo Shipments from Ports in the Central East Region, 2000

	Salt cement etc.	Liver oil and fish meal	Fish products	Other goods	Total
Seyðisfjörður		32,049	1,712	113	33,874
Neskaupstaður		35,256	10,357	398	46,011
Eskifjörður		33,663	27,372	9,385	70,420
Reyðarfjörður	324	4,675	1,478	369	6,846

Source: Statistics Iceland, Statistical Yearbook 2002

Table 2.9 Cargo Shipments to Ports in the Central East Region, 2000

	Fuel oil and petrol	Salt, cement	Other goods	Total
Seyðisfjörður	13,517	81	325	13,923
Neskaupstaður	12,259	1,446	24	13,729
Eskifjörður	13,403		20,279	33,682
Reyðarfjörður	13,778	7,631	3,057	24,466

Source: Statistics Iceland, Statistical Yearbook 2002

Airports

Egilsstaðir airport is served by a few flights a day from Reykjavík. In 2000, 73,000 passengers traveled through Egilsstaðir airport. It was built as a reserve facility for the international airport at Keflavík; if Keflavík is closed the large aircraft operated by Icelandair can land at Egilsstaðir. Climatic conditions for air transportation are excellent at Egilsstaðir. The runway is 2,000 m long and 45 m wide and the airport has modern air traffic control and landing systems. However, there is no hangar space or repair facility for aircraft, and while it can provide customs clearance in emergencies and for charter flights, there is no scheduled international service.

There are also small airfields in Neskaupstaður, Fáskrúðsfjörður, Breiðdalsvík and Borgarfjörður, used mainly in the case of emergency.

Roads

The Public Roads Administration (Vegagerðin) has a regional branch in Reyðarfjörður that is responsible for all road construction and maintenance in the entire East Region. All major roads connecting the towns in the Central East Region are paved, with the exception of nine kilometers between Reyðarfjörður and Fáskrúðsfjörður.

The Public Roads Administration clears snow every morning, if needed, weather permitting. Mountain passes between the towns in the region are only closed a few days a year and in some years they are never closed. Services have improved over the last few years and by daily snow clearance it is relatively easy to keep the roads open.

Energy

The main mode of energy in the region is electricity. Only Egilsstaðir and Fellabær have geothermal water for district heating. The State Electric Power Works (Rarik) serves the entire region. There is a municipal distribution system in Reyðarfjörður that is supplied by the State Electric Power Works and a small hydropower station.

The National Power Company supplies electricity to the region at the transformer substation at Hryggstekkur in Skriðdalur. The State Electric Power Works transmits it through a 132 kV line to Eyvindará, near Egilsstaðir. From Eyvindará there is a 66 kV line to Seyðisfjörður and a 66 kV line to Eskifjörður. Direct from Hryggstekkur to Stuðlar in Reyðarfjörður is a 66 kV line, from where a 66 kV lines link to Fáskrúðsfjörður, Reyðarfjörður, Eskifjörður and Neskaupstaður. A 66 kV transmission line serves all the towns in the region, with a back-up provided by an alternative line or diesel generators.

The State Electric Power Works also produces electricity in the region. There is a 7.5 MW hydro-power station at Lagarfoss and a 2.8 MW station at Grímsá. Both transmit their electricity to the transformer substation at Eyvindará.

Increased production of capelin meal factories in the region, which are periodically intensive energy users, has enlarged the electricity market, leading to improved power lines and distribution systems. Most houses in the region, with the exception of Egilsstaðir and Fellabær, are heated by electricity. According to the State Electric Power Works, there is surplus capacity in their distribution system in the region and up to 500 new homes could easily be absorbed.

According to information from the State Electric Power Works (Rarik) electricity consumption in the East Region has been increasing gradually over the last 5 years, as is shown in table 2.10.

Table 2.10 Electricity Consumption in East Iceland, 1995-2001

Year	GWh
2001	205
2000	200
1999	201
1998	195
1997	197
1996	182
1995	178

Source: Information from Rarik

The fish meal plants are heavy users of energy, e.g. as in 1997 when large amounts of capelin were caught. The increase 1995-1999 is 13% but the growth since 1990 has been 29%.

Telecommunications

Telecommunication systems in the Central East Region are of a high standard, including radio, television and telephone transmissions to the region. A fiber optic cable has been laid around Iceland. It provides security for the East Region as it can be connected to other areas through both the southern and northern route. Figures 2.6-2.9 highlight the telecommunications system.

Egilsstaðir and Fjarðabyggð are connected to the fiber optic system as the figure shows.

Figure 2.5 Fiber Optic and Micro Wave

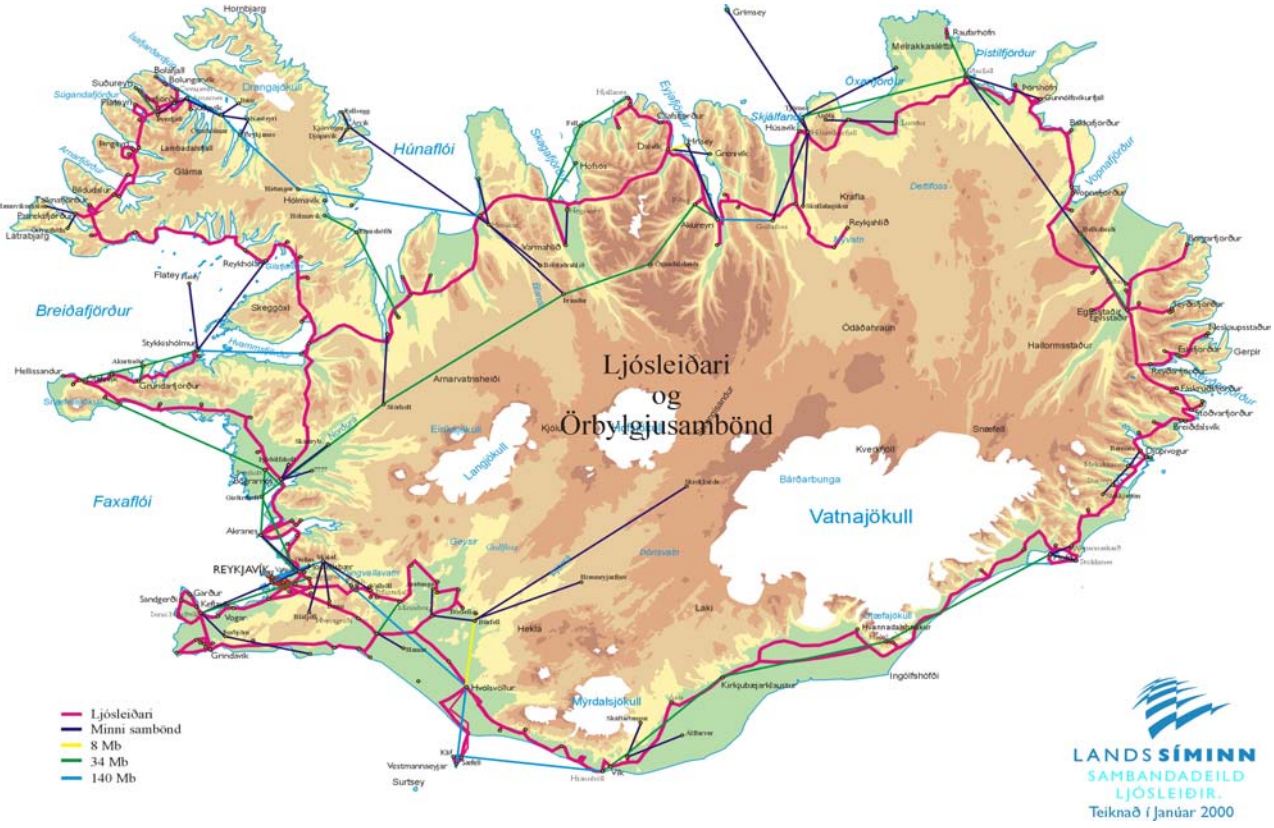
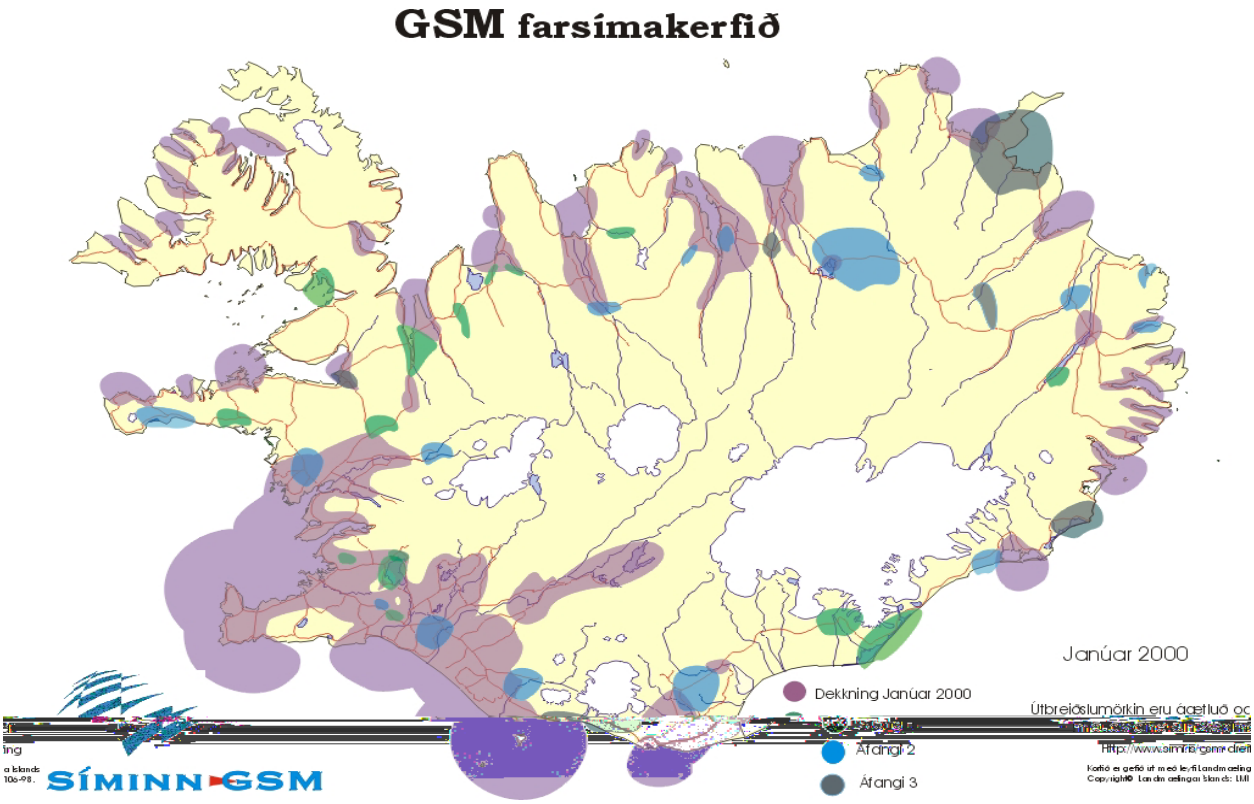


Figure 2.6 GSM Network in Iceland



As the figure shows the GSM network reaches all the towns in the Central East Region. It does not reach some of the mountain roads.

Figure 2.7 shows the distribution of transmitters for the NMT system. It is well connected in the Central East Region and on most parts of the main highway to Reykjavík.

Figure 2.7 NMT Connection in Iceland

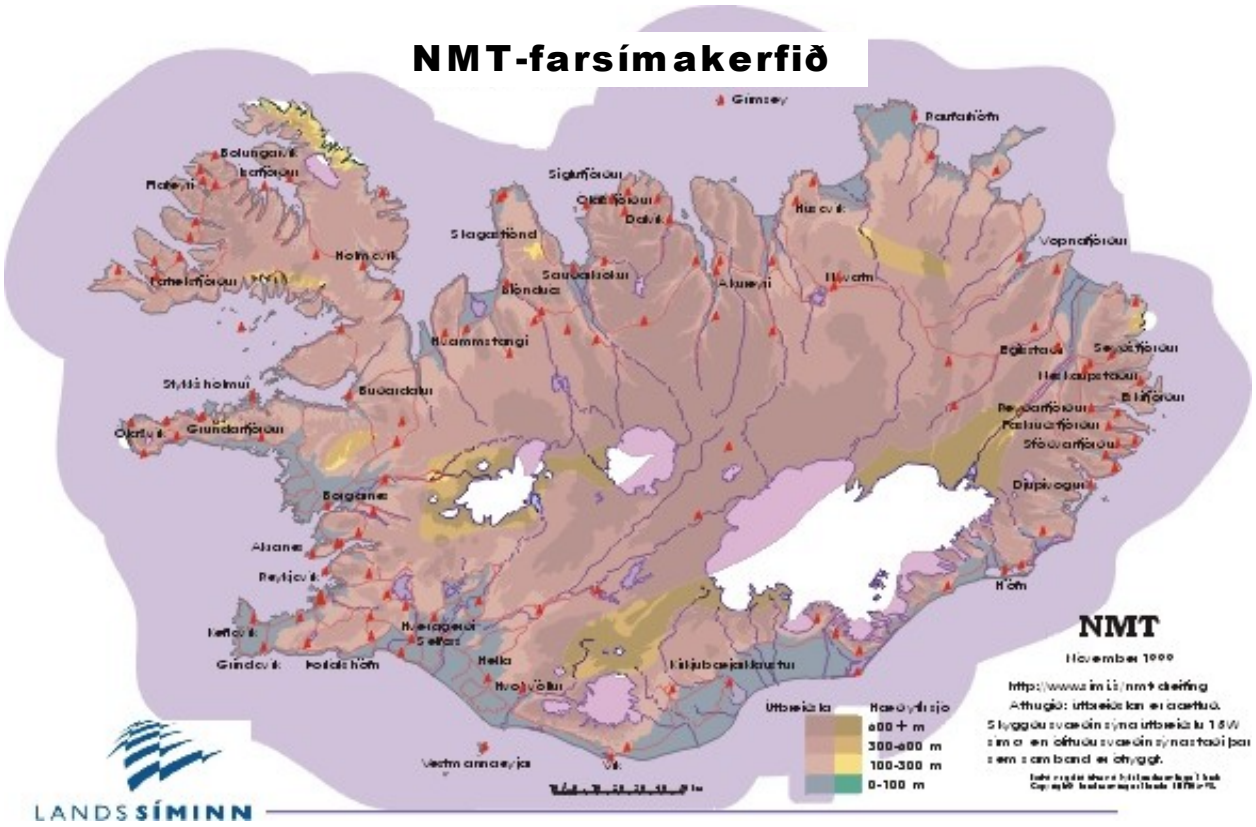
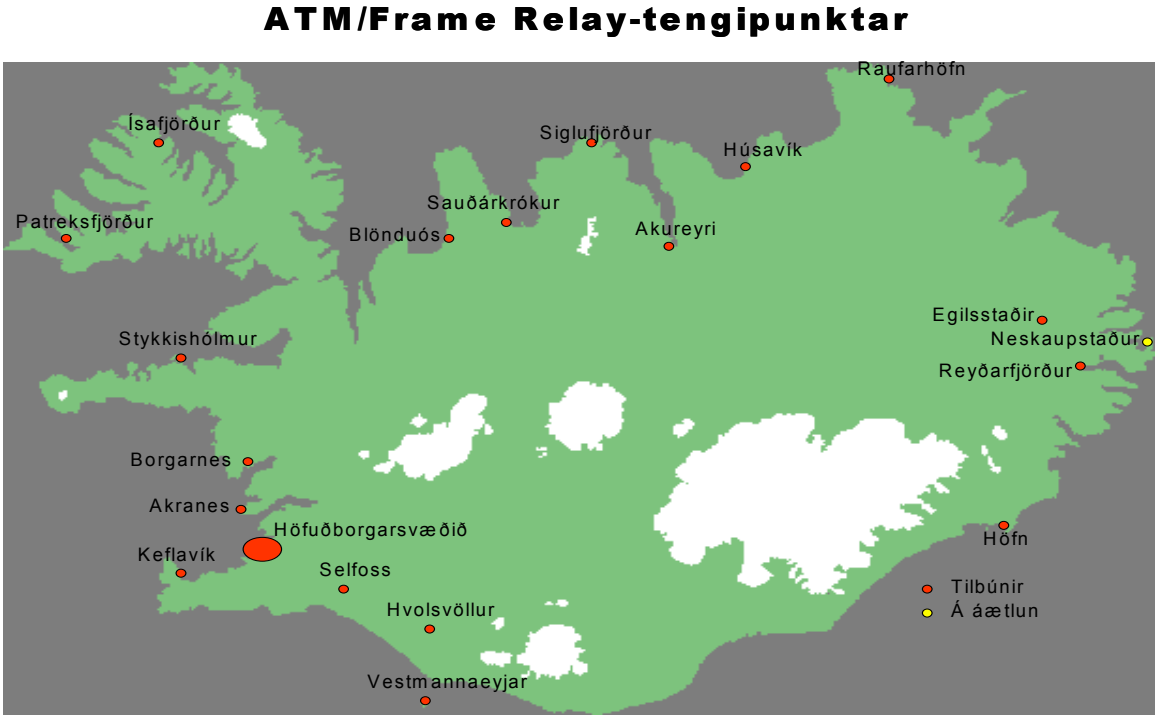


Figure 2.8 ATM/Frame Connecting Nodes



The ATM-network of the Icelandic Telephone Company (Landssíminn) is a closed multi service net that can transmit all modes of communication, such as voice, pictures and data. In this way it is possible to transport both voice and data on the same transmission-line and in that way optimize the running of your business. The build-up of a wide-network on the ATM network of Landsíminn has many additional assets, such as security, convenience, a uniform environment, secured bandwidth, flexibility and unlimited possibilities of expanding. The ATM-network is a transmission-network for Frame-Relay, the data transmission-service of Landssíminn, as well as offering pure ATM service. Connecting nodes for this system are in Reyðarfjörður. As the fiber optics cable is there as well it will be easy to connect the proposed plant into a telecommunications network with a large capacity.

The Icelandic national radio, as well as some private stations can be reached in all the major towns and villages in the regions. The same applies to the Icelandic national TV, TV2, Sýn and Skjár einn.

2.1.8 LAND USE AND RESOURCES

The East Region has rich natural resources, both at sea and on land. Only a small fraction of land in the region has been developed.

There are a few glacial rivers that flow from Vatnajökull to the north and they can be used for producing large amounts of electricity. The largest and most feasible proposal for electricity production is the Kárahnjúkar project.

Geothermal energy is not apparent on the surface in the Central East Region, although it has been used to heat houses at Egilsstaðir and Fellabær for a long time. Recent geological research using experimental boreholes has shown that there are geothermal resources at Reyðarfjörður, Eskifjörður, Neskaupstaður and Fáskrúðsfjörður, that may pobably harnessed.

The fishing grounds off the east coast of Iceland form the basis of a strong fishing industry in the region. Fishing for capelin and herring is especially good off the east coast, and for blue whiting in deeper waters. Cod and other ground fish species are also plentiful.

In many of the fjords conditions for fish farming in sea cages are considered very good. The fjords are long and sheltered and water circulation is substantial due to considerable depth and sizeable tides. Sea temperatures and salinity are similar to the fjords in northern Norway where salmon farming is prevalent. Salmon farming has already started in Mjóifjörður and definite plans are underway to start salmon farming in Berufjörður and Reyðarfjörður.

Land use for farming is mainly based on extensive methods, as the sheep graze in the highland during the summer months. A few dairy and cattle farmers use the land more intensively. Forestry has become widespread in Fljótsdalshérað and organic farming has started with some success. There are plans to start forestry programs in the fjords as well by the East Region Forestry Project. The upland areas north of the region are valuable for tourism and are used for hiking and hunting of reindeer, geese and ptarmigan. However, the climate there is rather dry and soil erosion is a problem. In lowland areas fishing for trout and salmon is popular.

The Planning and Building Act has general provisions for the development of built-up areas, land use and building projects. The Minister for the Environment has an overall control of planning and building under the Act. The Planning Agency monitors its application, advises the minister, advises on planning and building issues, and assists local authorities if required. Municipalities prepare regional, municipal and local plans, examine applications, grant building permits and carry out building inspection.

An inter-municipal committee of all the local authorities concerned, at their own initiative, or the Planning Agency, prepares regional plans. The objective of such plans is to co-ordinate the policies of the local authorities regarding land use, urban development and policy. Every municipality must approve the plan before the minister can approve it.

Each municipality must prepare and approve the municipal plan that covers all land within the municipal boundaries. It expresses the local authority's policy regarding land-use, communications, service systems, environmental matters and the development of built-up areas in the municipality for a period of at least 12 years. Overall supervision of municipal planning is in the hands of the Planning Agency. The Minister for the Environment approves municipal plans, as advised by the Planning Agency. More detailed local plans, covering selected built-up areas, can be prepared and approved by the municipality, providing they comply with the municipal plan.

All the towns in the Central East Region have approved municipal plans, which allow for the expansion of their built-up areas.

2.1.9 CULTURE AND WAY OF LIFE

The local culture is strong and resilient, based on local fisheries and farming. The East Region has over the last century or so experienced substantial foreign influences. Norwegian merchants were very influential in developing the fishing towns of the region in late 19th and early 20th century. They brought to the region entrepreneurial spirit, capital and technology and built up both the whaling and herring industries, in addition to establishing direct trade routes between the East Region and Norway. French fishermen had strong influence in Fáskrúðsfjörður in the early 20th century, and the region experienced influx of British and American soldiers during the Second World War. Large influxes of seasonal workers have also been experienced, for example during the

herring boom of the 1960s. Over the last few years the region has again attracted foreign fish plant workers, chiefly from Poland.

Many amateur cultural groups, such as theatre groups, choirs, bands and various clubs, are active. Sporting activities are competitive mainly at a junior level, but take a more recreational form at adult level. Professional artists and groups visit the region to perform, with Egilsstaðir and Neskaupstaður both hosting annual music festivals. The Lutheran state church is active in the region with eight or nine clergymen, each serving about one to three churches.

There are some museums in the East Region and most towns have a library. By way of example of the first, there is a folk museum at Egilsstaðir and Hornafjörður, a war museum at Reyðarfjörður, a fisheries museum at Eskifjörður, a technical museum at Seyðisfjörður, a natural history museum at Neskaupstaður, a museum of stones and minerals at Stöðvarfjörður and the cultural centre, Langabúð, at Djúpivogur.

In the year 2000 the municipalities in the East Region formulated a joint strategy for cultural affairs and this work was published in a special report. In May 2001 the Ministry for Education and Culture signed an agreement with the Association of Municipalities in the East Region on co-operation in cultural activities. At the same time the municipalities signed an inter-municipal agreement for co-operation in cultural activities and a letter of intent to establish four cultural centers in the region.

There are no extensive social problems in the region. There is generally a good standard of living, especially in the towns, and the unemployment rate is rather low. There is however, considerable income gap between fishermen on one hand and general workers in fish plants, construction or services on the other hand. Most farmers have a low income too. Most families own a modest house or an apartment. The average size is 50 square meters per inhabitant. Level of car ownership is high. Part time job opportunities for students are very good and they enjoy a comparatively high standard of living.

The local communities have very strong family ties. It is common for people with local roots to have an extended family in the community. The family network is socially very important and family members help dealing with potential social problems, such as alcoholism, drug use, teenage pregnancies, lone elderly citizens and physically and mentally handicapped people. Public services have the capacity needed to help these people. Social and health services for both the elderly and the handicapped are provided in all the towns and villages. There are nursing wings in the hospitals, sheltered apartments for the elderly connected to the hospitals, homes for small groups of handicapped people, social programmes for the elderly etc. The municipalities provide social counseling and support to people who cannot let ends meet. They lease council apartments at below market rates for people in need.

3. FUTURE WITHOUT THE PROJECT

All indications are that, without the project, the East Region will continue to experience out-migration and a generally stagnant economy similar to the last ten years. Farming will continue to decline and fishing and fish processing will see continued fluctuations in activity and employment levels.

There are, however, some opportunities for economic growth in East Iceland. For example, it is attractive for tourists over the summer months, and an all-season road to Akureyri has been upgraded. A new and larger ferry will replace the Norræna on the Seyðisfjörður to the Faroe Islands, Denmark and Norway ferry service in 2003, strengthening tourism in the region. Tourism is, however, a seasonal activity that offers low average salaries and profits is generally low.

Aquaculture presents opportunities for economic development in the region. Salmon farming in sea cages has already started in Mjóifjörður and companies are preparing to start salmon farming in Reyðarfjörður and Berufjörður, providing business and employment opportunities that conform well to the local employment sectors and infrastructure. Furthermore, cod farming is rapidly expanding around the North Atlantic, using land-based hatcheries and sea cages, and represents a potential new growth sector over the next few years. However, individually and collectively, these growth opportunities are uncertain and limited, except in salmon farming, and can only be expected to replace declining opportunities in fishing, fish processing, farming and manufacturing.

Declining population base tends to lead to a declining service base, where the local residents see a closure of small retail outlets, bank branches, post offices etc., as well as rationalization of public services such as educational and health services. It also leads to an aging population and out-migration of young educated people. An aging population brings about a shrinking local tax base and the local economic activity fades away gradually. An enduring downward trend has dismal social implications for the communities concerned as they loose people with leadership skills, community spirits and future hopes dwindle and a few people who are financially trapped in the community, e.g. pensioners and social security recipients, will stay.

The following table provides an overview of main strengths, weaknesses, threats and opportunities in the coastal settlements and farming areas in the East Region if the plant project is not realized. This is in reality a description of the business environment in the region at present. It is not possible to foresee economic development, but the main underlying and foreseeable factors are portrayed.

COASTAL SETTLEMENTS IN THE EAST REGION WITHOUT A PLANT

STRENGTHS: Prolific offshore fishing grounds of the East Region; large quotas in pelagic species; thriving fleet of inshore vessels, trawlers and large purse seiners; expertise in fishing and processing; strong fishing companies; large-capacity capelin meal plants; good natural conditions for salmon farming in sea cages; many good harbors; geothermal energy; closeness to European markets; strong position of Icelandic seafood on international markets; skilled labor force and good labor relations; the European Economic Area Agreement; accessible road network; good airport at Egilsstaðir; high-quality public services; municipalities with authority in local affairs; and, unspoiled natural environment. In comparison with many other parts of Iceland the East Region has neither earthquakes nor active volcanoes.

WEAKNESSES: Declining population and employment; declining income levels relative to the Capital Region; narrow industrial base; unfavorable age structure and imbalanced sex ratio; low education levels; few employment opportunities for young educated people; high proportion of low-paying jobs; low growth rate of manufacturing and services; high telecommunications costs; long distance from the Capital Region; high retail prices in the smaller communities; low market value for real estate and high costs of heating houses; pelagic fisheries that are seasonal and fluctuate considerably; and long distance to Keflavík international airport, limited opportunities for fresh fish exports.

OPPORTUNITIES: Salmon and cod farming, both in sea cages and land-based; some opportunities for harnessing geothermal heat, expanded tourism related to road improvements, the improved ferry service to Seyðisfjörður and possible international flights to Egilsstaðir airport; opportunities in information technology, call centers and software; and possible hydro-power developments for export markets.

THREATS: Increasing gap between the East Region and the Capital Region leading to continued loss of people, expertise and capital; few interesting and well-paid jobs; growing municipal debts and possible loss of control of the largest companies in the region and of fish quotas from the region; increased share of farmed fish on international seafood markets is threatening traditional fisheries; increasing fish-meal quality requirements may lead to import bans into European markets; onshore fish processing is in decline; environmentalist threats to the livelihood of hunters and fishermen. Snow avalanches, screes and mudflows threaten certain communities.

FARMING AREAS IN THE EAST REGION WITHOUT A PLANT (FLJÓTSDALSHÉRAÐ)

STRENGTHS: Good quality land for cultivation and grazing; reindeer hunting; favorable climate relative to other regions; favorable conditions for forestry, organic farming and tourism development; high-quality expertise in farming and meat and dairy processing, closeness to local towns for services, shopping and possible work; the reputation of the co-operative in meat and dairy processing; accessible road network; good airport at Egilsstaðir; good public services; and, unspoiled natural environments. In comparison with many other parts of Iceland the East Region has neither earthquakes nor active volcanoes.

WEAKNESSES: Longstanding and large population declines, leading to an unfavorable age structure and imbalanced sex ratio; continually declining income levels relative to the towns; fewer jobs in farming; few opportunities of commuting to work for those who live furthest away from the towns; low market value for farmland; stagnant demand and low market prices for agricultural products; limited export opportunities; and, possible expansion limited by production quotas in farming.

OPPORTUNITIES: Increased opportunities in tourism, including those related to road improvements, the improved ferry service to Seyðisfjörður and possible international flights to Egilsstaðir airport; possible opportunities in fur farming and for increased reindeer hunting; increased opportunities for commuting to work in the towns as a consequence of road improvements; and, possible hydro-power developments for export markets.

THREATS: Increasing differentials with urban areas and the Capital Region leading to continued loss of people, expertise and capital; fewer interesting and well-paid jobs; weakening municipal governments; declining competitiveness of sheep farming in comparison with pig and poultry farming; stagnant or declining demand for meat and dairy products; waning position of producers vis-à-vis sales and marketing companies.

Overall, if the project is not implemented, the population decline of the Central East Region will most likely continue. It can be expected that the proportion of 20-40 years old people, and hence children, will be lower than at present; the imbalance between the number of men and women will increase; and the income per capita in East Region will continue to fall behind that of the Capital Region.

The competitiveness of the outlying regions in Iceland in comparison with the Capital Region is in general rather weak. The East Region is no exception. The Capital Region exhibits extensive opportunities for work and studies. A large portion of capital investments in the private sector is in projects in the Capital Region or abroad. The most interesting and best-paid jobs are in the capital region, as well as great variety of services

and cultural activities and growth in most sectors. About 65-80% of jobs in the national growth sectors are in the Capital Region. The population of the East Region is declining, especially amongst the young generation that migrates to the Capital Region. Good investment opportunities in the East Region are few. There is virtually no overall growth in turnover amongst companies in the region, other than fishing companies, and construction activity is sluggish. The East Region has a high proportion of primary and secondary activities but low share of the main growth sectors. The number of jobs in the fishing industry, farming and manufacturing, which are important sectors in the region has declined over the last five years.

The proposed aluminum plant is the greatest opportunity in sight to make the regional economy of the Central East Region more competitive in comparison with the Capital Region so it has a realistic chance of appealing to young local people that can build up a future career in the region.

4. EVALUATION OF SOCIO-ECONOMIC IMPACTS

4.1 INTRODUCTION

This section of the report provides an evaluation of the socio-economic impact of an aluminum plant in Reyðarfjörður during both construction and operations. In doing so, it builds on the project description (Ch. 1) and baseline study of socio-economic factors (Ch. 2) provided above. The general approach is to assess how the direct, indirect and induced effects of the project will affect the various components of the baseline socio-economic environment, given their current capacity and ability to respond to new demands. This includes discussion of the ways in which aspects of the project design (including the proponent's approaches, policies and practices) and measures taken by governments, business people, unions and other interested parties, will or could help optimize the project's effects.

It shall be noted that a number of factors will help minimize the potential negative socio-economic impacts of the plant project. These include:

Dispersed impacts. The proposed plant will not require or result in the development of a single industry community. Rather, the regional employment, business and other impacts will be distributed across a number of communities in the Central East Region. Direct employees will be drawn from the existing populations of, and new-immigrants to, communities within commuting distance of the plant. The proposed road tunnel between Reyðarfjörður and Fáskrúðsfjörður will extend the commuting range to the communities south of Reyðarfjörður. A possible new tunnel between Neskaupstaður and Eskifjörður is also being investigated. Individuals taking up plant-related employment may be somewhat more widely distributed, depending on their place of employment. In-migrants, including return migrants, will be able to choose where to live, based on such factors as lifestyle preferences, opportunities for spousal employment, housing costs and (in the case of return migrants) the former place of residence. The impacts on individual communities will be moderate and easily absorbed.

Population decline. Nearly all the coastal communities and all the farming districts in the region have experienced slow population decline over the past 10-15 years, resulting in some spare capacity in public buildings and other infrastructure and services. This capacity will be able to absorb at least some of the new demands resulting from the construction and operation of the plant.

Strong economic base. The Central East Region has rather strong and resilient economic bases, which are heavily dependent on the fishing industry. There are no signs that the existing economic bases are likely to be undermined or seriously damaged by the introduction of the plant and related activity. To the contrary many new business opportunities will emerge as a result of the plant and the local fishing industry might use

the opportunity to make their production systems more efficient and less labor demanding.

Local co-operation. Consultations with town managers, government officials, local business people, union officials and others indicate only limited local concerns about the plant project. Instead, there are high levels of interest in both it and engaging in collaborative initiatives to optimize its impacts. A survey conducted by the Social Sciences Research Institute amongst 18-28 year old people in the region in the year 2000 showed that 75% of them support the plant project.

Project timing. The project time frame allows plenty of time for local governments, industry, unions and the proponent to plan and engage in such collaborative initiatives, for instance in training and infrastructure development, prior to the start of project activity.

However, the assessment is not only concerned with identifying and estimating the size of potential negative impacts. Rather, the concern is with both negative and positive impacts, reflecting the fact that the project can have a range of very beneficial effects on the region, especially when allied to some innovative thinking about approaches, policies and practices.

Potential benefits include:

Economic growth and diversification. The plant will generate significant direct, indirect and induced employment, income and business. It will both represent a new industrial sector and have benefits for a range of other sectors that will provide goods and services to the plant and its labor force. The project will have particular benefits for tourism and farming. In the former case, project-related demographic and economic growth will result in increased demands for skiing, fishing and other recreational and tourism activities. In the case of both tourism and farming, plant-related employment will provide valuable supplementary income opportunities for individuals and families engaged in these largely seasonal and commonly economically marginal pursuits.

Population retention. The population decline in recent years has largely been a result of educated local residents leaving the area to look for appropriate employment opportunities. The project's direct, indirect and induced demand for skilled and professional personnel will help these people to remain in the area and help address current age structure imbalances. The survey conducted by the Social Sciences Research Institute in the year 2000 showed that 40 per cent of 18-28 year old residents in the Central East Region were interested in plant work and that 17 per cent of out-migrants 20-49 years old would probably move back to the region if the plant were built.

Improved infrastructure and services. The plant and related activity will lead to improvements in transportation and a wide range of other infrastructure and services, to the benefit of all living in the region.

Cultural enrichment. Economic and demographic growth will contribute to further enrichment of the strong local culture, through increased spending on arts and crafts, as well as attendance to cultural activities and increased participation in cultural groups, e.g. choirs and theatre groups.

Interviews with people in the region and the survey conducted by the Social Science Research Institute revealed that the regional economy would be strengthened if there were larger towns and more diversified and better paid jobs available, especially for young and educated people. This could be achieved if the plant project is realized. A few of the interviewees expressed their wish to see more opportunities for recreational activities, social life and college level education. A few complained about high cost of heating houses and high retail prices, especially in comparison with Reykjavík.

4.2 POPULATION

4.2.1 CONSTRUCTION

The impact of the plant construction (including harbor at plant site) on employment and population is illustrated in Appendix I, Tables 4 and 8. The impact of the other related components (hydro-project, transmission lines and essential new infrastructure and buildings in the region) on employment and population are exhibited in Appendix I, Tables 5, 6 and 8.

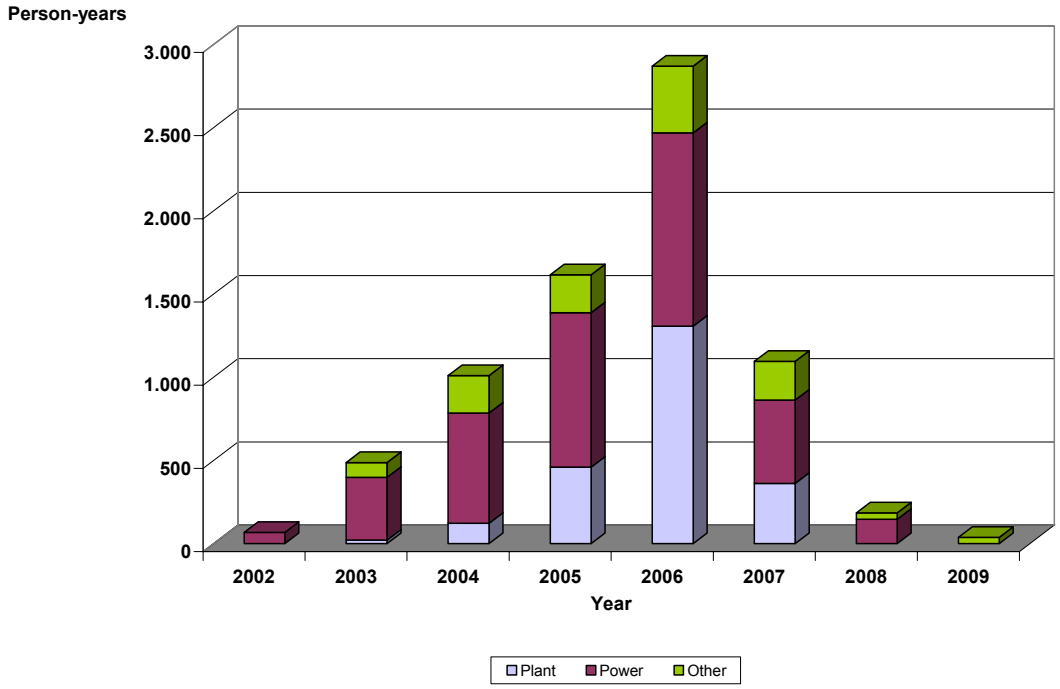
Plant construction

The construction of the plant and the harbor will involve a total number of workers amounting to about 2,300 person-years in 2003-2007, peaking in 2006 with about 1,300 person-years. Other components of the project will involve a workforce estimated to be nearly 5,100 person-years in 2002-2008, thereof Kárahnjúkar hydro project about 3,850 person-years and construction of residential housing (including streets and utilities) about 790 person-years. Total construction labor-demand for the entire project will peak in 2006 when it will exceed 2,600 person-years.

It is assumed that local workers will perform 10% of the construction work and construction workers that move into the region with their families while construction activity prevails will perform another 15%. It is furthermore assumed that foreign workers will perform 30% of the construction work and 45% will be performed by domestic labor staying in work camps. The estimated share of the four groups above is based on the experience of senior executives in the construction industry from previous projects.

The number of person-years in the Central East Region is now about 50% of the population. It is estimated to increase marginally over the next 7 years to 51% of the population, due to changes in the age pyramid, i.e. increased ratio of 50-65 year old people, and declining birth rates. The assumptions made are that for every new job created the population will grow by almost 2 persons. It is furthermore assumed that 200 man-years of existing local jobs will be postponed during peak construction 2005-2006. The assumptions presented above will result in a rapid construction-related population growth 2007 (Appendix I, Table 8) to a population level of approximately 9,800 inhabitants. In 2007 plant jobs will not replace fading construction jobs and if assumptions hold lead to a population level of ca. 9,600 in 2009.

Figure 4.1 Construction Activity in the Central East Region, 2002-2009



4.2.2 OPERATIONS

Plant operation

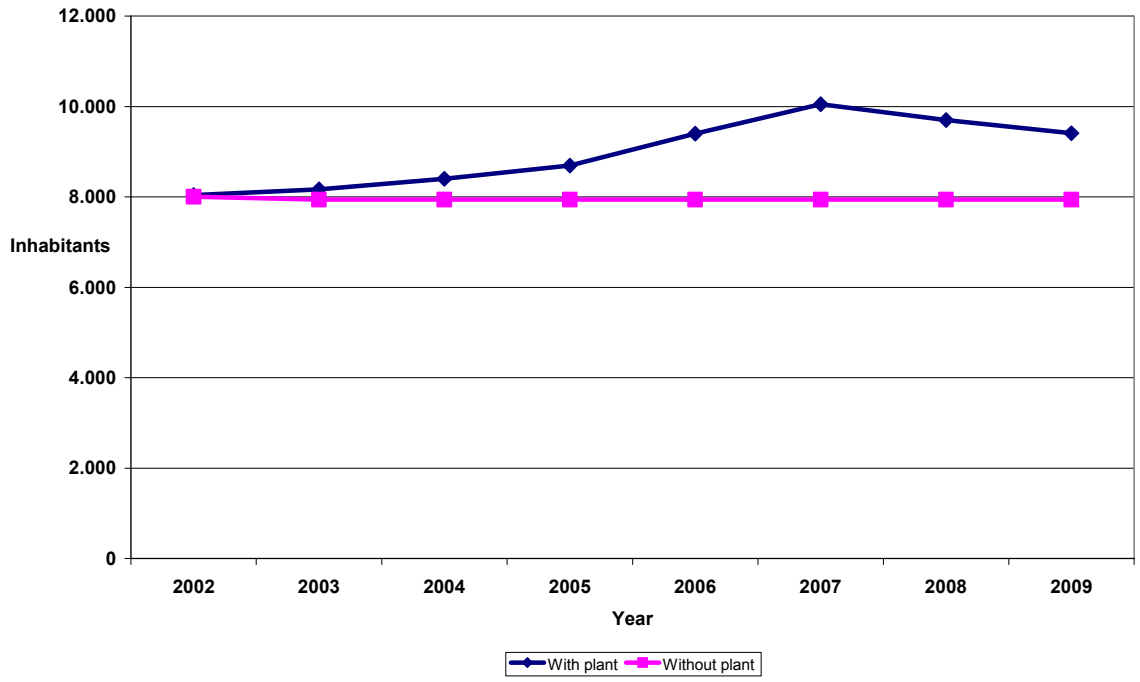
It is estimated that the plant will require 420 full-time jobs and 8% release work, or a total of 454 person years. Indirect and induced jobs created in the region as a result of plant operation are calculated at 295. In total this will result in 750 person-years (Appendix I, Table 2).

The calculations of the relationship between number of jobs and population are based on information from Statistics Iceland. The following assumption is made for the year 2001:

Percent of domestic population in full-time employment	40%
Percent of domestic population in part-time employment	8%
Foreign workers	2%

It is furthermore assumed that person-years as a percentage of population will increase from 50% in 2002 to 51% in 2009, as explained in Chapter 4.2.1 before. Estimated population growth as a result of plant operation is calculated at 1,468 people from 2006 to 2009 (Appendix I, Table 8). The present population base of the region is expected to shrink to 7,940 people before the full impact of the project is felt on population growth in the region in 2006. If plans are realized there will be a completely new business environment in the region by then with higher salary levels and range of business opportunities in many sectors.

Figure 4.2 The Impact of the aluminum plant on the population in the Central East Region



It must be emphasized that these assumptions do not account for any major social and technological changes that may happen over the next 10-15 years. As an example the nation is seeing a greater degree of spatial concentration in southwest Iceland every year, educational level is rising steadily, the participation of women in the labor force is increasing gradually, people are using more energy and producing more waste, consumer

behavior is changing with growing prosperity, car ownership is increasing and information technology is having a great influence. Social values change, environmentalism is becoming more significant, individualism is on the rise, traditional family structures are changing, people make greater demands as consumers and technology develops rapidly.

Location of indirect and induced employment

Indirect and induced employment is classified into three categories, i.e. final demand linkage, backward linkage and horizontal linkage. The final demand linkage will be felt most strongly in the home community of the workers and to some extent in Egilsstaðir because of its role as a regional service center. The backward linkage will almost exclusively be felt in Fjarðabyggð and Egilsstaðir. The horizontal linkage, measuring job losses in other activities due to competition from the plant for workers will be felt all over the Central East Region, not at least in marginal settlements where income is low and employment unstable.

The net number of indirect and induced jobs will be approximately 300. The jobs will for the most part emerge in Austur-Hérað and Fjarðabyggð, but to a small extent in Fáskrúðsfjörður.

Demographic implications of the plant project

The expected demographic implications of the plant project will probably be as follows:

Retention of existing residents. At present many young people in their 20's, especially educated people, leave the region. This trend is more pronounced amongst women than men. The plant project will reduce considerably out-migration of young people, especially if it directly or indirectly generates a variety of jobs for young women. The interest of the young generation in the region in plant work has been confirmed in a recent survey conducted by the Social Sciences Research Institute. Many people in the 50's and 60's are presently leaving the region because suitable jobs, which do not demand hard physical work, are scarce. They are more likely to get "light" service jobs in Reykjavík, and in many cases move to join their grown-up children and grandchildren who have already settled there. The plant project will through induced demand increase the range of jobs suitable for people in their 50's and 60's, and, if their children and "in-laws" can be attracted to plant-related work, all three generations will remain in, or return to the region.

Sex ratio. As was seen in Chapter 2 the number of men at working age (15-69 years old) is higher than the number of women. Presumably many young men leave the region because a "suitable" partner cannot be found locally, or attracted to move to the region. One of the most important challenges for the plant project is to make jobs available and attractive to women, and this will have the incidental effect of reducing the gender imbalance in the region.

In-migration. The impacts of the project on in-migration has been surveyed amongst 25-50 year old people that left the region 1995-1999 and had not returned by the end of 2000. The survey showed considerable motivation for people to move back to the East Region if more and better employment opportunities were created. About 17% said it was rather or very likely that they would move back if an aluminum plant was built in Reyðarfjörður, but 49% said it was rather or very unlikely. This position was age dependent as the young people were more motivated to move back than the older people.

Age distribution. There will be age structure changes as a result of the above noted demographic change. In addition it will initially greatly increase the number of young children 0-9 year old, and to less extent 10-14 year old. It will also increase greatly the number of people 20-39 year old.

4.3 THE ECONOMY

4.3.1 CONSTRUCTION PERIOD

The planned investment of Alcoa in a plant, which has a production capacity of 322 thousand tons a year, is estimated at approximately 1,000 m USD, or approximately 100 billion ISK. Total investment for the Kárahnjúkar Hydro-power project and the transmission lines will be close to 900-1,000 m USD, or approximately c.a. 90-100 billion ISK. Total investment for the whole project will therefore be around 2,000 m USD, or approximately 200 billion ISK. These figures are at this stage preliminary estimates.

It is estimated that about 70% of investment costs are imported investment goods and about 30% domestic costs. Domestic cost is about 30 billion ISK. By far the largest item of domestic costs is labor.

Calculations in Chapter 4.3.2 reveal that an activity like plant operation will create a regional employment multiplier of 0.65. It is estimated that the indirect and induced effects of the local construction workers on job generation in other activities will be the same, or 0.65. It is furthermore assumed that the regional employment multiplier for temporary in-migrants will be 0.5, for foreign workers 0.15 and for domestic workers staying in work camps 0.1. The reasoning for a lowering multiplier effect of these types of workers is that they spend on average a lower percentage of their income in the region than the local workers.

As many of the indirect and induced construction-related jobs will be seasonal and short-lived it is estimated that the local residents, including students, can only absorb about

40% of them, but the people from away that come and work temporarily in the region, including students from other parts of Iceland, 60%.

The estimated regional employment multiplier effect, 2003-2007, is 523 person-years in total, 40% is expected to be absorbed by local residents and 60% by persons from outside the region (Appendix I, Table 4).

It is presupposed that some main contractors will be hired and that there will be a few sub-contractors for each main contractor. The main business opportunities for entrepreneurs in the East Region will be as sub-contractors. Sub-contractors will be needed for the assembly of electrical and mechanical equipment, maintenance of electrical systems, machinery and equipments, transportation, operation of work camps and provision of materials, equipment, tools and food.

Examples of possible sub-contracting opportunities of the plant are as follows. In the potroom, casthouse and rodding plant are various types of jobs related to the assembly of equipment and systems and preparation of production systems. There is a need to set up work camp for a few hundred workers. At the peak of activity in 2006 there might be about 1,600 construction workers engaged at the plant site.

A great number of guest workers, both of domestic and foreign origin, will be expected in the Central East Region during the construction period. Some of them will probably bring their families and stay there for a long time, which will further increase activity in the region.

Many small local construction companies and their employees will find work on the plant project, or on project-related construction, for example building roads and additional housing units. Many business opportunities will be created for companies providing goods and services to the project itself or the construction labor force. Air passenger and freight movements through Egilsstaðir airport will increase greatly, and there will be new demands for trucking, shipping and courier services. There will also be a major requirement for hotel space. In some cases (for example, improved air services), new or expanded services will benefit the entire community.

The impact on the local economy will be large and a few years boom will be expected, as there will be other projects implemented concurrently. The impact on construction companies, retail, services and transportation will be large. It can be expected that demand for housing will increase substantially and prices of houses will rise, especially in Austur-Hérað and Fjarðabyggð.

4.3.2 OPERATIONS

4.3.2.1 Methodology

There are a few different approaches to assessing the regional economic impact of an industrial project like the plant. The main approaches will be discussed briefly before an assessment is made for this study.

In a study in 1990 on the impact of power-intensive industries on population and employment, the Institute for Regional Development compared the effects of a new aluminum plant in three different locations: the Reykjavík area, Eyjafjörður and Reyðarfjörður. Their conclusions were that the employment multiplier, using location quotient of exporting and non-exporting activities, was 2.3 for the Reykjavík area, 1.3 for the Akureyri area and 1.0 for the Reyðarfjörður area. Nationally the ratio of basic to non-basic industries, a classification that is subject to criticism, is 1 to 2.0-2.5 (depending on definition of basic/non-basic). Hence, were this ratio to be applicable to a plant project, each new "basic" job at an aluminum plant would create 2.0-2.5 derived "non-basic" jobs. If an aluminum plant is located in Reyðarfjörður, less than half of the nationally derived new jobs will emerge in the local area, according to the calculations of the Institute for Regional Development.

This approach of estimating indirect and induced employment effects through the use of locational quotients is rather vague. It measures industrial concentrations in certain locations and can be used as a rough guideline for total employment impact. It is not a good analytical tool for conceptualizing economic space and uneven regional development. Many other issues are at stake when multiplier effects are considered. A new big manufacturing plant influences salary levels and prices in its immediate area. It can lead to the reduction of low-paying jobs, higher local government income so it can offer better services and increase the rate of returns of service firms, which will e.g. generate more diversified employment opportunities in the region.

In the year 2000 Richard S. Conway published an economic impact study for the Washington State aluminum industry. The aluminum industry has been a permanent fixture in the Pacific Northwest economy, especially in Washington State for the past sixty years. The Washington aluminum companies constituted a 2.6 billion USD industry, as measured by total sales in 1998, and employed about 7,500 workers.

A model was applied by Conway that provides a means of measuring the total (direct and indirect) impact of the aluminum industry on the state economy. The behavior of the economy was first simulated with the aluminum industry's output (and thus the industry's employment, labor income and in-state purchase) to produce a baseline projection over a period of time. The simulation is then repeated but without the aluminum's industry output to yield a conditional projection. The difference between the two projections is a measure of the total impact, i.e. multiplier effect, of the aluminum industry.

The conclusion of the study is that the industry employment multiplier was 3.9 implying that every industry job supported 2.9 jobs elsewhere in the economy. The multiplier is relatively large because of the aluminum industry's high wages and high level of in-state spending. The study also calculated an employment multiplier for all nine counties that have an aluminum industry within Washington State. Most of these counties are in rural areas. In six of these counties direct employment in the aluminum industry is of the size range that is planned for the plant at Reyðarfjörður, or ranging from 350 to 880 jobs. The size of the impact on indirect and induced activities is e.g. dependent on the degree to which the county economy is self-sufficient. The highest multiplier of the six counties mentioned above was found in Chelan County (population 60 thousand) 2.74 and the lowest in Klickitat (population 19 thousand) 1.84, indicating that for every direct job in the industry an additional 0.84-1.74 jobs were created in indirect and induced activities. The county economy of Klickitat is to a much lesser degree self-sufficient than the county economy of Chelan and therefore more comparable to the Central East Region.

One of Conway's conclusions was that the employment multiplier for Washington State as a whole was considerably larger than the aggregate multiplier for the nine counties, indicating that substantial impact was felt in the main urban areas of the State. His study is measuring the economic impact of an already established industry, within an economy of 5-6 million people. The State economy of Washington is 20 times larger than the Icelandic economy. For that reason it is more self-sufficient with intermediary goods and services for the aluminum industry, not counting electricity and raw material. There is also a more substantial use of aluminum as a manufacturing raw material in Washington State than in Iceland.

Measuring the economic impact of the plant in Reyðarfjörður is concerned with a new industrial plant to be ready in 5 years. Such a measurement is bound by uncertainties (technology, unforeseeable future developments, export markets), within which the assessment has to be made. Although Conway's findings are indispensable for this study his simulation method cannot be applied. It is designed for an established industry but not for a new export-based activity, as the export-base model, which appears to be the most suitable model for this study. The export-base model examines the linkage mechanism that connects growth in a new major export-based activity to investments and growth in non-exporting activities and infrastructure in the region. For this purpose plant-related economic growth (or decline) is desegregated into four sectors that display different linkage effects within the region (Figure 4.3):

Backward linkages have an impact on supplies, services and infrastructure that are needed as inputs for the aluminum production, including construction and operation of the hydropower stations and plant construction.

Forward linkages include further processing of aluminum, shipments of the plant products etc.

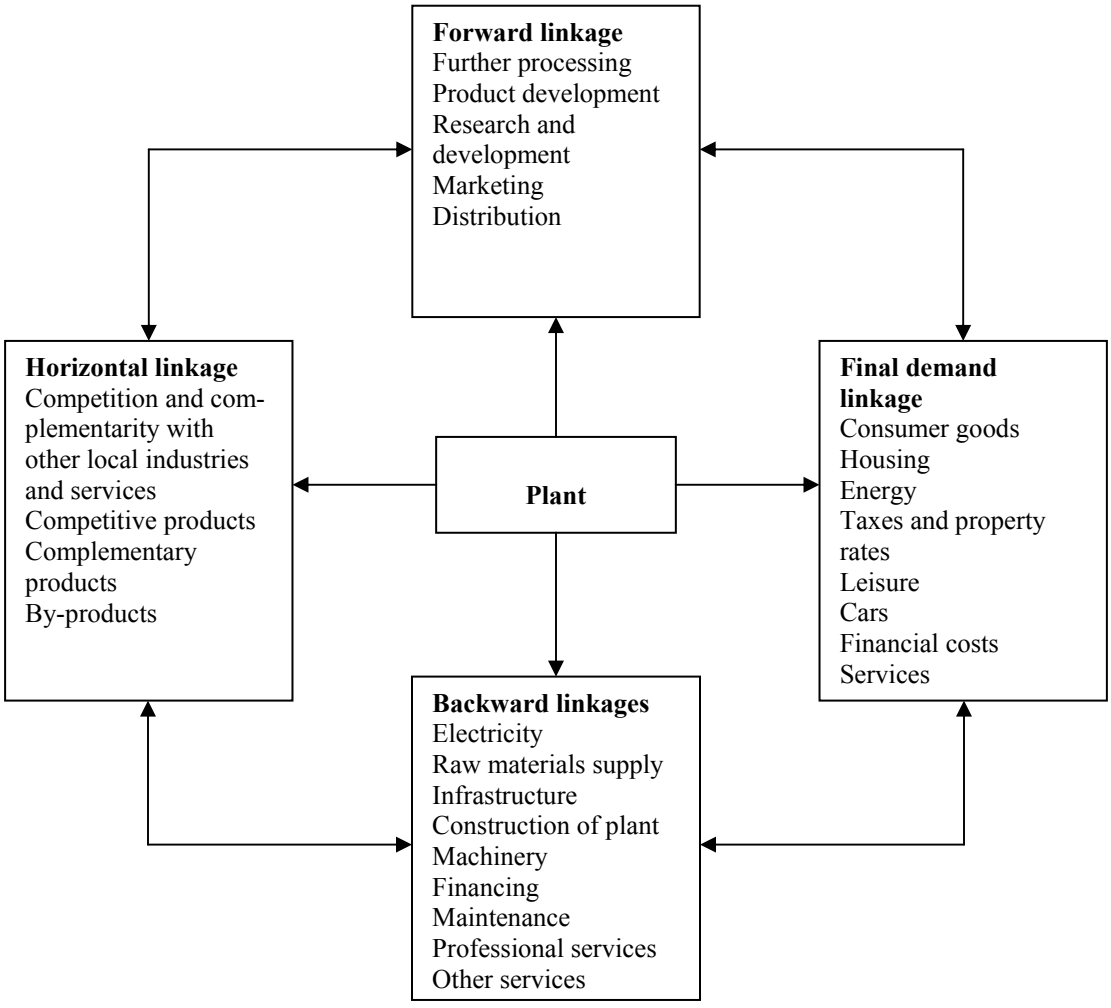
Final demand linkages are impacts felt primarily through the salaries of the plant workers, company taxes and service charges, and workers in plant-related activity. They

buy houses, cars, consumer goods and services and pay taxes. The government uses taxes for education, health services, etc.

Horizontal linkages are the impacts felt in other economic activities as a result of the plant, e.g. such as increased competition for local labor and the rise of new opportunities in tourism through better infrastructure. It represents also impacts felt on competitive and complementary products, and linkages to by-products.

These four linkages will have a very different effect within the region. The final demand and backward linkages will be felt most strongly, forward linkages will probably be weak as no further processing is anticipated, but horizontal linkages will probably have both positive and negative effects on regional economic growth. The horizontal effects will be much greater during the construction period than the operational period. They will influence construction activity, repair services, tourism, retail and trade.

Figure 4.3 Export-base Multiplier of an aluminum plant



4.3.2.2 Final demand linkage

Salaries paid in a 322 thousand tons plant are estimated at around 1.8 billion ISK a year. It can be estimated that 16% of salaries are national government taxes, 12% local government taxes, 4% contributions to pension funds and 1% union dues. On average about 3% of salaries are saved and 64% used for consumption.

Information from aluminum plants in Iceland shows that, personnel cost, including employee benefits, training, food and transport to and from work, is about 4 million ISK per year. According to the regular consumer survey conducted by Statistics Iceland in the year 2002 about 20% of household costs are food, beverages and tobacco, 5.7% clothes and shoes, 16.1% housing costs, 2.7% energy, 6.7% furniture and domestic appliances, 3.8% health care and medicine, 14% cars, 1.9% transport, 3.1% post and telephone, 14% recreation and culture, 0.5% education and 5.5% restaurants and hotel and 6.1% various goods and services

The personnel cost of a 322 thousand tons plant will be about 2.0 billion ISK a year at current price levels. It is estimated that about 50-60% per cent of this sum, or about. 1,000-1,200 billion ISK will be spent in the Central East Region through consumption, personal investments and taxes, but about 40-50% outside the region.

Of the sum spent in the Central East Region it can be estimated that one-third, or about 330-400 million ISK, will be salaries. A multiplier of the size about 1/3 approaches 0.5 after an indefinite number of rounds in the economy, which gives a figure of just over 500 million ISK for a regional employment multiplier in the Central East Region, or about 250-300 jobs. A final demand linkage multiplier of 0.60 gives a total of 272 indirect and induced jobs. This conclusion is within a possible variation of 10-15%.

4.3.2.3 Backward linkage

According to information from Alcoa the plant plans to purchase intermediary goods and services, except electricity and raw material, of amount 30 million USD per year. Domestic purchases are estimated as 9 million USD a year.

The intermediary goods and services are of various different kinds and probably no more than 30% of this amount is spent on salaries, or about 300 million ISK. No more than one-third to half of these salaries will be paid to employees in the Central East Region. This assumption will result in 100-150 million ISK in salaries, or 50-60 indirect jobs, which through multiplier effect will induce another 25-30 jobs, or bringing the total to 75-90 jobs.

In addition the plant's purchase of electricity will have an economic impact in the region. After operation of the hydropower project begins there will be around 15 employees and purchases of intermediary goods and services to the power station. The total number of

direct, indirect and induced jobs from the plant's purchase of electricity will be about 30 jobs.

In accordance with the above the backward linkage should make about 105-120 jobs after the plant is in operation. A backward linkage multiplier of 0.25 gives a figure of 113 indirect and induced jobs. This conclusion is within a possible variation of 10-15%.

4.3.2.4 Multiplier effects – general observations

The following assumptions, based on the analysis above, will be made regarding the regional employment multiplier of the plant operation:

- The impact through forward linkages will be miniscule and is not calculated.

- The economic impact through horizontal linkages is uncertain, especially after operation begins. It is not possible with any level of accuracy to foresee these impacts a few years into the future. After consultative meetings with representatives from local authorities and businesses in the region it is assumed that the regional employment multiplier through horizontal linkages will be –0.2.

- The regional employment multiplier through final demand linkage is calculated at 0.60 and backward linkage at 0.25.

- The net regional employment multiplier of plant operation is calculated at 0.65 (0.60+0.25-0.20).

The calculations based on the assumptions above are presented in Appendix I, Table 2. The assumptions may not hold after 5-10 years. It must also be stressed that the national government, local authorities in the Central East Region and Alcoa will through their policies and outsourcing have an impact on the size of the "induced" or "derived" impact of the plant. It must be emphasized that multiplier effects can be assessed using other criteria than number of jobs, such as impact on salary levels and prices, more diversified employment opportunities, increased rates of return for service companies and more efficient operation of public services.

There will be an ongoing and almost uninterrupted construction activity for 6 years in the Central East Region engaged with addition to the plant, a large hydro-power project, transmission lines, harbor and a road tunnel. The construction will have immense effect and it is problematic to separate the impact of one construction project from another.

It is estimated that the plant will directly, indirectly and through induced effects create about 750 new jobs in the Central East Region, thereof just over 450 direct jobs in the plant itself. It is also important in this respect that plants in Iceland pay on average higher salaries than all other industries, except fishing. There is a shortage of well-paid

jobs in the Central East Region. The greatest economic impact of the plant will probably be to increase the number of well-paid jobs in the region and raise the general standard of living considerably.

The immense size of activity during the construction period has the potential to result in wage and price inflation, although it is spread over a 6 years period. Labor shortages could have a negative effect on low-wage sectors (e.g. farming, tourism and services), new demand could result in house price inflation, etc., leading to increases in the cost of living which may be particularly negative for those with low fixed income.

However, a number of factors suggest that such problems will be minor or non-existent after the construction period. The most important of these is the project timeframe, which allows quite adequate time to plan and prepare for all phases of activity. New demands for labor, housing, transportation infrastructure, etc. have already been anticipated and plans can be put in place to respond as necessary. Secondly, and related to this, town managers, union officials and other key informants interviewed as part of the research were generally of the opinion that the local labor, housing and other markets, and existing systems of government, would be well able to respond to the new demands resulting from the plant project. Lastly, both of these reflected in part the fact that the region has a generally healthy economy but has been subject to population declines, leaving surplus capacity in some infrastructure and services.

4.3.2.5 The impact of the plant on other sectors

The foreseeable impact of the plant on other economic sectors is as follows:

Fishing and fish processing

As was discussed in Chapter 2, the region has a strong, resilient fishing and fish processing industry, based on proximity to the resources. However, some of the work in fishing and fish processing involves (in the former case) extended absences from home, or is seasonal and provides uncertain income. As a result, some trawler, inshore fishery or processing personnel may choose to take up plant or plant-related employment. There are already labor shortages in processing, addressed through use of migrant labor. The education of many fishermen, except marine engineers, skippers and mates, does not match the requirements of the plant. Only a few of the fish processing workers have the educational qualifications required by the plant, especially engineers and mechanical tradesmen. For this reason only a small proportion of people who are presently employed in the fishing industry will be able to find jobs in the aluminum plant, mainly from the fish meal plants and the mechanical workshops. The salaries of skippers are much higher than for plant workers. The plant may, however, attract young people who would otherwise possibly aim for jobs in the fishing industry. However, representatives of

major companies and labor unions are not greatly concerned that this would be problematic.

Agriculture

As was discussed in Chapter 2, agriculture has been in decline, and plant-related work may provide some workers with an alternative, or supplement, to agricultural employment. In the former case, the project will speed the ongoing rationalization of the agricultural sector, with a further abandonment of the most marginal lands. In the latter case, new project, or project-related waged employment can supplement farm incomes, allowing farmers access to the capital needed to upgrade and diversify their operations into organic farming and forestry.

Manufacturing and construction

Many small firms in manufacturing and construction, as well as self-employed craftsmen, will benefit from both the construction and the operation phases of the plant. It will be through "backward linkages", i.e. by supplying goods and services to the plant project, and through "final demand linkage", e.g. by being involved in housing construction for the plant workers and resulting from project-related demographic and economic growth. A few firms in manufacturing, e.g. mechanical repair workshops and small manufacturing establishments, will probably loose workers in competition with the plant.

Tourism

The local tourism sector will benefit from increased spending as a result of plant employment and income effects, and improved transportation, including air connections. However, there are possible negative impacts from shortages of tourism accommodations (hotels, bed and breakfasts) and wage inflation.

In the former case, there is the danger that the local supply of temporary accommodations will not keep pace with project-related demand, especially during construction. This phase of the project will see an influx of construction workers and contractors, some of who will require or prefer hotel or boarding house accommodations within easy reach of the site. This may lead to a shortage of rooms, and/or increases in room rates, deterring tourists from staying in the area. This effect is likely to be short-term, being most significant during construction and declining as new hotels are opened over time. The project proponent will make best efforts to minimize negative effects on the tourist industry.

As has already been discussed, the labor demand associated with plant construction and operations may lead to some absorption of un- and under-employed labor and increases in local wage rates. This may disproportionately affect the tourism sector that has

traditionally relied on seasonal, part-time and low wage labor. This effect, reflecting the pattern of adaptation in the labor market, is also expected to be minor and short-term.

It is thought unlikely that the presence of the plant itself will significantly deter tourism, especially given careful design and landscaping. Indeed, there is the alternative prospect of industrial tourism during both construction and operations, especially if there is a provision of viewing sites and opportunities to tour the construction site and then plant. Similar opportunities have generated significant tourism traffic at such diverse projects as the Lillehammer Winter Olympic site, PEI-New Brunswick Fixed-Link (highway bridge) and Hibernia offshore oil platform construction site in Newfoundland.

The service sector

As has been discussed in Chapter 2, expansion will be evident in the service sector given increases in population, employment and incomes, as well as Alcoa's out-sourcing policy. It will further fuel development of Egilsstaðir as a regional service center and, perhaps, Reyðarfjörður as a local service center. In-migrant spouses may help address shortages of professionals in, for example, health care, social services, teaching and other professions and services.

It is assumed that the employment multiplier created through horizontal linkages will be – 0.20, or a loss of about 90 jobs as a result of the plant project. This loss will be felt mainly in fish processing, fishing and manufacturing, especially in businesses that pay low salaries and provide insecure and seasonal jobs. A few people are also expected to give up self-employment for plant work, i.e. farmers, skilled craftsmen, inshore fishermen and farmers. The loss will probably be mainly felt in Fjarðabyggð, Egilsstaðir and Fáskrúðsfjörður.

4.4 LABOR MARKET

4.4.1 SURVEY

The Social Science Research Institute at the University of Iceland conducted a postal survey for Reyðarál in the year 2000 amongst young people 18-28 years of age living in the Central East Region. The survey was carried out in November and December 2000. Of an initial sample of 400, and an amended sample of 364, there were 203 respondents, or 56%.

The respondents were in general displeased with the employment situation in their home community, both because of lack of diversity of employment opportunities and because

of inadequate income prospects. They were however more pleased with job security. They were rather displeased with the diversity and range of goods in retail outlets (51%) and even more with price levels (70%) in their home community. About 43% of respondents were very or rather pleased with the availability of suitable housing, but this opinion varies between communities. Of the respondents 43% were very or rather pleased with opportunities for college level education in the region. About 56% were very or rather pleased with opportunities for outdoor recreation and leisure in their home community.

When all the above factors were analyzed in relation to where the respondents think they will live after 10 years a significant difference were observed for 7 variables out of 10. Respondents that intended not to live in the region after ten years were more unhappy with the following factors: Employment opportunities, diversity of employment, income prospects, job security, price levels, diversity and range of goods in retail outlets and opportunities for outdoor recreation and leisure. It could be concluded that all these factors could intensify out-migration of young people from the region. It therefore seemed most important to strengthen the local economy and improve retailing in order to retain the young people in the region. Other factors such as opportunities for college level education and housing were not as influential factors in people's decision whether to stay or move away.

Those who said they expected to live outside the East Region after 10 years were also asked if they were more likely to stay if added and better employment opportunities were created in their home community. About 90% said that added and better employment opportunities would increase the likelihood of them staying in the region.

Young people in the East Region were generally in favor of an aluminum plant being built in Reyðarfjörður. About 56% were very supportive and about ¾ were very or rather supportive. About 40% said they were interested in working at the plant if it would be built in Reyðarfjörður. This position varied according to sex and residence.

About 87% thought that an aluminum plant in Reyðarfjörður would strengthen the local economy in the East Region very or rather much. About 59% of respondents thought that a plant would lead to higher salaries in the region and about 40% thought salaries would remain similar, but almost none that salaries would decrease.

Just over ¾ of respondents thought that the aluminum plant would lead to much or rather better community life. When asked about the impact of the plant on out-migration, about 82% thought that out-migration would decline and only 3% that it would increase.

4.4.2 CONSTRUCTION PERIOD

The estimated total labor requirement for the construction of the plant (including the harbor) is around 2,300 person-years. During the winter 2005-2006 about 900-1,000 workers, and in the summer of 2006 about 1,600 workers, will probably be employed in construction. The labor requirement will level off during the winter 2006-2007 until substantial completion is reached in the spring of 2007. It is estimated that the construction labor force will be drawn from the following sources:

- Local residents: 10%
- Workers from away that move temporarily into the region with their families: 15%
- Foreign construction workers: 30%
- Domestic construction workers staying in the work camp but going home during work breaks: 45%.

The main uncertainty evolves around the group of workers that are assumed to move in temporarily with their families, or 15%. This ratio is rather high, but these people will see almost uninterrupted construction work for a few years, as well as the probable attraction of a permanent plant job at the end of construction.

The project's proponents will seek to optimize the local employment and business benefits from construction through its hiring, purchasing and contracting policies and procedures and by providing the local business community, municipal governments, training institutions and others with timely information about its plans and requirements.

Previous experience shows that some of the construction workers from other areas will want to settle in the region and seek work in plant operations. Some of them may originally have lived in the region; about 17% of respondents to a survey of 20-49 year old people that moved out of the Central East Region 1995-1999 said it was rather or very likely that they would move back if the plant was built. The response was age dependent, with young people being more likely to return than the older ones. However, such return migration is more likely to occur related to the plant operations than construction, because the latter presents longer-term employment opportunities.

The distribution of employment, during construction and operations, will be dependent on such things as work schedules, the availability and location of work camps and other employer-provided accommodations, and commuting distances.

4.4.3 OPERATIONS

This chapter describes the labor demand of the plant during operations and the likely response of the labor market in the region and how many new jobs it can absorb bearing in mind the present employment level and future outlook. The chapter will furthermore discuss the likely development of the labor market over the next few years, how many in-

migrants are needed if the plant is built and how this task will be most suitably approached.

It is estimated that 322 thousand tons plant will provide total employment of 454 person-years. The aluminum plant will utilize the best available technology in the world, both in respect to technical performance as well as pollution control. Dry scrubbers will be installed to reduce the emissions from the potrooms, which will be well within all national and international regulations. Furthermore, the advanced technology will also introduce a high level of automation, eliminating most exposed and physical wearing jobs and will instead demand highly skilled employees for its operations.

The number of women working in aluminum plants has been growing and they are now doing jobs that previously were considered jobs for men. Many aluminum plants use affirmative action programs to attract more women.

The plant will be in a strong position to compete with other industries for labor. Other plants in Iceland pay higher salaries than all other industries, except fishing. They provide secure jobs and a shift work that is normally better paid than daytime work. Plant work is particularly attractive for many categories of workers.

4.4.3.1 Educational requirements of workers

The educational requirements for the workers are as follows:

- Jobs that do not require any specific skills, i.e. for unskilled workers
- Jobs that require journeyman certificate or education from a comprehensive school
- Jobs that require a technical education
- Jobs that require a technical education at a university level or comparable education
- Jobs that require an academic qualification from a university

The first estimate of educational requirements for the 420 permanent jobs of the plant is as follows:

- There is a need for 10-20 workers with an academic qualification or comparable.

- There is a need for 20-25 workers with a technical education at a university level or comparable education.

- There is a need for 50-60 workers with a special technical education.

- There is a need for about 300 workers who are skilled craftsmen or educated from a comprehensive school.

- There is a need for 25-30 jobs of unskilled people.

It is planned that about half of the 420 jobs are performed during the daytime, but the other half will be shift work.

The preliminary plans of Alcoa are as follows:

The key management people will be hired very early in the process and be there during construction. Gradually other workers will be hired until about 3 months ahead of start up when all the positions will be filled.

There are no extensive surveys available of the level of skills and education in the region. Based on a labor market survey published in February 1998 and key informant interviews it can be estimated that unskilled people form at least 55-60 per cent of the labor force, university educated people are no more than 5-10 per cent, but skilled workers, very widely defined, comprise probably 30-35 per cent of the labor force. The last group is diverse and includes craftsmen, skippers and mates, marine engineers, cooks, educated farmers, qualified fish processing workers, educated office and retail workers, assistant nurses and a few nurses, kindergarten and primary school teachers. Some of these professions now require a university level education such as nurses and teachers.

4.4.3.2 Responses of the labor market

This section discusses the degree to which, and ways in which, the local labor market can meet the direct labor requirements of the plant and the indirect and induced requirements it will generate. It describes, first, the availability of local labor, in the form of the existing labor force and likely new entrants (e.g. school leavers). In doing this, it considers the size of the project labor-shed; that is, the size of the region from which plant employees can reasonably be expected to commute to the Reyðarfjörður site. The size of this area is related to both transportation systems and the work schedule. The section goes on to examine other sources of labor that might be used to meet the direct and plant-related demand for workers. These are return migrants, new in-migrants and the use of long distance commuters.

The likely responses of the labor market have been estimated for the main segments of the labor force below, with emphasis on the direct requirements of the plant. The estimates are based on a number of interviews with key informants in the region.

1. Local residents

The number of local residents and school leavers available for direct employment at the plant is constrained by the practical commuting range to and from the plant site. Within 30 minutes driving distance at present are about 5,400-5,500 residents, mainly living in Neskaupstaður, Eskifjörður, Reyðarfjörður, Egilsstaðir and Fellabær. After a road tunnel is built between Reyðarfjörður and Fáskrúðsfjörður another 600 residents will be within 30 minutes commuting distance. An additional 2,000 residents live in communities with a 30-60 minutes driving distance.

Experience shows that commuting up to about 30 minutes is a common practice, e.g. between Egilsstaðir and Reyðarfjörður and between Neskaupstaður, Eskifjörður and Reyðarfjörður. People who commute further on a daily basis tend to get tired of it and do so only because they have no other option, the job is highly paid and interesting, or the work schedule is based on a more concentrated work, e.g. fishermen.

A number of people currently living within 30-60 minutes driving distance, will probably be interested and able to work at the plant. This will include some who are currently underemployed or on low salaries, but others will move to plant work from other forms of employment. This group includes farmers, their spouses, lorry drivers, self-employed craftsmen, inshore fishermen, fish plant workers and people who work in tourism.

General laborers, fish plant workers, fishermen, skilled craftsmen (mechanics, carpenters, metal & steel, plumbers and electricians) and marine engineers, that live in the region, will for various reasons be interested in working at the plant. Their motives will be different. Some of the fish plant workers and skilled craftsmen will expect higher wages, the fishermen will be interested in land-based work etc. They will leave behind them vacant jobs for new recruits on the labor market. Some of them, however, will require basic and/or specialist training in order to qualify.

In more detail the opportunities of recruiting local residents can be described as follows:

Within one-hour commuting distance from the aluminum plant are about 250 farms. Most of them are sheep farms, but about 40-50 are dairy farms, half of which are mixed sheep and dairy farms. Most farmers, especially those who live close to the towns, and many housewives, supplement their farm income. The farmers work e.g. as school bus and truck drivers, in construction and repair work, slaughtering, stevedoring, inshore fishing and fish processing. The housewives work in fish processing, health institutions, home help, school catering and cleaning, teaching, day-care for children, make handicrafts and a few operate bread and breakfast on the farms. If more stable and highly paid jobs become available within a reasonable commuting range, many of the farmers and their spouses would probably be interested.

In the East Central Region are many people with technical skills such as carpenters, electricians, plumbers, masons, mechanics etc. Many of these men are self-employed, i.e. doing repair and maintenance work and some operate a small workshop. Others work

in larger mechanical workshops or for construction firms. Some have insecure and variable income. They would be attracted by more stable and well paid jobs.

In the fishing communities of the Central East Region are many fishermen who are interested in alternative employment. Many inshore fishermen that fish on their own boat face various restrictions such as limited access, quota and weather conditions. They can only work part of the year and would be interested in a more stable job, where they could fish during off-duty hours. Many fishermen on trawlers, or large purse seiners, have high wages but are tired of harsh working conditions and long stays away from home. Many of them will be tempted to secure and highly paid jobs at shore.

Most fish processing workers are rather low paid except workers in capelin meal plants and foremen in freezing plants. Many fish processing workers would clearly be interested in plant related work.

As was indicated above, the number of local residents applying for work at the plant will to some degree depend on road improvements in the region and hence the reasonable commute distance. The project time frame allows enough time, prior to the start of the plant, for municipalities, industry, unions and the proponent to plan and engage in the training needed for the local residents. The Technical School in Neskaupstaður is well prepared to conduct the basic training along with the East Educational Network, but for some workers job experience placements at other Alcoa Aluminum operations might be required.

2. School leavers

The number of school leavers in the region is about 130 a year. With a 4-5 years lead time to the start of the plant it is a total of 520-650.

In the survey conducted by the Social Sciences Research Institute amongst 18-28 year old people in the Central East Region about 40% said they were interested in working at the plant if it would be built in Reyðarfjörður. This position varied according to sex and residence. Men (53%) were generally more interested than women (29%). People in Fjarðabyggð (52.5%) and in the fjord communities south of Fjarðabyggð (50%) were more interested than people in Seyðisfjörður (41.2%) and in Fljótsdalshérað, i.e. Egilsstaðir and surrounding area (25.4%).

Young women seem to leave the region earlier and in larger numbers than young men. The challenge here is twofold. Firstly, to interest the young men and offer them a formal training program, e.g. at the Technical School in Neskaupstaður. In order to keep them active until the plant starts operating, they could be employed during the construction period and possibly given the opportunity of job experience placements at other Alcoa's Aluminum operations. Secondly, a special attempt should be made to offer a program for young women from the region for work at the plant. This programme needs to be carefully designed, as it is probably more difficult to keep them in the region until the

plant starts operating. Various service activities will emerge as a result of the plant, both in public and private services. These could be particularly attractive for young women.

3. Return migrants

A number of young people 18-30 years old, from the Central East Region, but now living elsewhere in Iceland or abroad, will probably be tempted to return, if interesting and well paid work becomes available. A very crude measure shows that about 300 persons 18-30 years are "missing" from the age pyramid in the Central East Region. Of this estimated figure about 66 per cent are women and about 34 per cent men. Many of these persons are still single, some are childless couples, some live in a rented accommodation and a number of them are at school or university. Many out-migrants from the Central East Region will be interested in moving back for various reasons.

In the survey conducted by the Social Sciences Research Institute amongst 20-49 years old people who had moved out of the Central East Region 1995-1999, about 39% of the respondents had over the last 2 years considered a move back. More women (46%) than men (33%) had considered a move back. It was also age dependent, the younger respondents seemed to be more inclined to move back than the older ones.

In accordance with the view that poor employment situation is often mentioned as the main reason for out-migration it emerges that greater employment opportunities will increase considerably the probability that people will move back to the East Region. About 70% of those who said it was not likely that they would live in the East Region after 10 years said they would consider moving back to the East Region if more and better employment opportunities were created there. This position depended considerably on age. People aged 20-29 years (80%) and 30-39 years (67%) was more ready to consider moving back if more and better employment opportunities were created than people aged 40-49 years (27%).

The survey showed considerable motivation for people to move back to the East Region if more and better employment opportunities were created. About 17% said it was rather or very likely that they would move back if an aluminum plant was built in Reyðarfjörður, but 49% said it was rather or very unlikely.

4. New in-migrants and immigrants

The most likely new in-migrants can be grouped into three main categories:

Firstly, people from outside the region that come initially to work during the construction, either at the hydro-power project, or at the plant site, and decide to stay if they can get a job at the plant. Secondly, people living in towns and villages outside the commuting range from the plant. Some of them face uncertain future with their present job, they might be tired of working at sea or in a fish plant, or be self-employed craftsmen

interested in a permanent job where they can apply their skills and experience. Thirdly, professional people aiming for jobs in general or technical management, personnel administration, finance, marketing and sales, purchase and laboratory. People for these positions can come from anywhere.

In addition it is quite likely that some Icelanders living abroad will be interested in returning to Iceland, especially if they have the skills and qualifications required to work in a plant. Alcoa will presumably be bringing in a number of senior or specialist personnel that they will transfer from other operations and/or hire abroad for this task.

5. Long-distance commute workers

It is possible to man part of the plant jobs with people who live outside the daily commuter range, but would like to work in a concentrated workweek, e.g. 12-hour shifts 5-7 days in a row and the same period at home. The proponent will normally pay all of the costs of the worksite accommodations and transportation to and from major home communities. No doubt, the plant can attract many long distance commute workers, e.g. by bus from Akureyri, as long as this option is attractive for the plant.

Long distance commuting is a category of last resort because of costs, but has worked well in many situations, e.g. offshore oil, mining operations in the Arctic and hydro-power stations in the highland of Iceland. This type of work is very attractive to many people because they are able to deliver a very concentrated workweek and have an extended period off. They do not have to sell their house or move the family and during the period off many become engaged in a subsidiary activity to supplement their income, e.g. as self-employed craftsmen. This arrangement is expensive for the employer and is only used when there is no other alternative.

6. Expected recruitment

Taking into consideration the estimated number of school leavers, number of local residents who will probably be interested in plant-work, as well as possible return migrants and new in-migrants, our expectations are presented in Table 4.1. There is a few years period to realize these expectations after project initiation. The construction period can be used wisely to retain the young generation and attract in-migrants who will first come for construction related work. The construction period will also present an opportunity for various service related activities to develop.

Table 4.1 Expected Recruitment, 2009, 322 thousand tons plant

Labor source:	*Plant*	*Plant-related*	*Total*
Local residents	120	80	200
School leavers	120	80	200
Return migrants	60	40	100
In-migrants	155	95	250
Total labor requirement:	**455**	**295**	**750**

4.5 MUNICIPAL GOVERNMENT

4.5.1 CONSTRUCTION

It is expected that the greatest impact during the construction of the plant will be felt in Fjarðabyggð. The municipalities in Fljótsdalshérað will also feel a strong impact, especially as construction at Kárahnjúkar will also peak at the same time. It is possible that the process of municipal amalgamation at Fljótsdalshérað will continue; there are at present 4 municipalities, but were 10 until 1998. If they continue to merge this local government level will become better organized, more cost-effective and capable of improving services and infrastructure, helping the region to plan for this enormous project.

Municipal operations are considered satisfactory if operating costs do not exceed about 80% of taxable income. In 2001 this ratio was 82.7% for the country as a whole. In 2001 income from municipal taxes in Fjarðabyggð was about 12% above the national average. The operating costs of Fjarðabyggð were however 87.5% of municipal taxes for that year. In comparison with municipalities of over 1.000 inhabitants outside the Capital Region the cost per capita in most sectors was above average in Fjarðabyggð. The total municipal debt of Fjarðabyggð was in 2001 21.6% above the national average. However, considerable monetary assets, such as shares, offset the municipal debt.

The pressure will be greatest in Fjarðabyggð during the construction time. There will be a lot of activity and substantial investments are needed in buildings, utilities, streets, harbor and developing new building sites. The additional plant-related municipal income will not be realized until the plant operation begins. During the construction period most jobs will be performed by people who pay their municipal income tax elsewhere. Increased turnover in the region will benefit the state treasury as all turn-over related taxes such as VAT are received by the national government.

Municipal service fees for leaseholders of new building lots are considerably lower in Fjarðabyggð than in the Capital Region. They will probably not cover site development costs, including new streets and utilities. As market price for real estate in Fjarðabyggð

is low it could deter interests for new construction if the service fees for building lots are increased.

During the construction period there will be many workers in the region that live permanently outside the region. The main source of income for municipalities is municipal income tax and rates from residential and commercial property. The municipalities only benefit from a rising income level of the local inhabitants. It is well known that municipalities have to bear increased costs during the construction period of large projects, but do not receive the real benefits from them until the construction is completed and new inhabitants start to pay municipal income taxes and rates from their properties.

Provided that the income structure of municipalities remains largely the same it is foreseen that the municipalities in the region, especially Austur-Hérað and Fjarðabyggð, will need to increase municipal costs during the construction years, e.g. in physical planning, infrastructure improvement and investment in new municipal infrastructure such as streets, sewerage, water works and probably public buildings. These facilities need to be built during the first years of the project.

It is well known that municipalities that grow rapidly, such as the suburban communities in the Capital Region, need about 20-25 years to pay up new investment costs under the present municipal cost and income structure.

As discussed above, the finances of municipalities affected by the project in the Central East Region, will probably be oppressed during the construction, but improve substantially from 2007 onwards as the plant workers settle down in the region. However, if the municipalities can attract some of the construction workers to move temporarily into the region while construction prevail the municipal finances will be augmented.

4.5.2 OPERATIONS

The impact on local government will be increased income of municipal income tax, rates and service charges. However, the municipalities will probably receive less equalization payments. Equalization payments are at present 10-20 per cent of municipal tax income in the towns and villages, but up to 50 per cent in small farming districts. The property rates from the plant will supplement the municipal income of Fjarðabyggð considerably. The home communities (municipality) of the workers will receive the municipal tax of the workers.

The municipalities will face new demands for infrastructure and services, as well on municipal staff. They need to plan new housing estates and initiate housing programmes, either collaboratively and/or in co-operation with private developers. They need to prepare new municipal plans and probably make agreements with Alcoa regarding infrastructure and services to the site (harbor, water, sewage and fire services).

As the municipalities are concerned about local economic development they might through their joint Business Development Centre assist the private sector to make use of new business opportunities that rise as a result of the plant.

In general municipal finances will improve substantially after plant operations begin, but they might have to invest during the initial years of the project in order to maximize project benefits. The two municipalities of Fjarðabyggð and Austur-Hérað are expected to receive the greatest benefits from the plant project. It would be advantageous for planning of optimum local benefits of the project if the four municipalities in Fljótsdalshérað would merge into one strong unit. A decision to locate an aluminum plant in Reyðarfjörður may also call for a regional plan for the entire Central East Region.

4.6 HOUSING

4.6.1 INTRODUCTION

As has been discussed before, plant construction and, especially, operations will cause in-migration to the area. This will probably include some senior employees transferring from other Alcoa's Aluminum operations, return and new migrants taking more junior positions at the plant, and people attracted to the area by indirect and induced employment and business opportunities. Increased employment and incomes may also result in new housing demands by the existing population, including some movement to higher-quality housing. As was discussed above, it is expected that these impacts will be spread across a number of existing communities within commuting range of the plant.

Interviews with senior municipal officials showed them to be positive towards the plant project, with them expressing a willingness and ability to respond to new demands. There has also been some preliminary discussion of seeking to meet most of this demand either through a municipal housing corporation or co-operation with private developers. However, additional resources will clearly be needed (in most cases).

4.6.2 DEMAND FOR NEW RESIDENTIAL HOUSING

New residential housing demand is calculated as follows:

- Estimated population growth from 8,152 in 2003 to approx. 9,400 in 2009, resulting from both construction and plant operation, will require about 570 new apartments or housing units.

- Due to changes in family size the average number of inhabitants per apartment, or 2.53 in 2002, is estimated to be the same in 2003 but rise thereafter as young families with children move into the region to 2.6 in 2009. This factor leads to a negative demand of 92 apartments or housing units 2004-2009.

- The need for renewal of old and obsolete houses is estimated at 1% of the present housing stock per year. It is estimated that half of this demand will be met until 2009 but fully met from then on. This will result in a demand for 96 new housing units 2004-2009.

Estimated total demand for new residential housing is, as a consequence of the above, calculated about 570 new apartments or housing units during the years 2004-2009 (Appendix I, Table 10).

The average size of housing units in the region is 125 square meters without a garage and is not supposed to change over the next 10 years. Each new housing unit, including garage and infrastructure costs (streets, sewerage and water) is assumed to be 15 million ISK per unit, or about 8,5 billion ISK. Hönnun engineering services estimate that 1.4 person years are required on average to build one unit. As a corollary, approx. 790 person-years are required to build new residential housing units 2004-2009.

In the year 2002 there were nearly 325 thousand square meters of commercial property and public buildings in the Central East Region, or 81 square meters per person-year. There is already an excess capacity of both public buildings and certain commercial property in the region. This has to be considered when new demand is assessed, as well as increased need for offices and service facilities.

After the operation of the aluminum plant begins in 2007 a net total of 295 indirect and induced jobs (person-years) is projected. It is estimated that 24% of new jobs will be in public services and 76% in the private sector. It is projected that each new job in the private sector will demand on average 35 square meters in commercial buildings. In projections for school buildings it is estimated that each new child at a kindergarten requires 8 square meters, each additional student at elementary and junior high schools requires 10 square meters and at senior high schools 12 square meters. Calculated new demand for public buildings is close to 12,000 square meters thereof school buildings about 3,800 square meters, health care institutions 2,200 square meters and other public buildings 5,900 square meters (Appendix I, Table 9).

In 2002 there are 117 thousand square meters of specialized buildings in the Central East Region (mainly public buildings) and 208 thousand square meters in commercial and industrial buildings. Minimum need for renewal is calculated at 0.5% per year or close to 13 thousand square meters over the period 2002-2009. If new demand, as well as demand for building renewal is met, as described above, it is estimated to exceed 2.8 billion ISK and require 230 person-years of construction work (Appendix I, Table 9).

The demand for commercial and public buildings will be rather specialized. For commercial buildings the demand will mainly be for offices and service firms, but less for production and storage. There will be a substantial demand for school buildings (3,800 square meters). Despite declining number of children in the Central East Region over the last 10 years, changes within the school system (continuous school day and homeroom for each class) and increased population concentration within the region will lead to the demand for new school buildings.

4.6.3 INTRA-REGIONAL DISTRIBUTION OF HOUSING DEVELOPMENT

The municipal plans for Reyðarfjörður and Egilsstaðir have been approved by the municipal councils and endorsed by the Ministry for the Environment. New housing areas are also being planned. It will be relatively easy to absorb project-related demand for new housing. There is at present a spare capacity in services and infrastructure in the region such as schools and kindergarten.

In Appendix I, Table 11 the intra-regional distribution of new residential housing, and of commercial buildings as well, is estimated. This distribution is only estimated within a considerable range of accuracy as the individuals and families concerned will decide for themselves where to buy a house. The most important factors in the decision-making process over the next 7 years, if the project is implemented as planned, are: Proximity to the aluminum plant, location of spousal employment, services in the community for the entire family, transportation and supply of houses for sale or availability of building lots.

When the factors above are considered it is clear that most individuals or families will choose either Fjarðabyggð or Austur-Hérað, but some will choose Fáskrúðsfjörður or Fellabær. Project-related housing development will probably be very limited outside these four municipalities.

Appendix II exhibits the plans of Fjarðabyggð for possible housing developments on empty lots in built-up areas and in new planned areas. These are in total 648 apartments, thereof 434 in Reyðarfjörður, 151 in Eskifjörður and 63 in Neskaupstaður.

In Egilsstaðir the possible supply of building lots is as follows: About 50 lots have been apportioned to prospective house builders, many of which are undertaking construction. There are another additional 14 lots ready for apportion. According to local plans there are 23 vacant lots in already built-up housing estates in Egilsstaðir, but the plan will probably be endorsed in December 2002. There are other housing estates where no local plan exists, but where housing density can be increased. A local plan is being prepared for a new housing estate east of the present built-up area for an estimate of 90-100 apartments. Future housing development areas are available both north and south of the present built-up area, or for around 120 apartments in the north and for about 1,000 apartments in the south. The land for the prospective built-up area to the north is owned by the municipality, but the land to the south is privately owned. Land for commercial

buildings is available both in the center of Egilsstaðir and in the future built-up area to the south.

Fellabær has at present 18 vacant building lots, both within the built-up area and in a new street that is under construction. If needed there is ample space on the outskirts of the community for further built-up areas.

The municipal plan for Fáskrúðsfjörður 1980-2000 has 12.5 hectares available for new housing estates, of which 37 housing units on 3.5 hectares of land have been approved by a local plan. In addition there are about 10 vacant building lots in already built up areas.

The existing supply of industrial and commercial space is adequate for present demand and there is spare capacity to absorb some project-related demand. However, the demand for additional commercial and industrial space and public buildings, as stated above, will be in both Reyðarfjörður, serving the direct needs of the plant, and in Egilsstaðir, given an expansion and further consolidation of its role as a regional service centre. Project-related demand will likely require increases in the amount of hotel space in both communities.

In the present municipal plans of the four municipalities, as well as in the proposals for new and revised municipal plans, a total number of building lots for 1,250 housing units will be available. The demand for residential housing is calculated as about 570. The demand for new building lots will be even less as some older houses will be demolished and new houses built on the lots.

4.7 SERVICES AND INFRASTRUCTURE

Infrastructure development needed both for construction and operation of the aluminum plant is in some cases a municipal duty, in other cases a state responsibility and in a few instances a joint municipal-state task. It is assumed that for some infrastructure developments and related services special agreements will be made between Alcoa and the public authorities. These are functions like water, sewer, roads, harbor, airport and telecommunications.

The same principle applies to services to industry. They can be a municipal duty, a state function or a joint state-municipal task. These are functions like waste disposal, fire services, planning, building control, occupational health and safety and environmental health. These services are all available in the Central East Region.

In the same manner services to the inhabitants within the field of education, social services, health services, sports, recreation and culture are all available and of a good standard in the region.

Education

There will be an increase in the demand for education in response to population growth and starting immediately after project approval, the requirement for plant-related vocational training. A rapid response to the latter is needed so as to prepare local residents for plant-related economic opportunities. The Technical College in Neskaupstaður, the Senior High School in Egilsstaðir and the East Educational Network are educational institutions in the region that are all capable of educating the local population to meet new demands.

Many of the kindergartens and elementary and junior-high schools in the region have excess capacity to absorb a few more pupils. However, once the project takes off there is a need to expand the schools. If the municipalities are expecting more local taxpayers as a result of the plant they will build the necessary facilities and hire the extra staff needed to provide the required services.

Health

There will be an increased demand for health services and infrastructure as a result of any direct requirements of the plant for on-site and related services as well as plant-related population growth. In the former case, it is expected that there will be an on-site provision of first aid services and a health clinic, which would be provided in co-operation and perhaps collaboration with local health authorities. In the case of an accidental event during construction or operations, there could be a need to use hospital services. Population growth would place demands on the health care system, and could lead to requirements for additional staff, equipment and infrastructure.

Social services

While the plant project will generate some increased demand for social services in response to population growth, increased income and employment may reduce other demands. It seems likely that there will be minimal changes in the demand for social work, poor relief and child welfare services. No significant impacts are expected on the demand for services to the elderly and the handicapped although, in the former case, project-related return migration will mean that some people who had left the region will again be available to help care for their elderly relatives. Minor project-related social problems can be expected during the construction period, but they will be short lived. Increased income gap can also cause social problems in the region that the municipal social services can help to solve.

Public safety

In addition to any direct requirements of the plant for on-site and related public safety services and equipment (e.g. security, fire-fighting, ambulance and other emergency response), there will be some increase in requirements for public safety services and equipment in response to demographic and economic growth. The site requirements will likely be met with a mix of direct provision (e.g. fire fighting equipment), contracted commercial services (e.g. site security) and co-operative arrangements with local authorities (e.g. additional fire fighting equipment and services). These arrangements will probably be reciprocal, with site services and equipment being available to assist in any local emergencies.

Demographic and economic growth could lead to an increased demand for public safety and emergency services as a result of increased highway traffic, spending on drugs and alcohol, etc. Increased income differentials could also be a cause of social problems. However, in all cases the total effect will likely be very modest and easily addressed through normal increases in the provision of equipment and services.

Recreation

The recreation requirements of the project construction labor force will be met through a mixture of direct provision at the construction work camp and through collaborative arrangements with nearby communities, the last generating new revenues which will be used to fund expanded and new services and facilities. While there will also be an increase in demand for recreational services and infrastructure in response to longer-term population and economic growth, it is not thought that this will be problematic, since the growth in the economy will also see increases in the tax base and ability of local residents to pay user fees.

Water and sewer

There is some surplus capacity in the potable water supply and sewer systems of all communities, although upgrading is needed in some communities because of more stringent regulatory requirements. The municipality of Fjarðabyggð can supply water to the plant by extending its system from Reyðarfjörður to the site. The plant will have its own sewer system.

Solid waste disposal

The inter-municipal board responsible for local waste management will be able to deal with increases in solid waste and recyclable waste, both from increasing number of inhabitants and from the plant itself. The present landfill site at Reyðarfjörður will last

for 15-20 years, but there is plenty of marginal land available from landowners for lease as a landfill site.

Power

The current electrical power supply is adequate for regional needs, although there may be a need to upgrade the service to individual communities depending on the distribution of plant-related population and economic growth. The new plant power supply may supplement, helping to respond to increased demand. The present geothermal district heating system in Egilsstaðir and Fellabær has surplus capacity.

Geothermal heat has been discovered in boreholes in Eskifjörður, Reyðarfjörður, Neskaupstaður og Fáskrúðsfjörður. If the project proceeds it is important to continue geothermal energy research and use it for heating houses in these communities if technically and economically feasible.

The State Electricity Company is prepared to supply electricity to the plant site during the construction period.

Harbors

The present harbor facilities in the Central East Region are for the most part sufficient for the current and anticipated demand. There is a cargo port facility at Reyðarfjörður that can handle most project related traffic, if needed. The quay is 80 m long with 6,000 square meters of asphalt grounds intended for containers. Cargo facilities are also adequate at Eskifjörður, the regional hub for Eimskip shipping company.

It is projected that construction of both the harbor and plant lot will commence at the same time in the year of 2003. It is planned that the harbor facility will be built in 20 months. The peak of activity will be over the summer months, when 35 workers will be employed. They will be fewer over the winter months. It is possible that a work camp will be shared with plant construction workers. Otherwise they will be at Mjóeyri, adjacent to the harbor. The projected investment cost for the harbor is about 1 billion ISK. The Harbor Fund of Fjarðabyggð will build and operate the harbor.

The objective with the new harbor at Hraun in Reyðarfjörður is to build up a good facility for the unloading of raw material and general cargo for the plant and for the loading of finished product for shipment. It is also the intention to meet partly present demand in the region and for future port-related economic development. This harbor will have longer quay and greater depth than any other port in the region.

Airport

The current regional airport at Egilsstaðir has the capacity to absorb increases in traffic resulting from all phases of the plant and hydro projects. However, this traffic will result in increasing numbers of domestic, and the introduction of international, flights, benefiting all individuals and businesses in the region. If international flights will be introduced, there are already customs facilities at the Egilsstadir Airport. The airport will also be of importance for emergency flights with sick and injured people when needed.

Roads

Over the next few years further project-related road improvements are planned in the Central East Region. It is planned that by 2004 a new road with a paved surface will be finished between Egilsstaðir and Akureyri. A road tunnel between Reyðarfjörður and Fáskrúðsfjörður is being planned and it is expected that construction will begin in 2003. Completion of the tunnel will take two and a half year and it cannot be ready until at the end of 2005. A tunnel with two lanes will cost at least 3 billion ISK. In addition a new road along the scree slope (Kambanesskriður) between Stöðvarfjörður and Breiðdalsvík is ready. These road improvements will extend southern the labor-shed of the proposed aluminum plant to Breiðdalsvík.

It is vital to finish the road improvements close to the plant site before construction activity gets underway. About 400 million ISK have been budgeted for this purpose. The targeted road improvements are a bypass through the harbor of Reyðarfjörður for heavy loads, and improvements at the mountain ridge Hólmaháls (between the plant and Eskifjörður), where the road will be widened and the slope reduced. Construction of a new road from Reyðarfjörður to the plant site is already underway.

Road improvements are also needed at Fagridalur, the mountain pass and valley between Reyðarfjörður and Egilsstaðir. A new surface is needed capable of carrying heavier loads of traffic. It is also essential to study new future road connections through Egilsstaðir and Eskifjörður. No further road constructions or improvements are needed during the construction period, although transportation of goods and people, both between Reyðarfjörður and the plant, and between Reyðarfjörður and Egilsstaðir, could lead to short lived traffic delays. A study has begun of new possible road tunnel between Eskifjörður and Neskaupstaður and Vopnafjörður and Fljótdalshérað, which is important to continue.

Major road plans are underway in relation to the hydropower project. Construction of a new main road from Hallormsstaður to the proposed power plant and onwards to the projected dam at Kárahnjúkar is already underway. The other road to Kárahnjúkar through Jökuldalur will also be improved.

The Public Road Administration is now preparing a final proposal for the location of the road from Vopnafjörður to highway 1. It is important for the inhabitants of Vopnafjörður

to get a better road connection to the Central East Region that is open all year around or a road tunnel.

There will be significant new traffic associated with commuting workers. As has been described above, the amount coming from different communities is not yet known, but the main flows will be along Highway 92 from Neskaupstaður and Eskifjörður in the east, and from Egilsstaðir, Reyðarfjörður and Fáskrúðsfjörður in the south and west. The volumes will also depend on the shift arrangements and the degree to which workers commute using car pooling and buses, but it is unlikely that the amount of traffic will cause congestion.

Telecommunications

In all cases, existing communications services and facilities are thought to be adequate for present and future demand. At present the GSM system cannot be used on certain roads between major towns, especially mountain roads. This network is gradually being improved and will within a few years provide a better coverage of area.

4.8 LAND AND RESOURCE USE

The aluminum plant will be built on land that is hardly used at all today. The plant will itself not have any impact on land use or the utilization of natural resources in the immediate vicinity.

As has been discussed above, agriculture has been declining in the region, and in Iceland in general, for a considerable time. However, substantial numbers of those still engaged in agriculture would like to be able to support such activity through plant project employment and incomes. The plant will therefore support continued use of farmland in the area.

Land is also a valuable recreational resource, used for hunting, skiing, hiking, including some tourism. Project-related population increases are likely to result in growth in such use but, given continued care in management of these resources, no problems are anticipated.

4.9 CULTURE AND WAY OF LIFE

4.9.1 CONSTRUCTION PERIOD

During the construction period there will be a tightness and tension in the local economy that will influence the culture and way of life. It is important to plan the influx of migrant workers and their work camps in such a manner that possible negative influences will be kept at minimum. This can be done by requiring construction companies to provide first class facilities in the work camps and that their location will be adjacent to the construction site.

4.9.2 OPERATIONS

Once operations begin and the construction activity is substantially completed conditions will change considerably. Those who will work at the plant will be spread with their families over a few communities in the region. In-migration of new people and increased income levels will lead to a more diversified society and strengthen various social and cultural activities in the region.

In the survey by the Social Science Research Institute 18-28 years old people in the region were asked whether they thought that the plant in Reyðarfjörður would lead to a better community life or not. Of the respondents 76% thought that it would lead to a rather or much better community life, 18% neither better nor worse and 6% to a worse community life. This showed that most young people in the region thought the plant would have positive effect on community life.

In the year 2000 the municipalities in the East Region formulated a joint strategy for cultural affairs and this work was published in a special report. In May 2001 the Ministry for Education and Culture signed an agreement with the East Region Association of Municipalities on co-operation in cultural activities. At the same time the municipalities signed an inter-municipal agreement for co-operation in cultural activities and a letter of intent to establish four cultural centers in the region.

Central East Iceland has a rich, strong, and resilient culture based on fisheries and agriculture. It also has a demonstrated ability to absorb changes such as fluctuations in resource economy, influx of foreigners during Second World War and presence of the Norwegians and French in the region at the beginning of the last century. There was also a massive influx of seasonal workers during the herring boom in the region during the 1960's. These, and the attitude of key informants consulted as part of this research, suggest that there should be no problem absorbing plant-related population increase and, especially, in-migration and immigration. As has been discussed above, the number of people moving to the region is expected to be moderate, and it is likely that many of them

will be return migrants and that they will be dispersed across a number of different communities. Indeed, the expectation is that these new migrants and increased incomes will lead to an enrichment of the local culture (see, on the positive cultural impacts of resource development projects on rural areas, Gramling (1996) and Wills (1991)).

4.10 IMPLICATIONS OF POSSIBLE CHANGES IN THE BUSINESS ENVIRONEMENT OF THE PLANT

Aluminum plants are like other firms dependent on variations in their business environment. The conditions in their external environment can at any time improve or deteriorate. In this regard it is important that the plant is owned and operated by a solid company, that the contract for purchase of electricity and long term credit facilities are structured in such a way that the plant will continue to operate despite unfavorable operational conditions. It is important to consider the following points when the implications of possible changes in the business environment on plant operations are examined:

- Presently there is a shortage of aluminum in the world and huge and growing demand anticipated over the next few years. These favorable market conditions should assure a good operational basis for the proposed aluminum plant.

- Alcan (previously Ísal Ltd.) that has operated an aluminum plant in Iceland for about 30 years has never closed down its operation despite unfavorable operational conditions from time to time. The strength of the company and the structure of the contract for purchase of electricity have bee key factors in ensuring uninterrupted operations.

- There are examples from other countries where large firms like aluminum plants have faced a possible closure because of adverse external conditions. In such cases there is so large amount at stake for the lender that it is more profitable and sensible to pay the debt for the time being in the hope of being able to sell the company later for a decent price rather than lose a substantial part of the investment loan. The amount of financing is so high that the lender will make all efforts to continue to operate the plant despite temporary operational problems.

It is planned to structure the long term credit facility, sales agreement and energy purchase agreement that the aluminum plant will be operated at full capacity, independent of changes in external factors during the payback period.

4.11 THE EAST REGION OUTSIDE THE CENTRAL EAST REGION

The project will have a considerable impact in the East Region outside the Central East Region, especially during construction. Construction workers, small construction firms and self-employed people with specialized trade skills, e.g. carpenters, electricians, machinists and plumbers, will find many opportunities for work or sub-contracting. This will be especially appealing for people and firms from Vopnafjörður, Djúpivogur and Hornafjörður. People from these communities can work in construction projects and commute between home and work on e.g. a weekly basis. For them it is a matter of 2-4 hour drive depending on where they live and which project component they are engaged in.

Of the three communities named above the greatest impact during construction will probably be felt in Vopnafjörður. This community of 700-800 people is only within 1-2 hours drive from the Kárahnjúkar project. The local economy has recently been on the decline and will welcome opportunity of this kind. The road between the Central East Region and Vopnafjörður is under improvement, thanks partly to the new road link between Egilsstaðir and Akureyri. Furthermore research is being undertaken for a road between Vopnafjörður and Fljótdalshérað.

The reason why the construction activity will be felt considerably less in Djúpivogur and Hornafjörður is greater distance, especially to Hornafjörður, and because the local economies of these two towns are at the moment stronger than the local economy at Vopnafjörður. There are e.g. plans for a major salmon farming project in Djúpivogur, which will probably absorb all spare labor locally and call for some in-migrants. The distance from Hornafjörður to the power project sites or the plant site is greater than from Djúpavogur and Vopnafjörður, which can deter interest from potential workers, especially if there is plenty of work at home.

It can be anticipated that the impact of construction activity on employment and business opportunities in Akureyri will be considerable. The town has many tradesmen, a few construction companies and service firms. The distance from there to the proposed plant site is only 3-4 hours.

The operation of the plant will have much less impact than the construction activity on job creation outside the Central East Region. The main impacts to be foreseen are the following:

- Some residents in the East Region outside the Central East Region, as well as on the eastern part of the north coast, will probably be interested in temporary release work in the plant, even full-time jobs performed in concentrated work schedules if facilities to stay overnight are provided.

- It can be expected that potential plant workers living in settlements further away than 30-60 minutes driving distance from the plant would be tempted to move to a settlement closer to the plant. It can lead to an out-migration from communities

that are marginal or with limited job prospects, e.g. Bakkafjörður and Borgarfjörður eystri. It can be anticipated that the project will lead to a greater spatial concentration of the settlement pattern in both the East Region and the Central East Region, but a dispersed settlement pattern is one of the main weaknesses in the region.

- In some cases there are firms in the East Region outside the Central East Region that could possibly supply goods or services to the plant. This is considered to be minimal. It is more likely that firms in Akureyri will benefit from business opportunities created by the outsourcing policy of the plant.

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APPENDIX I
- DATA AND IMPACT PROGNOSIS -

TABLE 1:

SOCIO-ECONOMIC IMPACT OF THE PROPOSED ALUMINUM PLANT IN REYÐARFJÖRÐUR - SUMMARY

ALCOA PLANT:	
Production capacity	322,000
Estimated investment costs (billion ISK)	100
Estimated number of jobs - plant operation, from 2007	454
Estimated number of indirect and induced jobs	295
Total number of jobs in operation of the plant (person-years)	748
Estimated number of jobs - plant construction, 2003-2007	2.274
Estimated number of indirect and induced jobs, 2003-2007	586
Total number of construction and construction-related jobs (person-years)	2.860

KÁRHNJÚKAR POWER PLANT AND TRANSMISSION LINES:	
Size of power plant	630 MW
Estimated investment costs (billion ISK)	95
Estimated number of jobs - operation, from 2007	16
Estimated number of indirect and induced jobs	11
Total number of jobs in operation of power plant (person-years)	27
Estimated number of jobs - construction of power plant, 2002-2008	3.844
Estimated number of indirect and induced jobs	786
Total number of construction and construction-related jobs (person-years)	4.630

OTHER CONSTRUCTION ACTIVITY IN THE CENTRAL EAST REGION:	
Estimated number of jobs - other construction, 2003-2009	1.250
Estimated number of indirect and induced jobs, 2003-2009	275
Total number of jobs in other construction (person-years)	1.525

ESTIMATED POPULATION GROWTH IN YEAR 2009:	
Estim. cumulative population growth as a result of plant and power plant	1.468

ESTIMATED SALARIES AND SALARY- RELATED COST ('000 ISK):	
Plant operation per year (2008)	2.047.114
Construction work, 2003-2007	10.945.481

ESTIMATED IMPACT ON MUNICIPALITIES ('000 ISK):	
Increased municipal income tax per year, plant oper. 2009	238.413
Increased municipal income tax per year, ind./induced jobs	96.854
Increased property tax (100.000 ISK per apartment)	56.700
Increased property tax of commercial buildings	17.667
Estimated property tax of plant	200.000
Estimated property tax of Hydro-power plant	60.000
Estimated increased income of municipalities per year	669.634
Increased municip. oper. costs per year (240,000 ISK per pers.)	352.320
Municipal Fund available for investment and financial costs	317.314
Infrastructure tax of new buildings (6.000 ISK per sq. m)	473.695
Investment of municipalities in public buildings	713.448
State investment in public buildings	343.512
Estimated investment in streets and public utilities is 1-2 billion ISK	

ESTIMATED DEMAND FOR RESIDENTIAL HOUSING:	
Demand for new housing units	567
Demand for new housing stock (sq. m)	71.097

ESTIMATED DEMAND FOR COMMERCIAL AND PUBLIC BUILDINGS:	
Demand for new commercial buildings (sq. m)	7.852
Demand for new kindergartens (sq.m)	587
Demand for new Elementary and Junior High schools (sq. m)	2.349
Demand for Senior High schools (sq. m)	881
Demand for new health care institutions (sq. m)	2.202
Demand for other public buildings (sq. m)	5.872

TABLE 2:

ESTIMATED MULTIPLIER EFFECTS OF PLANT OPERATION IN THE CENTRAL EAST REGION

		2006	2007	2008	2009
Number og jobs in plant:					
Full-time jobs		50	420	420	420
Estimated release work (person-years)	8%			34	34
Total:		***50***	***420***	***454***	***454***
Indirect and induced jobs in the region:					
	Multiplier				
Final demand linkage	0,60	15	141	262	272
Backward linkage	0,25	6	59	109	113
Horizontal linkage	-0,20	-5	-47	-87	-91
Total:	***0,65***	***16***	***153***	***284***	***295***
Total person-years in the Central East Region:		***66***	***573***	***738***	***748***
Estimated source of workers:					
Local residents	25%	17	143	184	187
School leavers	25%	17	143	184	187
Return migrants	15%	10	86	111	112
In-migrants	35%	23	200	258	262
Total (person-years):	***100%***	***66***	***573***	***738***	***748***

TABLE 3:

ESTIMATED MULTIPLIER EFFECTS OF THE OPERATION OF KÁRAHNJÚKAR POWER PLANT (PERSON-YEARS)

		2005	***2006***	***2007***	***2008***	***2009***
Number of jobs at power plant:						
Estimated full-time jobs		0	0	15	15	15
Estimated release work (person-years)				1	1	1
Total:		***0***	***0***	***16***	***16***	***16***
Indirect and induced jobs in the region:						
Multiplier	0,65	0	0	10	11	11
Total person-years in the Region:		***0***	***0***	***26***	***27***	***27***
Estimated source of workers:						
Local residents	30%	0	0	8	8	8
School leavers	30%	0	0	8	8	8
Return migrants	10%	0	0	3	3	3
In-migrants	30%	0	0	8	8	8
Total (person-years):	***100%***	***0***	***0***	***26***	***26***	***27***

TABLE 4:

NUMBER OF PERSON-YEARS ENGAGED IN CONSTRUCTION OF PLANT AND HARBOR

		2003	*2004*	*2005*	*2006*	*2007*	*TOTAL:*
Person-years, as planned by Alcoa:		***22***	***123***	***460***	***1.307***	***362***	***2.274***
Estimated source of workers:							
Local residents	10%	2	12	46	131	36	227
Temporary in-migrants	15%	3	18	69	196	54	341
Foreign workers	30%	7	37	138	392	109	682
Domestic workers in camp	45%	10	55	207	588	163	1.023
Total:		***22***	***123***	***460***	***1.307***	***362***	***2.274***
Estimated multiplier effects (person-years):							
Local residents	0.65	1	8	30	85	24	148
Temporary in-migrants	0,50	2	9	35	98	27	171
Foreign workers	0.15	1	6	21	59	16	102
Domestic workers in camp	0,10	1	6	21	59	16	102
Total indirect and induced jobs:		***5***	***28***	***106***	***301***	***83***	***523***
Estimated division of indirect and induced jobs:							
Local residents	50%	2	11	42	120	33	**209**
People from outside region	50%	3	17	63	180	50	**314**

TABLE 5:

NUMBER OF PERSON-YEARS IN CONSTRUCTION OF HYDRO PROJECT IN THE CENTRAL EAST REGION

		2002	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*TOTAL:*
Construction projects:									
Kárahnjúkar power-plant		60	370	594	794	994	467	147	3.426
Transmission lines		7	7	68	134	168	34	0	418
Total:		***67***	***377***	***662***	***928***	***1.162***	***501***	***147***	***3.844***
Estimated devision of workers:									
Local residents	15%	10	57	99	139	174	75	22	577
Temporary in-migrants	3%	2	11	20	28	35	15	4	115
Foreign workers	20%	13	75	132	186	232	100	29	769
Domestic workers in camp	62%	42	234	410	575	720	311	91	2.383
Total:		***67***	***377***	***662***	***928***	***1.162***	***501***	***147***	***3.844***
Estimated multiplier effects (person-years):									
Local residents	0,65	7	37	65	90	113	49	14	375
Temporary in-migrants	0,50	1	6	10	14	17	8	2	58
Foreign workers	0,15	2	11	20	28	35	15	4	115
Domestic workers in camp	0,10	4	23	41	58	72	31	9	238
Total:		***14***	***77***	***135***	***190***	***238***	***102***	***30***	***786***
Division of indirect and induced jobs:									
Local residents	50%	5	31	54	76	95	41	12	**314**
People from outside the region	50%	8	46	81	114	143	61	18	**472**

TABLE 6:

NUMBER OF PERSON-YEARS ENGAGED IN OTHER CONSTRUCTION ACTIVITY IN THE CENTRAL EAST REGION

		2003	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*TOTAL:*
Construction projects:									
Road tunnel		50	80	60					190
Commercial buildings (incl. infrastructure)		38	38	38	38	38	38	38	266
Residential housing (incl. infrastructure)		0	107	130	362	195	0	0	794
Total:		***88***	***225***	***228***	***400***	***233***	***38***	***38***	***1.250***
Estimated division of workers:									
Local residents	10%	9	23	23	40	23	4	4	125
Temporary in-migrants	15%	13	34	34	60	35	6	6	188
Foreign workers	10%	9	23	23	40	23	4	4	125
Domestic workers in camp	65%	57	146	148	260	151	25	25	813
Total:		***88***	***225***	***228***	***400***	***233***	***38***	***38***	***1.250***
Estimated multiplier effects (person-years):									
Local residents	0,65	6	15	15	26	15	2	2	81
Temporary in-migrants	0,50	7	17	17	30	17	3	3	94
Foreign workers	0,15	1	3	3	6	3	1	1	19
Domestic workers in camp	0,10	6	15	15	26	15	2	2	81
Total:		***19***	***50***	***50***	***88***	***51***	***8***	***8***	***275***
Estimated division of indirect and induced jobs:									
Local residents	50%	8	20	20	35	21	3	3	**110**
People from outside the region	50%	12	30	30	53	31	5	5	**165**

TABLE 7:

ESTIMATED SALARIES AND SALARY-RELATED COSTS

From 2003 the average price index of 2002 is applied
All figures in '000 ISK

	2003	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***
Number of jobs in the plant, operation (person-years)	0	0	0	50	420	454	454
Estimated salaries per person-years (1% incr. above inflation)	3.800	3.838	3.876	3.915	3.954	3.994	4.034
Estimated salary-related costs per person-years (13%)	494	499	504	509	514	519	524
Estimated salaries and salary-related costs per person-years	4.294	4.337	4.380	4.424	4.468	4.513	4.558
Total salaries and salary-related costs:	***0***	***0***	***0***	***220.746***	***1.874.832***	***2.047.114***	***2.067.585***
Number of jobs in construction of the plant (person-years)	22	123	460	1.307	362		
Estimated salaries per person-years (1% incr. above inflation)	3.600	3.636	3.672	3.709	3.746		
Estimated salary-related costs per person-years (13%)	1.080	1.091	1.102	1.113	1.124		
Estimated salaries and salary-related costs per person-years	4.680	4.727	4.774	4.822	4.870		
Total salaries and salary-related costs:	***102.960***	***581.396***	***2.196.071***	***6.302.104***	***1.762.950***		
Total salaries and salary-related costs in operation and construction of the plant:	***102.960***	***581.396***	***2.196.071***	***6.522.849***	***3.637.782***	***2.047.114***	***2.067.585***

	2000-2001	***2001-2002***
Increase of wage index	1,09	1,06

Income from employment ('000 ISK)	***2000***	***Estim. 2001***	***Estim. 2002***
Average income per tax payer	1.968	2.145	2.274
Average income Males	2.546	2.775	2.942
Average income Females	1.407	1.534	1.626
Average income 25-65 years, Iceland	2.372	2.585	2.741
Average income 25-65 years, Reykjavík	2.439	2.659	2.818
Average income 25-65 years, East Region	2.182	2.378	2.521

TABLE 8:

THE IMPACT OF THE PLANT AND CONSTRUCTION ACTIVITY ON POPULATION GROWTH IN THE CENTRAL EAST REGION

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estm. population without plant and hydro project:	***8.060***	***8.000***	***7.940***	***7.940***	***7.940***	***7.940***	***7.940***	***7.940***	***7.940***
Plant and plant-related person years:									
Jobs in the plant						50	420	454	454
Indirect and induced jobs (Hydro project included)						32	273	295	295
Total:						***82***	***693***	***748***	***748***
Person-years in construction of plant and harbor:									
Local residents and temporary in-migrants			6	31	115	327	91	0	0
Indirect and induced jobs			2	11	42	120	33	0	0
Person-years in construction of hydro project and transmission lines:									
Local residents and temporary in-migrants			68	119	167	209	90	26	0
Indirect and induced jobs			31	54	76	95	41	12	0
Total person-years in construction and construction-related jobs:			106	215	400	751	255	38	0
Estimated of postponed projects (person-years) while construction is peak, i.e. from 2005-2006:			0	0	-50	-150	0	100	100
Net number of person-years in construction and construction-related:			106	215	350	601	255	138	100
Person-years as a ratio of population:		0,5	0,5	0,5	0,505	0,505	0,505	0,505	0,51
Estimated cumulative population growth as a result of construction:			212	431	694	1.191	505	274	196
Estimated cumulative population growth as a result of plant:			0	0	0	163	1.372	1.482	1.468
Estimated population:			***8.152***	***8.371***	***8.634***	***9.294***	***9.817***	***9.696***	***9.604***
Net in-migrant of people:			8.152	218	263	660	524	-121	-93
Estimated number of person-years:		***4.000***	***4.076***	***4.185***	***4.360***	***4.693***	***4.958***	***4.897***	***4.898***

TABLE 9:

ESTIMATED NEW DEMAND FOR COMMERCIAL AND PUBLIC BUILDINGS IN THE CENTRAL EAST REGION (Plant and Kárahnjúkar hydro project not included)

Total size of commercial buildings 2002 (sq. m)	
Shops and offices	47.594
Industrial buildings/factories	126.448
Warehouses	33.721
Total:	***207.763***

Total size of public buildings 2002 (sq. m)	
Health care institutions	13.250
Kindergartens	3.268
Elementary and Junior High schools	18.803
Senior High schools	5.326
Sport facilities	12.880
Other public buildings	63.579
Total:	***117.106***
Renewal of housing stock per year	0,5%
Person-years in public service (22%)	880
Farmers (8%)	320
Person-years in other activities	2.800
Total person-years:	***4.000***

Plant and plant-related jobs:	***Person-years***
Plant operation	295
Presumptions:	
Salaries as a % of total building cost	55%
Hourly rate, average	3.000 kr.
One person-year is in number of hours	2.200

Calculated demand for new commercial buildings (sq. m)

	Sq. m per person-years in year 2002	***Estim. sq. m per pers.-years 2002-2009***	***Estim. new build-ings 2002-2009***
	74	35	7.852
	Total sq. m:		***7.852***

Calculated demand for new public buildings (sq. m)

Demand for schools:	***New students***	***Space per addict. student (sq. m)***	***Total demand (sq. m)***
Students in kinderg. (5% of pop. growth)	73	8	587
Students in Elem./ Jun. High sch. (16%)	235	10	2.349
Students in Senior High schools (5%)	73	12	881
Total:	***382***		***3.817***

Demand for health care institutions:	
1,5 sq. m per new resident	***2.202***

Demand for other public buildings:	***Population growth***	***Sq. m***	
Ave. demand 4 sq. m. per new resident	1.468	4	***5.872***
Total demand for public buildings:			***11.891***

Calculated investments in commercial and public buildings ('000 ISK)

	Price per sq. M	***2002-2009***
Commercial buildings	125.000	981.500
Public buildings	150.000	1.783.650
Total:		***2.765.150***

Number of person-years in construction: ***230***

TABLE 10:

ESTIMATED NEW DEMAND FOR RESIDENTIAL HOUSING IN THE CENTRAL EAST REGION

	2002	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***TOTAL:***
Number of persons per housing unit	2,53	2,53	2,55	2,57	2,58	2,60	2,60	2,60	
Result of reduced family size		0	-25	-26	-13	-28	0	0	-92
Renewal of older houses		0,50%	0,50%	0,50%	0,50%	0,50%	0,50%	0,50%	
Number of housing units			16	16	16	16	16	16	96
Estimated population		8.152	8.371	8.634	9.294	9.817	9.696	9.604	
Result of population growth			86	102	256	201	-46	-36	563
New housing units per year		0	76	93	259	190	-31	-20	***567***
Increased number of apartments		0	76	93	259	139	0	0	
Calculated delay in construction						50	20	0	
Estimated number of housing units	3.190	3.190	3.266	3.359	3.618	3.757	3.757	3.757	
Housing stock (sq. m)	400.000							471.108	
Estimated investment (m. ISK)		0	1.144	1.390	3.881	2.091	0	0	***8.505***
Unit price (m. ISK)	15								
Person-years per one unit	1,4								
Person-years in construction		0	107	130	362	195	0	0	***794***

Unit price 15 m ISK is calculated for average size of housing unit 125 sq. m x 110 thousand ISK + garage + infrastructure

TABLE 11:

MUNICIPAL DEVELOPMENT PLAN FOR NEW RESIDENTIAL AND COMMERCIAL BUILDINGS

	Residential buildings				***Commercial buildings***			
	Minimum		***Maximum***		***Minimum***		***Maximum***	
	%	***No. of apartm.***	***%***	***No. of apartm.***	***%***	***Sq. meters***	***%***	***Sq. meters***
Municipality:								
Fjarðabyggð:	48%		64%		36%		52%	
Reyðarfjörður	31%	176	41%	232	20%	1.570	28%	2.198
Eskifjörður	12%	68	16%	91	8%	628	12%	942
Neskaupstaður	5%	28	7%	40	8%	628	12%	942
Austur-Hérað:								
Egilsstaðir	24%	136	40%	227	32%	2.513	48%	3.769
Fellahreppur:								
Fellabær	4%	23	8%	45	8%	628	12%	942
Búðahreppur:								
Fáskrúðsfjörður	4%	23	8%	45	4%	314	8%	628
Total:	***80%***	***454***	***120%***	***680***	***80%***	***6.281***	***120%***	***9.422***
Estimated demand:		***567***				***7.852***		

Figures are for the entire period 2003-2009
The aliminum plant buildings are not included

TABLE 12:

ESTIMATED NUMBER OF PERSON-YEARS AS A RESULT OF THE WHOLE PROJECT - ICELAND

		2002	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	
Operation:										
Alcoa plant				***0***	***0***	***50***	***420***	***454***	***454***	
Indirect and induced jobs:										
In the Central East Region	0,65			0	0	33	273	295	295	
Elsewhere in Iceland	1,5			0	0	75	630	680	680	
Total:				***0***	***0***	***108***	***903***	***975***	***975***	
Construction:										
										Total:
Plant and harbor		0	22	123	460	1.307	362	0	0	***2.274***
Hydro-power project		67	377	662	928	1.162	501	147	0	***3.844***
Other construction		0	88	225	228	400	233	38	38	***1.250***
Total:		***67***	***487***	***1.010***	***1.616***	***2.869***	***1.096***	***185***	***38***	***7.368***
Construction-related number of jobs - Iceland :	1,5	***101***	***731***	***1.515***	***2.424***	***4.304***	***1.644***	***278***	***57***	***11.052***
Total jobs (person-years):		***168***	***1.218***	***2.525***	***4.040***	***7.330***	***4.063***	***1.891***	***1.524***	
Percentage of person-years in Iceland:		***0,12%***	***0,86%***	***1,77%***	***2,80%***	***5,02%***	***2,75%***	***1,27%***	***1,01%***	

APPENDIX II
- HOUSING DEVELOPMENT PLAN IN FJARÐABYGGÐ MUNICIPALITY -

Housing development Plan in Fjarðabyggð municipality as proposed in the Municipal Plan

Eskifjörður	Local Plan or already built-up area	Residential area, Local Plan not yet prepared
Already built-up areas	30	
Barð 1	16	
Gunnarstún	8	
Dalur 2	62	
Dalur 3		35
total	116 apartments	35 apartments

Available Residential Area in Eskifjörður **151 apartments**

Neskaupstaður

Already built-up areas	10	
Bakkatún	14	
Bakkar 3	31	
Bakkar 4		8
total	55 apartments	8 apartments

Available Residential Area in Neskaupstaður **63 apartments**

Reyðarfjörður

Already built-up areas	23	
Oddnýjarhæð	29	
Miðbær	6	
Stekkir	35	
Melur 1	51	
Heiðarvegur - Efstagerði	17	
Bakkagerði1	138	
Stekkir 2		135
total	299 apartments	135 apartments

Available Residential Area in Reyðarfjörður **434 apartments**

Available Residential Area in Fjarðabyggð **648 apartments**

APPENDIX III
- A SURVEY AMONGST OUT-MIGRANTS FROM THE CENTRAL EAST REGION -

A survey amongst out-migrants from the Central East Region

The Institute of Social Sciences at the University of Iceland conducted a postal survey for Reyðarál in November and December 2000 amongst out-migrants from the East Region. The survey poll was 20-49 year old people that moved out of the Central East Region 1995-1999. The sample was 500 people and an amended sample of 487. Respondents are 236, which is 48%.

The sex ratio of respondents was rather even, or men (50.4%) and women (49.6%). The average age of respondents is 31 year. Of the respondents 78% live in the Reykjavík capital region but 22% elsewhere in Iceland. Of those who live elsewhere 42% live in north eastern Iceland inc. Akureyri.

Out-migrants from the East Region do not have high regard for the employment situation in the East Region highly in comparison with the community where they are presently living. About 73% are rather or very unhappy with the lack of diversity of employment opportunities in the East Region in comparison with the community they live in at present. About 62% are rather or very unhappy with income prospects in the East Region in comparison with their present home community. Job security is however considered quite good in the East Region in comparison with the present home community.

About 76% of respondents are rather or very displeased with price levels and 56% with the diversity and range of goods in retail outlets in the East Region in comparison with their present home community.

About 52% of respondents are very or rather pleased with the availability of suitable housing in the East Region in comparison with their home community, but considerable discontent was expressed with operational costs of houses in the East Region in a comparative perspective.

Of the respondents 54% are very or rather displeased with opportunities for post-secondary education in the East Region in comparison with their home community.

Opportunities for outdoor recreation and leisure are regarded more highly in the East Region than in their present home community.

The main reasons why people said they moved from the Eat Region was that they went away to study or they thought that employment opportunities were too narrow. Many also cited personal reasons. In a survey conducted in 1997 by professor Stefán Ólafsson it was revealed that employment was most often cited as a reason for out-migration. The results of this survey indicate similar causes.

About 39% of the out-migrants from the East Region have over the last 2 years considered a move back. More women (46%) than men (33%) have considered a move back. It is also age

dependent, the younger respondents seem to be more inclined to move back than the older ones.

In accordance with the view that poor employment situation is often mentioned as the main reason for out-migration it emerges that greater employment opportunities will increase considerably the probability that people will move back to the East Region. About 70% of those who said it was not likely that they would live in the East Region after 10 years said they would consider moving back to the East Region if more and better employment opportunities were created there. This position depends considerably on age. People aged 20-29 years (80%) and 30-39 years (67%) is more ready to consider moving back if more and better employment opportunities are created than people aged 40-49 years (27%).

The survey shows considerable motivation for people to move back to the East Region if more and better employment opportunities are created. About 17% said it was rather or very likely that they would move back if an aluminum plant was built in Reyðarfjörður, but 49% said it was rather or very unlikely. This position is age dependent as the young people are more motivated to move back than the older people.

The out-migrants from the East Region are rather supportive towards power-intensive industries in general. About 60% say they are rather or very positive but 18% are very or rather negative. Men (68%) are more positive than women (53%).

A great majority of the out-migrants is very or rather supportive of an aluminum plant in Reyðarfjörður (66%). About 23% of them are rather or very much against it. More men (69%) are supportive than women (63%).

About 79% of the out-migrants think that an aluminum plant in Reyðarfjörður will strengthen the local economy and the communities rather or very much. Only 10% think the plant will strengthen the communities and local economy very or rather little. About 38% think that very or rather many out-migrants from the East Region will move back if the plant project goes ahead. About 29% think that very or rather few will move back.

Overview of respondents

Sex	Men	Women	Total
Age			
20-29 years	48,3	51,7	116
30-39 years	53,6	46,4	84
40-49 years	50,0	50,0	36
Residence			
Reykjavík Capital Region	51,9	48,1	183
Rest of Iceland	45,3	54,7	53
Likely future occupation			
Manual / retail / mechanical	56,6	43,4	53
Tradesman / farming / fishing	75,0	25,0	24
Office / specialised jobs	12,5	87,5	24
Professional, technical, management,other	64,7	35,3	85
What is your marital status ?			
Married/co-habiting	50,9	49,1	163
Single	48,6	51,4	70
Do you have children ?			
Yes	46,0	54,0	150
No	57,1	42,9	84

Age	20-29 years	30-39 years	40-49 years	Total
Sex				
Men	47,1	37,8	15,1	119
Women	51,3	33,3	15,4	117
Residence				
Reykjavík Capital Region	52,5	32,2	15,3	183
Rest of Iceland	37,7	47,2	15,1	53
Likely future occupation				
Manual / retail / mechanical	49,1	32,1	18,9	53
Tradesman / farming / fishing	45,8	45,8	8,3	24
Office / specialised jobs	58,3	29,2	12,5	24
Professional, technical, management,other	29,4	49,4	21,2	85
What is your marital status?				
Married/co-habiting	44,2	38,7	17,2	163
Single	60,0	28,6	11,4	70
Do you have children ?				
Yes	34,0	44,0	22,0	150
No	76,2	20,2	3,6	84

Overview of respondents

Residence	Reykjavík Capital Region	Rest of Iceland	Total
Sex			
Men	79,8	20,2	119
Women	75,2	24,8	117
Age			
20-29 years	48,3	17,2	116
30-39 years	53,6	29,8	84
40-49 years	50,0	22,2	36
Likely future occupation			
Manual / retail / mechanical	79,2	20,8	53
Tradesman / farming / fishing	79,2	20,8	24
Office / specialised jobs	83,3	16,7	24
Professional, technical, management,other	76,5	23,5	85
What is your marital status?			
Married/co-habiting	77,9	22,1	163
Single	75,7	24,3	70
Do you have children ?			
Yes	75,3	24,7	150
No	81,0	19,0	84

What is your likely future occupation?	Manual/retail mechanical	Tradesman farming/fishing	Office specialised jobs	Professional/technical management/ other	Total
Sex					
Men	28,3	17,0	2,8	51,9	106
Women	28,8	7,5	26,3	37,5	80
Age					
20-29 years	34,2	14,5	18,4	32,9	76
30-39 years	22,1	14,3	9,1	54,5	77
40-49 years	30,3	6,1	9,1	54,5	33
Residence					
Reykjavík Capital Region	28,8	13,0	13,7	44,5	146
Rest of Iceland	27,5	12,5	10,0	50,0	40
What is your marital status?					
Married/co-habiting	26,6	14,8	10,9	47,7	128
Single	32,1	7,1	17,9	42,9	56
Do you have children?					
Yes	25,8	12,9	12,9	48,4	124
No	34,4	11,5	13,1	41,0	61

Overview of respondents

Marital status

	Married/co-habiting	*Single*	*Total*
Sex			
Men	70,9	29,1	117
Women	69,0	31,0	116
Age			
20-29 years	63,2	36,8	114
30-39 years	75,9	24,1	83
40-49 years	77,8	22,2	36
Residence			
Reykjavík Capital Region	70,6	29,4	180
Rest of Iceland	67,9	32,1	53
Likely future occupation			
Manual / retail / mechanical	65,4	34,6	52
Tradesman / farming / fishing	82,6	17,4	23
Office / specialised jobs	58,3	41,7	24
Professional, technical, management,other	71,8	28,2	85
Do you have children ?			
Yes	77,2	22,8	149
No	57,1	42,9	84

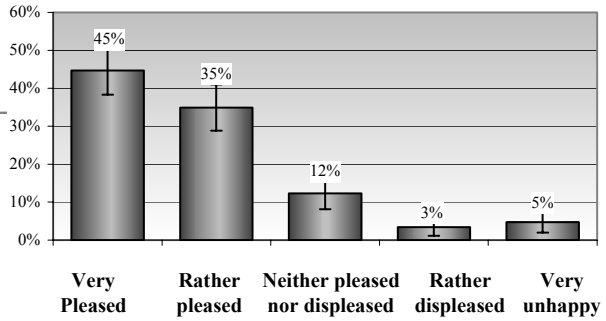
Do you have children?

	Yes	*No*	*Total*
Sex			
Men	59,0	41,0	117
Women	69,2	30,8	117
Age			
20-29 years	44,3	55,7	115
30-39 years	79,5	20,5	83
40-49 years	91,7	8,3	36
Residence			
Reykjavík Capital Region	62,4	37,6	181
Rest of Iceland	69,8	30,2	53
Likely future occupation			
Manual / retail / mechanical	60,4	39,6	53
Tradesman / farming / fishing	69,6	30,4	23
Office / specialised jobs	66,7	33,3	24
Professional, technical, management,other	70,6	29,4	85
What is your marital status?			
Married/co-habiting	70,6	29,4	163
Single	48,6	51,4	70

How satisfied or unsatisfied are you with employment opportunities in your present home community?

	Number	Percen-tage	Confidence-range
Very pleased	105	44,7	6,4
Rather pleased	82	34,9	6,1
Neutral	29	12,3	4,2
Rather displeased	8	3,4	2,3
Very unhappy	11	4,7	2,7
Total	235	100,0	

* Percentage of respondents

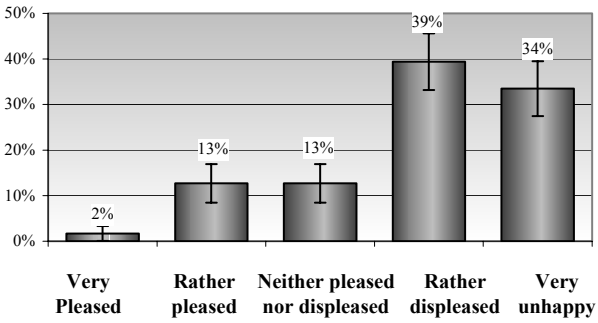


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	119	84,0	10,9	5,0
Women	116	75,0	13,8	11,2
Age				
20-29 years	116	81,0	12,9	6,0
30-39 years	83	73,5	15,7	10,8
40-49 years	36	88,9	2,8	8,3
Residence				
Reykjavík Capital Region	182	85,7	8,8	5,5
Rest of Iceland	53	58,5	24,5	17,0
Likely future occupation				
Manual / retail / mechanical	53	73,6	15,1	11,3
Tradesman / farming / fishing	24	83,3	16,7	0,0
Office / specialised jobs	24	83,3	8,3	8,3
Professional, technical, management,other	85	83,5	8,2	8,2
What is your marital status				
Married/co-habiting	162	77,2	13,0	9,9
Single	70	85,7	10,0	4,3
Do you have children ?				
Yes	150	80,7	10,7	8,7
No	83	78,3	14,5	7,2

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Diversity of employment

	Number	Percen-tage	Confidence-range
Very pleased	4	1,7	1,6
Rather pleased	30	12,7	4,2
Neutral	30	12,7	4,2
Rather displeased	93	39,4	6,2
Very unhappy	79	33,5	6,0
Total	236	100,0	

* Percentage of respondents

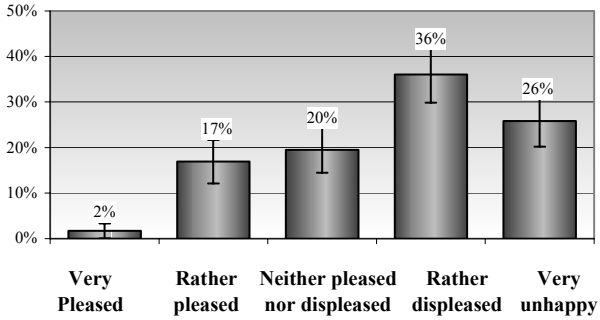


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	119	10,9	14,3	74,8
Women	117	17,9	11,1	70,9
Age				
20-29 years	116	8,6	18,1	73,3
30-39 years	84	20,2	8,3	71,4
40-49 years	36	19,4	5,6	75,0
Residence				
Reykjavík Capital Region	183	8,7	12,6	78,7
Rest of Iceland	53	34,0	13,2	52,8
Likely future occupation				
Manual / retail / mechanical	53	7,5	13,2	79,2
Tradesman / farming / fishing	24	8,3	16,7	75,0
Office / specialised jobs	24	16,7	4,2	79,2
Professional, technical, management,other	85	20,0	11,8	68,2
What is your marital status				
Married/co-habiting	163	15,3	12,9	71,8
Single	70	12,9	11,4	75,7
Do you have children ?				
Yes	150	14,7	10,0	75,3
No	84	14,3	17,9	67,9

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Income prospects

	Number	Percen-tage	Confidence-range
Very pleased	4	1,7	1,6
Rather pleased	40	16,9	4,8
Neutral	46	19,5	5,1
Rather displeased	85	36,0	6,1
Very unhappy	61	25,8	5,6
Total	236	100,0	

* Percentage of respondents

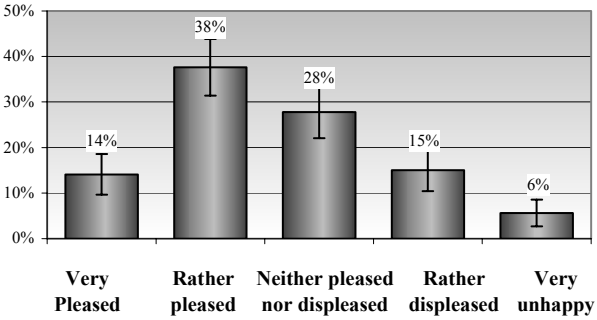


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	119	18,5	18,5	63,0
Women	117	18,8	20,5	60,7
Age				
20-29 years	116	13,8	18,1	68,1
30-39 years	84	23,8	25,0	51,2
40-49 years	36	22,2	11,1	66,7
Residence				
Reykjavík Capital Region	183	16,9	16,9	66,1
Rest of Iceland	53	24,5	28,3	47,2
Likely future occupation				
Manual / retail / mechanical	53	17,0	18,9	64,2
Tradesman / farming / fishing	24	16,7	12,5	70,8
Office / specialised jobs	24	16,7	12,5	70,8
Professional, technical, management,other	85	20,0	22,4	57,6
What is your marital status				
Married/co-habiting	163	19,0	20,2	60,7
Single	70	17,1	15,7	67,1
Do you have children ?				
Yes	150	16,7	20,0	63,3
No	84	21,4	17,9	60,7

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Availability of suitable housing

	Number	Percen-tage	Confidence-range
Very pleased	33	14,1	4,5
Rather pleased	88	37,6	6,2
Neutral	65	27,8	5,7
Rather displeased	35	15,0	4,6
Very unhappy	13	5,6	2,9
Total	234	100,0	

* Percentage of respondents

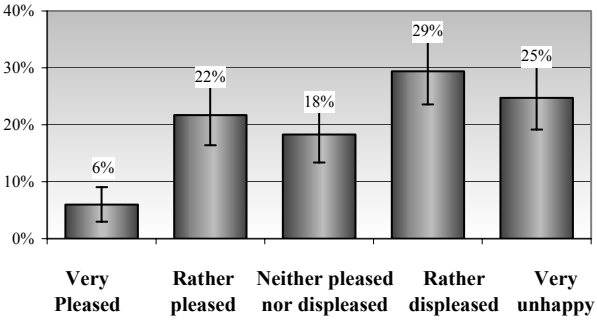


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	118	51,7	24,6	23,7
Women	116	51,7	31,0	17,2
Age				
20-29 years	116	49,1	32,8	18,1
30-39 years	84	53,6	22,6	23,8
40-49 years	34	55,9	23,5	20,6
Residence				
Reykjavík Capital Region	181	53,0	25,4	21,5
Rest of Iceland	53	47,2	35,8	17,0
Likely future occupation				
Manual / retail / mechanical	53	47,2	30,2	22,6
Tradesman / farming / fishing	24	54,2	20,8	25,0
Office / specialised jobs	24	54,2	20,8	25,0
Professional, technical, management,other	84	56,0	27,4	16,7
What is your marital status				
Married/co-habiting	161	52,2	25,5	22,4
Single	70	50,0	34,3	15,7
Do you have children ?				
Yes	148	51,4	25,0	23,6
No	84	52,4	33,3	14,3

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Opportunities for post secondary education

	Number	Percen-tage	Confidence-range
Very pleased	14	6,0	3,0
Rather pleased	51	21,7	5,3
Neutral	43	18,3	4,9
Rather displeased	69	29,4	5,8
Very unhappy	58	24,7	5,5
Total	235	100,0	

* Percentage of respondents

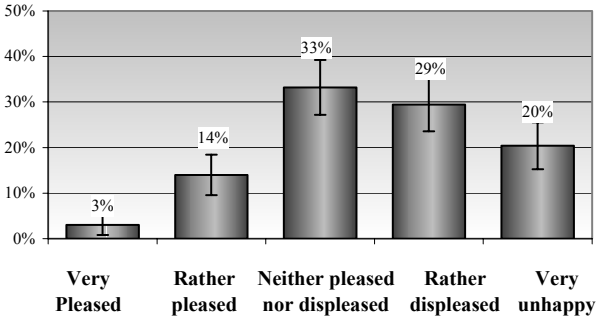


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	118	24,6	21,2	54,2
Women	117	30,8	15,4	53,8
Age				
20-29 years	116	29,3	22,4	48,3
30-39 years	84	25,0	13,1	61,9
40-49 years	35	28,6	17,1	54,3
Residence				
Reykjavík Capital Region	182	24,7	18,7	56,6
Rest of Iceland	53	37,7	17,0	45,3
Likely future occupation				
Manual / retail / mechanical	52	28,8	21,2	50,0
Tradesman / farming / fishing	24	20,8	37,5	41,7
Office / specialised jobs	24	33,3	12,5	54,2
Professional, technical, management,other	85	31,8	12,9	55,3
What is your marital status				
Married/co-habiting	162	26,5	16,7	56,8
Single	70	31,4	21,4	47,1
Do you have children ?				
Yes	150	25,3	18,0	56,7
No	83	32,5	19,3	48,2

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Operating cost of houses

	Number	Percen-tage	Confidence-range
Very pleased	7	3,0	2,2
Rather pleased	33	14,0	4,4
Neutral	78	33,2	6,0
Rather displeased	69	29,4	5,8
Very unhappy	48	20,4	5,2
Total	235	100,0	

* Percentage of respondents

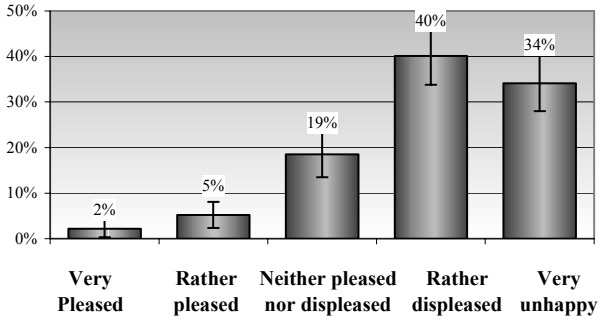


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	118	13,6	33,1	53,4
Women	117	20,5	33,3	46,2
Age				
20-29 years	115	17,4	41,7	40,9
30-39 years	84	16,7	26,2	57,1
40-49 years	36	16,7	22,2	61,1
Residence				
Reykjavík Capital Region	182	17,6	29,1	53,3
Rest of Iceland	53	15,1	47,2	37,7
Likely future occupation				
Manual / retail / mechanical	52	17,3	34,6	48,1
Tradesman / farming / fishing	24	8,3	29,2	62,5
Office / specialised jobs	24	20,8	29,2	50,0
Professional, technical, management,other	85	16,5	37,6	45,9
What is your marital status				
Married/co-habiting	162	14,8	31,5	53,7
Single	70	21,4	38,6	40,0
Do you have children ?				
Yes	150	16,7	27,3	56,0
No	83	18,1	44,6	37,3

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Price levels

	Number	Percen-tage	Confidence-range
Very pleased	5	2,2	1,9
Rather pleased	12	5,2	2,9
Neutral	43	18,5	5,0
Rather displeased	93	40,1	6,3
Very unhappy	79	34,1	6,1
Total	232	100,0	

* Percentage of respondents

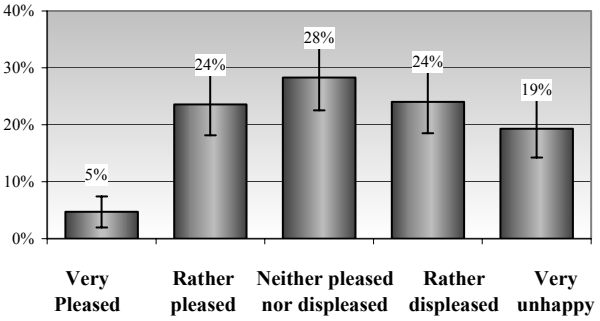


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	117	7,7	14,5	77,8
Women	115	7,0	22,6	70,4
Age				
20-29 years	115	7,8	21,7	70,4
30-39 years	83	7,2	14,5	78,3
40-49 years	34	5,9	17,6	76,5
Residence				
Reykjavík Capital Region	180	7,2	15,6	77,2
Rest of Iceland	52	7,7	28,8	63,5
Likely future occupation				
Manual / retail / mechanical	51	3,9	15,7	80,4
Tradesman / farming / fishing	24	4,2	4,2	91,7
Office / specialised jobs	23	8,7	17,4	73,9
Professional, technical, management,other	84	9,5	25,0	65,5
What is your marital status				
Married/co-habiting	160	7,5	16,3	76,3
Single	69	7,2	24,6	68,1
Do you have children ?				
Yes	146	6,8	16,4	76,7
No	84	8,3	22,6	69,0

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Stability of employment

	Number	Percen-tage	Confidence-range
Very pleased	11	4,7	2,7
Rather pleased	55	23,6	5,5
Neutral	66	28,3	5,8
Rather displeased	56	24,0	5,5
Very unhappy	45	19,3	5,1
Total	233	100,0	

* Percentage of respondents

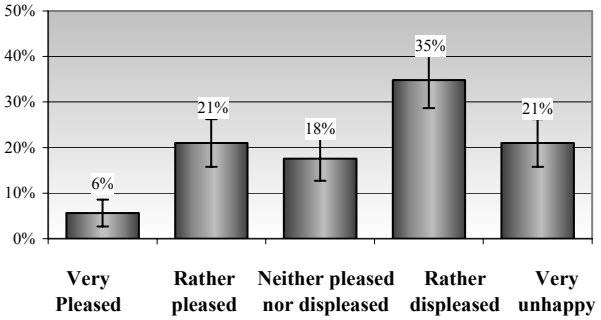


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	117	26,5	29,1	44,4
Women	116	30,2	27,6	42,2
Age				
20-29 years	115	23,5	33,0	43,5
30-39 years	84	33,3	26,2	40,5
40-49 years	34	32,4	17,6	50,0
Residence				
Reykjavík Capital Region	180	27,8	24,4	47,8
Rest of Iceland	53	30,2	41,5	28,3
Likely future occupation				
Manual / retail / mechanical	52	25,0	26,9	48,1
Tradesman / farming / fishing	24	16,7	29,2	54,2
Office / specialised jobs	23	13,0	39,1	47,8
Professional, technical, management,other	84	35,7	33,3	31,0
What is your marital status				
Married/co-habiting	160	30,6	24,4	45,0
Single	70	22,9	38,6	38,6
Do you have children ?				
Yes	148	25,0	26,4	48,6
No	83	34,9	32,5	32,5

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Diversity and range of goods in retail outlets

	Number	Percen-tage	Confidence-range
Very pleased	13	5,6	3,0
Rather pleased	49	21,0	5,2
Neutral	41	17,6	4,9
Rather displeased	81	34,8	6,1
Very unhappy	49	21,0	5,2
Total	233	100,0	

* Percentage of respondents

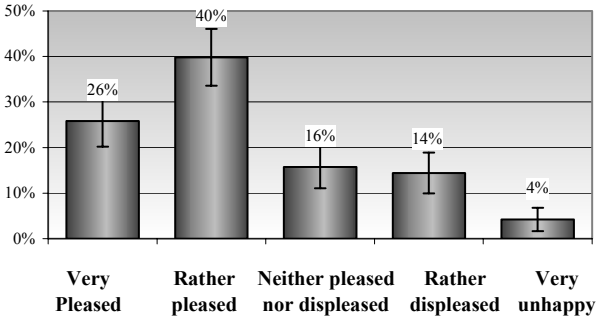


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	116	25,0	14,7	60,3
Women	117	28,2	20,5	51,3
Age				
20-29 years	116	27,6	18,1	54,3
30-39 years	83	22,9	16,9	60,2
40-49 years	34	32,4	17,6	50,0
Residence				
Reykjavík Capital Region	180	23,3	17,8	58,9
Rest of Iceland	53	37,7	17,0	45,3
Likely future occupation				
Manual / retail / mechanical	52	13,5	26,9	59,6
Tradesman / farming / fishing	24	33,3	0,0	66,7
Office / specialised jobs	24	45,8	12,5	41,7
Professional, technical, management,other	83	31,3	18,1	50,6
What is your marital status				
Married/co-habiting	160	24,4	19,4	56,3
Single	70	32,9	14,3	52,9
Do you have children ?				
Yes	149	23,5	18,1	58,4
No	82	32,9	17,1	50,0

How pleased or displeased were you with the following quality of life factors in the Central East Region in comparison with the community you live in at present?
Outdoor recreation and leisure

	Number	Percen-tage	Confidence-range
Very pleased	61	25,8	5,6
Rather pleased	94	39,8	6,2
Neutral	37	15,7	4,6
Rather displeased	34	14,4	4,5
Very unhappy	10	4,2	2,6
Total	236	100,0	

* Percentage of respondents

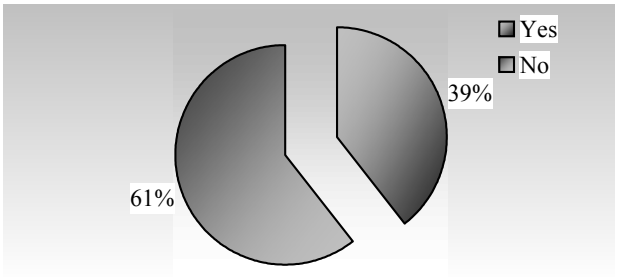


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Men	119	70,6	12,6	16,8
Women	117	60,7	18,8	20,5
Age				
20-29 years	116	62,1	14,7	23,3
30-39 years	84	70,2	16,7	13,1
40-49 years	36	66,7	16,7	16,7
Residence				
Reykjavík Capital Region	183	65,0	14,8	20,2
Rest of Iceland	53	67,9	18,9	13,2
Likely future occupation				
Manual / retail / mechanical	53	66,0	18,9	15,1
Tradesman / farming / fishing	24	66,7	4,2	29,2
Office / specialised jobs	24	58,3	20,8	20,8
Professional, technical, management,other	85	74,1	14,1	11,8
What is your marital status				
Married/co-habiting	163	67,5	14,7	17,8
Single	70	64,3	18,6	17,1
Do you have children ?				
Yes	150	62,7	16,0	21,3
No	84	72,6	15,5	11,9

Have you during the last two years considered moving back to the Central East Region?

	Number	Percentage*	Confidence-range
Yes	91	39,4	6,3
No	140	60,6	6,3
Total	231	100,0	

* Percentage of respondents

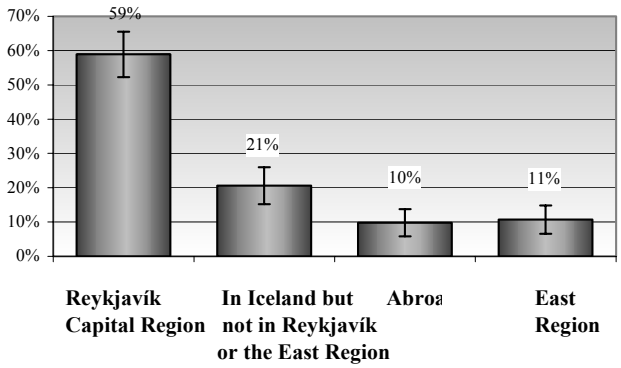


Sex	**Number**	**Yes**	**No**
Men	116	32,8	67,2
Women	115	46,1	53,9
Age			
20-29 years	113	45,1	54,9
30-39 years	82	39,0	61,0
40-49 years	36	22,2	77,8
Residence			
Reykjavík Capital Region	180	36,7	63,3
Rest of Iceland	51	49,0	51,0
Likely future occupation			
Manual / retail / mechanical	52	30,8	69,2
Tradesman / farming / fishing	23	56,5	43,5
Office / specialised jobs	23	26,1	73,9
Professional, technical, management,other	85	38,8	61,2
What is your marital status			
Married/co-habiting	160	42,5	57,5
Single	68	33,8	66,2
Do you have children ?			
Yes	149	39,6	60,4
No	80	40,0	60,0

Where do you think you will most likely live after 10 years?

	Number	Percentage*	Confidence-range
Capital Region	126	58,9	6,6
Rest of Iceland	44	20,6	5,4
Abroad	21	9,8	4,0
East Region	23	10,7	4,1
Total	214	100,0	

* Percentage of respondents

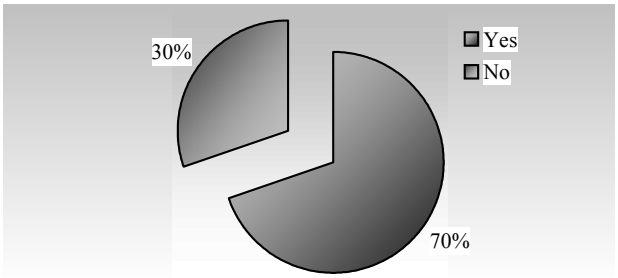


Sex	Number	Not in East Region	In East Region
Men	105	92,4	7,6
Women	109	86,2	13,8
Age			
20-29 years	102	88,2	11,8
30-39 years	78	88,5	11,5
40-49 years	34	94,1	5,9
Residence			
Reykjavík Capital Region	167	88,6	11,4
Rest of Iceland	47	91,5	8,5
Likely future occupation			
Manual / retail / mechanical	48	85,4	14,6
Tradesman / farming / fishing	19	89,5	10,5
Office / specialised jobs	24	91,7	8,3
Professional, technical, management,other	80	91,3	8,8
What is your marital status			
Married/co-habiting	149	87,2	12,8
Single	64	93,8	6,3
Do you have children ?			
Yes	139	86,3	13,7
No	74	94,6	5,4

Would you consider moving back to the East Region if more and better employment opportunities were created?

	Number	Percentage*	Confidence-range
Yes	94	69,6	7,8
No	41	30,4	7,8
Total	135	100,0	

* Percentage of respondents

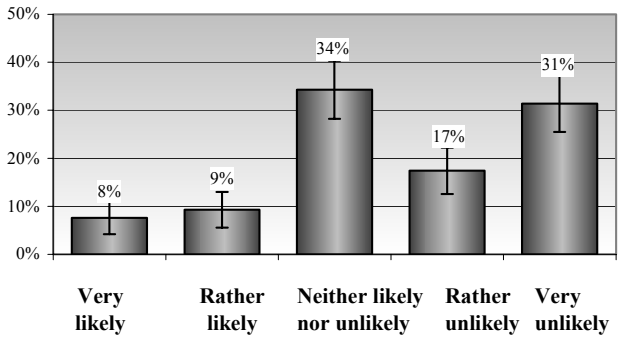


Sex	**Number**	**Yes**	**No**
Men	74	71,6	28,4
Women	61	67,2	32,8
Age			
20-29 years	74	79,7	20,3
30-39 years	46	67,4	32,6
40-49 years	15	26,7	73,3
Residence			
Reykjavík Capital Region	112	70,5	29,5
Rest of Iceland	23	65,2	34,8
Likely future occupation			
Manual / retail / mechanical	25	64,0	36,0
Tradesman / farming / fishing	16	81,3	18,8
Office / specialised jobs	15	60,0	40,0
Professional, technical, management,other	49	67,3	32,7
What is your marital status			
Married/co-habiting	90	68,9	31,1
Single	43	69,8	30,2
Do you have children ?			
Yes	81	65,4	34,6
No	53	75,5	24,5

Is it likely or unlikely that you will return to the Central East Region if an aluminum plant will be located in Reyðarfjörður?

	Number	Percentage*	Confidence-range
Very likely	18	7,6	3,4
Rather likely	22	9,3	3,7
Neutral	81	34,3	6,1
Rather unlikely	41	17,4	4,8
Very unlikely	74	31,4	5,9
Total	236	100,0	

* Percentage of respondents

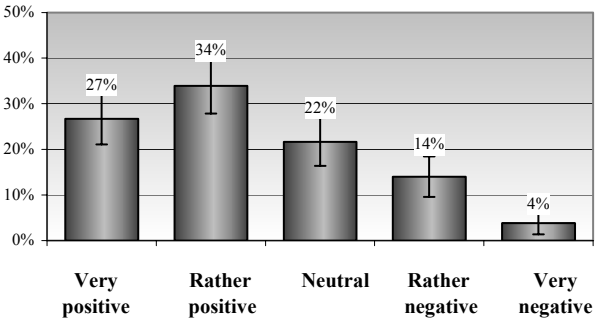


Sex	**Number**	**Likely**	**Neutral**	**Unlikely**
Men	119	15,1	31,9	52,9
Women	117	18,8	36,8	44,4
Age				
20-29 years	116	19,0	39,7	41,4
30-39 years	84	19,0	26,2	54,8
40-49 years	36	5,6	36,1	58,3
Residence				
Reykjavík Capital Region	183	15,3	35,0	49,7
Rest of Iceland	53	22,6	32,1	45,3
Likely future occupation				
Manual / retail / mechanical	53	18,9	30,2	50,9
Tradesman / farming / fishing	24	37,5	45,8	16,7
Office / specialised jobs	24	12,5	25,0	62,5
Professional, technical, management,other	85	9,4	34,1	56,5
What is your marital status				
Married/co-habiting	163	19,6	33,7	46,6
Single	70	10,0	35,7	54,3
Do you have children ?				
Yes	150	20,0	34,0	46,0
No	84	11,9	34,5	53,6

Are you in general positive, neutral or negative towards the present power-intensive industries in Iceland?

	Number	Percentage*	Confidence-range
Very positive	63	26,7	5,6
Rather positive	80	33,9	6,0
Neutral	51	21,6	5,3
Rather negative	33	14,0	4,4
Very negative	9	3,8	2,4
Total	236	100,0	

* Percentage of respondents

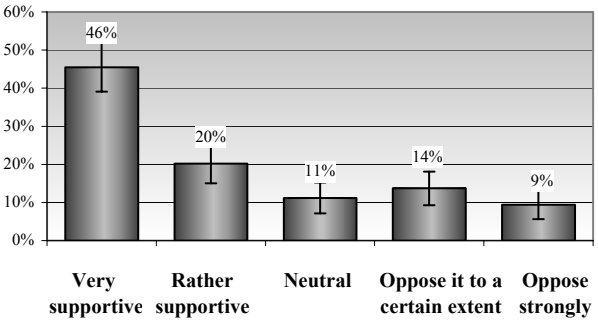


Sex	**Number**	**Positive**	**Neutral**	**Negative**
Men	119	68,1	14,3	17,6
Women	117	53,0	29,1	17,9
Age				
20-29 years	116	56,0	25,9	18,1
30-39 years	84	66,7	17,9	15,5
40-49 years	36	61,1	16,7	22,2
Residence				
Reykjavík Capital Region	183	60,7	21,9	17,5
Rest of Iceland	53	60,4	20,8	18,9
Likely future occupation				
Manual / retail / mechanical	53	64,2	22,6	13,2
Tradesman / farming / fishing	24	75,0	20,8	4,2
Office / specialised jobs	24	54,2	33,3	12,5
Professional, technical, management,other	85	58,8	16,5	24,7
What is your marital status?				
Married/co-habiting	163	63,2	20,2	16,6
Single	70	54,3	24,3	21,4
Do you have children ?				
Yes	150	63,3	20,7	16,0
No	84	56,0	22,6	21,4

Do you support, are you neutral or do you oppose an aluminum plant in Reyðafjörður?

	Number	Percentage*	Confidence-range
Very supportive	106	45,5	6,4
Rather supportive	47	20,2	5,2
Neutral	26	11,2	4,0
Oppose it to a certain extent	32	13,7	4,4
Oppose strongly	22	9,4	3,7
Total	233	100,0	

* Percentage of respondents

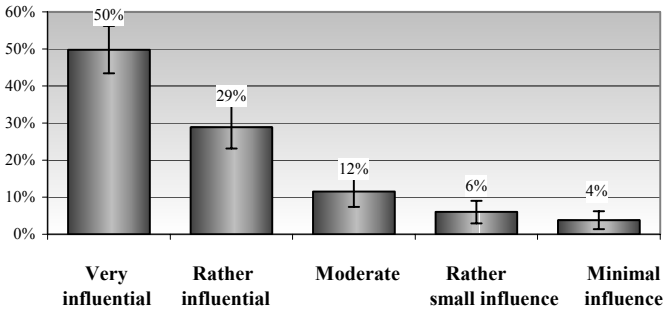


Sex	**Number**	**Supportive**	**Neutral**	**Oppose it**
Men	118	68,6	6,8	24,6
Women	115	62,6	15,7	21,7
Age				
20-29 years	114	64,9	14,0	21,1
30-39 years	83	69,9	9,6	20,5
40-49 years	36	58,3	5,6	36,1
Residence				
Reykjavík Capital Region	181	67,4	9,9	22,7
Rest of Iceland	52	59,6	15,4	25,0
Likely future occupation				
Manual / retail / mechanical	53	67,9	13,2	18,9
Tradesman / farming / fishing	23	87,0	4,3	8,7
Office / specialised jobs	23	60,9	21,7	17,4
Professional, technical, management,other	84	64,3	7,1	28,6
What is your marital status?				
Married/co-habiting	161	68,3	9,9	21,7
Single	69	59,4	14,5	26,1
Do you have children ?				
Yes	148	68,2	10,8	20,9
No	83	61,4	12,0	26,5

How influential do you think an aluminum plant in Reyðarfjörður will be in strengthening the local economy in the Central East Region?

	Number	Percentage*	Confidence-range
Very influential	117	49,8	6,4
Rather influential	68	28,9	5,8
Moderate	27	11,5	4,1
Rather small influence	14	6,0	3,0
Minimal influence	9	3,8	2,4
Total	235	100,0	

* Percentage of respondents

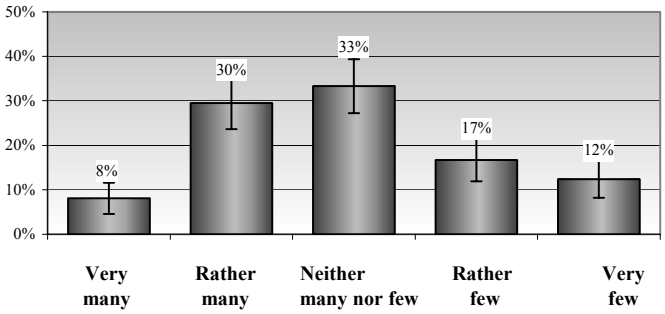


Sex	**Number**	**Influential**	**Moderate**	**Rather small/minimal**
Men	119	79,8	8,4	11,8
Women	116	77,6	14,7	7,8
Age				
20-29 years	116	79,3	12,9	7,8
30-39 years	84	79,8	11,9	8,3
40-49 years	35	74,3	5,7	20,0
Residence				
Reykjavík Capital Region	182	80,8	9,3	9,9
Rest of Iceland	53	71,7	18,9	9,4
Likely future occupation				
Manual / retail / mechanical	52	82,7	7,7	9,6
Tradesman / farming / fishing	24	87,5	12,5	0,0
Office / specialised jobs	24	66,7	12,5	20,8
Professional, technical, management,other	85	80,0	9,4	10,6
What is your marital status?				
Married/co-habiting	163	81,0	9,8	9,2
Single	69	73,9	15,9	10,1
Do you have children ?				
Yes	149	81,2	10,1	8,7
No	84	75,0	14,3	10,7

Do you think many people from the Central East Region will return to the Region if an aluminum plant is built in Reyðarfjörður?

	Number	Percentage*	Confidence-range
Very many	19	8,1	3,5
Rather many	69	29,5	5,8
Neither many nor few	78	33,3	6,0
Rather few	39	16,7	4,8
Very few	29	12,4	4,2
Total	234	100,0	

* Percentage of respondents



Sex	**Number**	**Many**	**Neither many nor few**	**Few**
Men	118	39,0	27,1	33,9
Women	116	36,2	39,7	24,1
Age				
20-29 years	115	38,3	34,8	27,0
30-39 years	84	42,9	27,4	29,8
40-49 years	35	22,9	42,9	34,3
Residence				
Reykjavík Capital Region	181	38,1	33,1	28,7
Rest of Iceland	53	35,8	34,0	30,2
Likely future occupation				
Manual / retail / mechanical	52	34,6	28,8	36,5
Tradesman / farming / fishing	24	54,2	20,8	25,0
Office / specialised jobs	24	29,2	41,7	29,2
Professional, technical, management,other	85	37,6	34,1	28,2
What is your marital status?				
Married/co-habiting	161	42,9	30,4	26,7
Single	70	25,7	40,0	34,3
Do you have children ?				
Yes	150	41,3	32,0	26,7
No	82	31,7	35,4	32,9

APPENDIX IV
- A SURVEY AMONGST YOUNG PEOPLE IN THE CENTRAL EAST REGION -

Survey amongst young people in the Central East Region

The Institute of Social Sciences at the University of Iceland conducted a postal survey for Reyðarál amongst young people 18-28 years of age living in the Central East Region. The survey was carried out in November and December 2000. Of an initial sample of 400, and an amended sample of 364, there were 203 respondents, or 56%.

The sex ratio was rather even, 55% women and 45% men. Average age was just over 22 years. About 37% are living in Fjarðabyggð. About 44% are single, about 39% married or co-habiting and 17% in a permanent relationship but not co-habiting. Of the respondents 41% are students and 59% working.

The respondents are in general displeased with the employment situation in their home community, both because of lack of diversity of employment opportunities and because of inadequate income prospects. They are however more pleased with job security. They are rather displeased with the diversity and range of goods in retail outlets (51%) and even more with price levels (70%) in their home community.

About 43% of respondents are very or rather pleased with the availability of suitable housing, but this view varies between communities. Of the respondents 43% are very or rather pleased with opportunities for post-secondary education in the region. About 56% are very or rather pleased with opportunities for outdoor recreation and leisure in their home community.

When all the above factors are analyzed in relation to where the respondents think they will live after 10 years a significant difference is observed for 7 variables out of 10. Respondents that intend not to live in the region after 10 years are more unhappy with the following factors: Employment opportunities, diversity of employment, income prospects, job security, price levels, diversity and range of goods in retail outlets and opportunities for outdoor recreation and leisure. It can be concluded that all these factors intensify out-migration of young people from the region. It therefore seems most important to strengthen the local economy and improve retailing in order to retain the young people in the region. Other factors such as opportunities for post-secondary education and housing are not as influential factors in people's decision whether to stay or move away.

About 68% of the respondents have during the last 2 years contemplated a move from the Central East Region. This is age dependent. This contemplation is most frequent in the age group 20-22 years (89%). A higher ratio of students (76%) has considered a move out than those who are working (62%).

After 10 years 43% intend to live in the region but 57% elsewhere. Of those who intend to live elsewhere 43% think they will live in the Reykjavik capital region and 32% elsewhere in Iceland.

Single people are more likely than those who are married or co-habiting to move out of the region and students are more likely to leave the region than those who work.

Those who said they expected to live outside the East region after 10 years were also asked if they were more likely to stay if added and better employment opportunities were created in their home community. About 90% said that added and better employment opportunities would increase the likelihood of them staying in the region.

Generally speaking young people in the East Region are rather positive towards the presently operating power intensive industries in Iceland. About 67% are positive and only 8% negative. Those who work are more positive than students.

Young people in the East Region are generally in favor of an aluminum plant being built in Reyðarfjörður. About 56% are very supportive and about ¾ are very or rather supportive.

About 40% said they were interested in working at the plant if it will be built in Reyðarfjörður. This position varies according to sex and residence. Men (53%) are generally more interested than women (29%). People in Fjarðabyggð (52.5%) and in the fjord communities south of Fjarðabyggð (50%) are more interested than people in Seyðisfjörður (41.2%) and in Fljótsdalshérað, i.e. Egilsstaðir and surrounding area (25.4%).

About 87% think that an aluminum plant in Reyðarfjörður will strengthen the local economy in the East Region very or rather much. About 59% of respondents think that a plant will lead to higher salaries in the region and about 40% think salaries will remain similar, but almost none that salaries will decrease.

Just over ¾ of respondents think that the aluminum plant will lead to much or rather better community life.

When asked about the impact of the plant on out-migration, about 82% think that out-migration will decline and only 3% that it will increase.

Overview of respondents: Young people in the Central East Region

Sex			
	Male	*Female*	*Total no.*
Age			
18-19	41,8	58,2	55
20-22	47,3	52,7	55
23-25	42,1	57,9	38
26-28	50,0	50,0	54
Residence			
Sub-region 1	44,4	55,6	81
Sub-region 2	41,2	58,8	17
Sub-region 3	48,0	52,0	75
Sub-region 4	44,4	55,6	27
Likely future occupation			
Manual / retail / mechanical	47,1	52,9	34
Tradesman / farming / fishing	45,9	54,1	37
Office / specialised jobs	12,5	87,5	32
Professional, technical, management,other	50,0	50,0	64
What is your marital status?			
Married/co-habiting	35,4	64,6	79
In a permanent relationship but not living toghether	52,9	47,1	34
Widow (er), single, divorced	51,7	48,3	89
Are you studying or do you work?			
Study	37,5	62,5	80
Work	50,4	49,6	115

Sub-Region 1 Egilsstaðir / Fellabær / Fljótsdalshérað
Sub-Region 2 Seyðisfjörður / Mjóifjörður
Sub-Region 3 Fjarðarbyggð (Neskaupstaður, Eskifjörður, Reyðarfjörður)
Sub-Region 4 Fáskrúðsfjörður, Stöðvarfjörður, Breiðdalsvík

Age distribution

	18-19 years	*20-22 years*	*23-25 years*	*26-28 years*	*Total*
Sex					
Male	25,0	28,3	17,4	29,3	92
Female	29,1	26,4	20	24,5	110
Residence					
Sub-region 1	26,3	27,5	12,5	33,8	80
Sub-region 2	11,8	29,4	29,4	29,4	17
Sub-region 3	28,0	30,7	17,3	24	75
Sub-region 4	33,3	18,5	33,3	14,8	27
Likely future occupation					
Manual / retail / mechanical	17,6	26,5	20,6	35,3	34
Tradesman / farming / fishing	27,0	24,3	13,5	35,1	37
Office / specialised jobs	21,9	28,1	34,4	15,6	32
Professional, technical, management,other	30,2	30,2	14,3	25,4	63
What is your marital status?					
Married/co-habiting	6,4	21,8	23,1	48,7	78
In a permanent relationship but not living toghether	50,0	29,4	11,8	8,8	34
Widow (er), single, divorced	37,1	30,3	18	14,6	89
Are you studying or do you work?					
Study	46,8	32,9	10,1	10,1	79,0
Work	12,2	22,6	26,1	39,1	115

Sub-Region 1 Egilsstaðir / Fellabær / Fljótsdalshérað
Sub-Region 2 Seyðisfjörður / Mjóifjörður
Sub-Region 3 Fjarðabyggð (Neskaupstaður, Eskifjörður, Reyðarfjörður)
Sub-Region 4 Fáskrúðsfjörður, Stöðvarfjörður, Breiðdalsvík

Residence

	Sub-Region1	*Sub-Region2*	*Sub-Region3*	*Sub-Region4*	*Total*
Sex					
Male	39,6	7,7	39,6	13,2	91
Female	41,3	9,2	35,8	13,8	109
Age					
18-19	39,6	3,8	39,6	17,0	53
20-22	40,0	9,1	41,8	9,1	55
23-25	27,0	13,5	35,1	24,3	37
26-28	50,0	9,3	33,3	7,4	54
Likely future occupation					
Manual / retail / mechanical	40,6	12,5	40,6	6,3	32
Tradesman / farming / fishing	37,8	2,7	37,8	21,6	37
Office / specialised jobs	41,9	9,7	35,5	12,9	31
Professional, technical, management,other	34,4	10,9	42,2	12,5	64
What is your marital status?					
Married/co-habiting	43,0	8,9	31,6	16,5	79
In a permanent relationship but not living toghether	30,3	9,1	51,5	9,1	33
Widow (er), single, divorced	42,5	8,0	36,8	12,6	87
Are you studying or do you work?					
Study	45,0	8,8	37,5	8,8	80
Work	38,1	8,8	35,4	17,7	113

Sub-Region 1 Egilsstaðir / Fellabær / Fljótsdalshérað
Sub-Region 2 Seyðisfjörður / Mjóifjörður
Sub-Region 3 Fjarðabyggð (Neskaupstaður, Eskifjörður, Reyðarfjörður)
Sub-Region 4 Fáskrúðsfjörður, Stöðvarfjörður, Breiðdalsvík

What is your likely future occupation?

	Manual/retail mechanical	*Tradesman farming/fishing*	*Office work and specialised jobs*	*Professional/technical management other*	*Total*
Sex					
Male	23,2	24,6	5,8	46,4	69
Female	18,4	20,4	28,6	32,7	98
Age					
18-19	14,3	23,8	16,7	45,2	42
20-22	19,6	19,6	19,6	41,3	46
23-25	21,9	15,6	34,4	28,1	32
26-28	26,1	28,3	10,9	34,8	46
Residence					
Sub-region 1	21,0	22,6	21,0	35,5	62
Sub-region 2	26,7	6,7	20,0	46,7	15
Sub-region 3	20,0	21,5	16,9	41,5	65
Sub-region 4	9,1	36,4	18,2	36,4	22
What is your marital status?					
Married/co-habiting	29,0	21,7	20,3	29,0	69
In a permanent relationship but not living toghether	6,7	30,0	13,3	50,0	30
Widow (er), single, divorced	17,9	17,9	20,9	43,3	67
Are you studying or do you work?					
Study	4,5	14,9	17,9	62,7	67
Work	30,1	26,9	19,4	23,7	93

Sub-Region 1 Egilsstaðir / Fellabær / Fljótsdalshérað
Sub-Region 2 Seyðisfjörður / Mjóifjörður
Sub-Region 3 Fjarðabyggð (Neskaupstaður, Eskifjörður, Reyðarfjörður)
Sub-Region 4 Fáskrúðsfjörður, Stöðvarfjörður, Breiðdalsvík

What is your marital status?				
	Married/co-habiting	*In a perment relationship but not living toghether*	*Widow (er), single, divorced*	*Total*
Sex				
Male	30,4	19,6	50,0	92
Female	46,4	14,5	39,1	110
Age				
18-19	9,1	30,9	60,0	55
20-22	31,5	18,5	50,0	54
23-25	47,4	10,5	42,1	38
26-28	70,4	5,6	24,1	54
Residence				
Sub-region 1	42,0	12,3	45,7	81
Sub-region 2	41,2	17,6	41,2	17
Sub-region 3	33,8	23,0	43,2	74
Sub-region 4	48,1	11,1	40,7	27
Likely future occupation				
Manual / retail / mechanical	58,8	5,9	35,3	34
Tradesman / farming / fishing	41,7	25,0	33,3	36
Office / specialised jobs	43,8	12,5	43,8	32
Professional, technical, management,other	31,3	23,4	45,3	64
Are you studying or do you work?				
Study	24,1	25,3	50,6	79
Work	50,4	10,4	39,1	115

Sub-Region 1 Egilsstaðir / Fellabær / Fljótsdalshérað
Sub-Region 2 Seyðisfjörður / Mjóifjörður
Sub-Region 3 Fjarðabyggð (Neskaupstaður, Eskifjörður, Reyðarfjörður)
Sub-Region 4 Fáskrúðsfjörður, Stöðvarfjörður, Breiðdalsvík

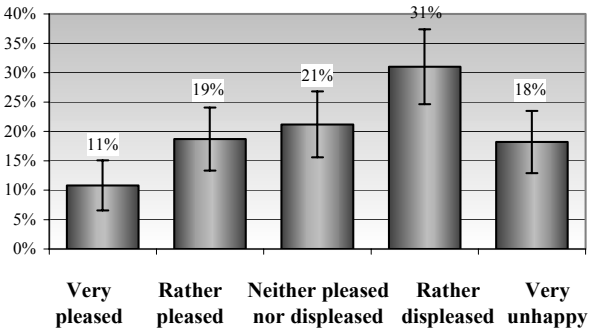
Do you study or are you working?			
	Study	***Work***	***Total***
Sex			
Male	34,1	65,9	88
Female	46,7	53,3	107
Age			
18-19	72,5	27,5	51
20-22	50,0	50,0	52
23-25	21,1	78,9	38
26-28	15,1	84,9	53
Residence			
Sub-region 1	45,6	54,4	79
Sub-region 2	41,2	58,8	17
Sub-region 3	42,9	57,1	70
Sub-region 4	25,9	74,1	27
Likely future occupation			
Manual / retail / mechanical	9,7	90,3	31
Tradesman / farming / fishing	28,6	71,4	35
Office / specialised jobs	40,0	60,0	30
Professional, technical, management,other	65,6	34,4	64
What is your marital status?			
Married/co-habiting	24,7	75,3	77
In a permanent relationship but not living toghether	62,5	37,5	32
Widow (er), single, divorced	47,1	52,9	85

Sub-Region 1 Egilsstaðir / Fellabær / Fljótsdalshérað
Sub-Region 2 Seyðisfjörður / Mjóifjörður
Sub-Region 3 Fjarðabyggð (Neskaupstaður, Eskifjörður, Reyðarfjörður)
Sub-Region 4 Fáskrúðsfjörður, Stöðvarfjörður, Breiðdalsvík

How satisfied or unsatisfied are you with employment opportunities in your home community?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

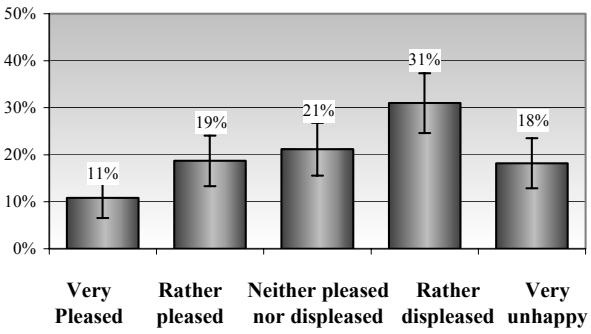


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	92	27,2	19,6	53,3
Female	111	31,5	22,5	45,9
Age				
18-19	55	23,6	25,5	50,9
20-22	55	18,2	20,0	61,8
23-25	38	29,5	18,4	42,1
26-28	54	40,7	20,4	38,9
Residence				
Sub-region 1	81	39,5	21,0	39,5
Sub-region 2	17	17,6	11,8	70,6
Sub-region 3	75	24,0	22,7	53,3
Sub-region 4	27	22,2	25,9	51,9
Likely future occupation				
Manual / retail / mechanical	34	26,5	26,5	47,1
Tradesman / farming / fishing	37	35,1	24,3	40,5
Office / specialised jobs	32	28,1	25,0	46,9
Professional, technical, management,other	64	28,1	17,2	54,7
What is your marital status?				
Married/co-habiting	79	30,4	19,0	50,6
In a permanent relationship but not living toghether	34	29,4	23,5	47,1
Widow (er), single, divorced	89	29,2	22,5	48,3
Are you studying or do you work?				
Study	80	32,5	20,0	47,5
Work	115	27,8	22,6	49,6

How pleased or displeased are you with diversity of employment in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

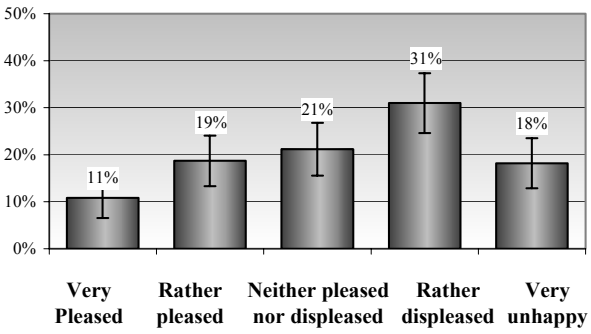


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	92	14,1	21,7	64,1
Female	110	22,7	14,5	62,7
Age				
18-19	54	16,7	22,2	61,1
20-22	55	21,8	12,7	65,5
23-25	38	21,1	10,5	68,4
26-28	54	16,7	24,1	59,3
Residence				
Sub-region 1	80	31,3	23,8	45,0
Sub-region 2	17	0,0	11,8	88,2
Sub-region 3	75	10,7	14,7	74,7
Sub-region 4	27	14,8	14,8	70,4
Likely future occupation				
Manual / retail / mechanical	34	23,5	23,5	52,9
Tradesman / farming / fishing	37	18,9	16,2	64,9
Office / specialised jobs	32	21,9	12,5	65,6
Professional, technical, management,other	64	17,2	14,1	68,8
What is your marital status?				
Married/co-habiting	78	17,9	15,4	66,7
In a permanent relationship but not living toghether	34	14,7	14,7	70,6
Widow (er), single, divorced	89	20,2	21,3	58,4
Are you studying or do you work?				
Study	79	20,3	17,7	62,0
Work	115	18,3	19,1	62,6

How pleased or displeased are you with income prospects in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

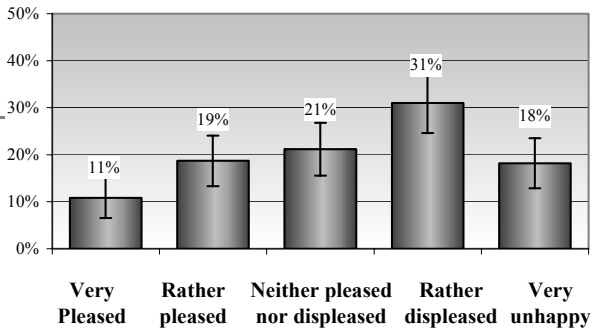


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	91	20,9	18,7	60,4
Female	108	13,9	25,9	60,2
Age				
18-19	53	20,8	30,2	49,1
20-22	54	9,3	16,7	74,1
23-25	38	23,7	21,1	55,3
26-28	53	17,0	20,8	62,3
Residence				
Sub-region 1	78	19,2	24,4	56,4
Sub-region 2	17	0,0	17,6	82,4
Sub-region 3	74	20,3	20,3	59,5
Sub-region 4	27	11,1	29,6	59,3
Likely future occupation				
Manual / retail / mechanical	33	21,2	15,2	63,6
Tradesman / farming / fishing	37	21,6	18,9	59,5
Office / specialised jobs	31	16,1	32,3	51,6
Professional, technical, management,other	64	12,5	21,9	65,6
What is your marital status?				
Married/co-habiting	76	10,5	23,7	65,8
In a permanent relationship but not living toghether	34	26,5	14,7	58,8
Widow (er), single, divorced	88	19,3	23,9	56,8
Are you studying or do you work?				
Study	77	14,3	31,2	54,5
Work	114	17,5	18,4	64,0

How pleased or displeased are you with availability of suitable housing in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

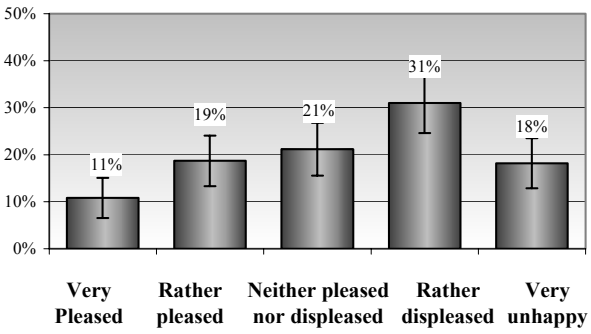


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	91	46,2	28,6	25,3
Female	108	40,7	25,0	34,3
Age				
18-19	54	44,4	27,8	27,8
20-22	54	46,3	25,9	27,8
23-25	37	51,4	21,6	27,0
26-28	53	34,0	30,2	35,8
Residence				
Sub-region 1	79	35,4	20,3	44,3
Sub-region 2	15	66,7	13,3	20,0
Sub-region 3	75	38,7	38,7	22,7
Sub-region 4	27	66,7	22,2	11,1
Likely future occupation				
Manual / retail / mechanical	34	50,0	23,5	26,5
Tradesman / farming / fishing	36	38,9	30,6	30,6
Office / specialised jobs	31	45,2	22,6	32,3
Professional, technical, management,other	63	44,4	27,0	28,6
What is your marital status?				
Married/co-habiting	77	39,0	20,8	40,3
In a permanent relationship but not living toghether	33	54,5	24,2	21,2
Widow (er), single, divorced	88	43,2	31,8	25,0
Are you studying or do you work?				
Study	77	46,8	26,0	27,3
Work	114	43,0	25,4	31,6

How pleased or displeased are you with opportunities for post secondary education in the East Region with reference to the community you live in at present ?

	Number	Percentage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

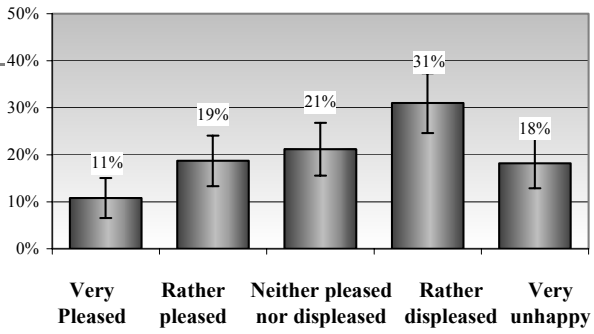


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	91	39,3	18,3	33,4
Female	108	47,2	16,7	36,1
Age				
18-19	53	47,2	18,9	34,0
20-22	54	44,4	18,5	37,0
23-25	38	39,5	18,4	42,1
26-28	53	39,6	24,5	35,8
Residence				
Sub-region 1	77	44,2	22,1	33,8
Sub-region 2	17	41,2	23,5	35,3
Sub-region 3	75	44,0	21,3	34,7
Sub-region 4	27	37,0	11,1	51,9
Likely future occupation				
Manual / retail / mechanical	33	39,4	21,2	39,4
Tradesman / farming / fishing	36	44,4	11,1	44,4
Office / specialised jobs	32	46,9	28,1	25,0
Professional, technical, management,other	64	48,4	17,2	34,4
What is your marital status?				
Married/co-habiting	77	37,7	20,8	41,6
In a permanent relationship but not living toghether	34	50,0	17,6	32,4
Widow (er), single, divorced	87	46,0	20,7	33,3
Are you studying or do you work?				
Study	78	52,6	11,5	35,9
Work	113	37,2	25,7	37,2

How pleased or displeased are you with operating cost of houses in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

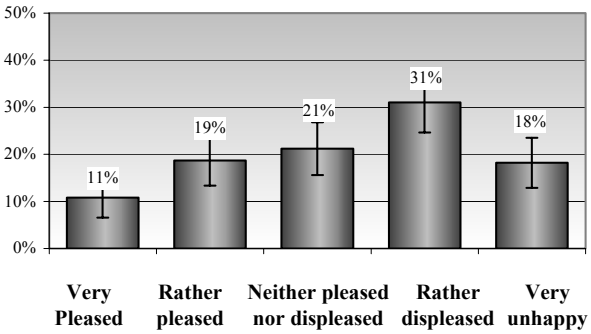


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	90	26,7	40,0	33,3
Female	109	24,8	40,4	34,9
Age				
18-19	53	24,5	43,4	32,1
20-22	54	27,8	51,9	20,4
23-25	37	24,3	37,8	37,8
26-28	54	25,9	27,8	46,3
Residence				
Sub-region 1	78	35,9	37,2	26,9
Sub-region 2	17	11,8	47,1	41,2
Sub-region 3	74	20,3	47,3	32,4
Sub-region 4	27	18,5	29,6	51,9
Likely future occupation				
Manual / retail / mechanical	32	28,1	37,5	34,4
Tradesman / farming / fishing	37	16,2	51,4	32,4
Office / specialised jobs	32	18,8	37,5	43,8
Professional, technical, management,other	64	37,5	32,8	29,7
What is your marital status?				
Married/co-habiting	77	26,0	35,1	39,0
In a permanent relationship but not living toghether	34	29,4	44,1	26,5
Widow (er), single, divorced	87	24,1	42,5	33,3
Are you studying or do you work?				
Study	78	33,3	37,2	29,5
Work	113	22,1	41,6	36,3

How pleased or displeased are you with price levels in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

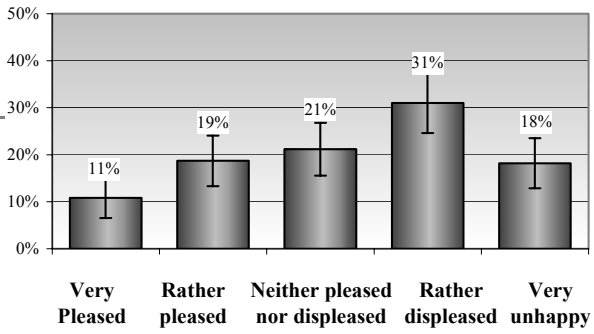


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	91	14,3	22,0	63,7
Female	108	7,4	17,6	75,0
Age				
18-19	53	11,3	30,2	58,5
20-22	55	9,1	16,4	74,5
23-25	36	5,6	19,4	75,0
26-28	54	14,8	13,0	72,2
Residence				
Sub-region 1	80	20,0	28,8	51,3
Sub-region 2	16	0,0	6,3	93,8
Sub-region 3	74	4,1	13,5	82,4
Sub-region 4	27	7,4	14,8	77,8
Likely future occupation				
Manual / retail / mechanical	33	6,1	21,2	72,7
Tradesman / farming / fishing	37	8,1	13,5	78,4
Office / specialised jobs	31	6,5	22,6	71,0
Professional, technical, management,other	63	12,7	19,0	68,3
What is your marital status?				
Married/co-habiting	77	9,10	13,0	77,9
In a permanent relationship but not living toghether	33	3,0	33,3	63,6
Widow (er), single, divorced	88	14,8	20,5	64,8
Are you studying or do you work?				
Study	79	15,2	20,3	64,6
Work	112	8,0	18,8	73,2

How pleased or displeased are you with stability of employment in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

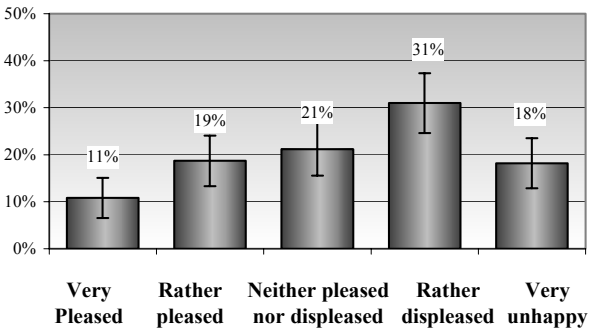


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	91	36,3	27,5	36,3
Female	109	33,0	28,4	38,5
Age				
18-19	54	35,2	37,0	27,8
20-22	53	22,6	39,6	37,7
23-25	38	42,1	15,8	42,1
26-28	54	40,7	16,7	42,6
Residence				
Sub-region 1	78	44,9	25,6	29,5
Sub-region 2	17	23,5	35,3	41,2
Sub-region 3	75	29,3	30,7	40,0
Sub-region 4	27	22,2	25,9	51,9
Likely future occupation				
Manual / retail / mechanical	33	45,5	18,2	36,4
Tradesman / farming / fishing	37	29,7	24,3	45,9
Office / specialised jobs	31	32,3	32,3	35,5
Professional, technical, management,other	64	28,1	35,9	35,9
What is your marital status?				
Married/co-habiting	76	38,2	18,4	43,4
In a permanent relationship but not living toghether	34	38,2	23,5	38,2
Widow (er), single, divorced	89	30,3	37,1	32,6
Are you studying or do you work?				
Study	79	32,9	35,4	31,6
Work	113	34,5	23,9	41,6

How pleased or displeased are you with diversity and range of goods in retail outlets in the East Region with reference to the community you live in at present?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

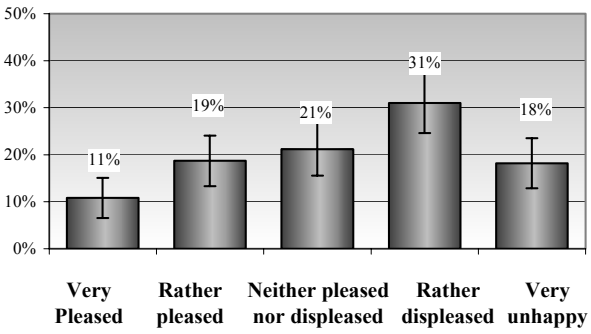


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	92	33,7	21,7	44,6
Female	108	25,0	18,5	56,5
Age				
18-19	53	30,2	30,2	39,6
20-22	54	24,1	20,4	55,6
23-25	38	15,8	23,7	60,5
26-28	54	42,6	7,4	50,0
Residence				
Sub-region 1	78	57,7	17,9	24,4
Sub-region 2	17	0,0	11,8	88,2
Sub-region 3	75	12,0	20,0	68,0
Sub-region 4	27	14,8	29,6	55,6
Likely future occupation				
Manual / retail / mechanical	34	23,5	26,5	50,0
Tradesman / farming / fishing	37	29,7	16,2	54,1
Office / specialised jobs	31	22,6	22,6	54,8
Professional, technical, management,other	64	23,4	21,9	54,7
What is your marital status?				
Married/co-habiting	77	28,6	14,3	57,1
In a permanent relationship but not living toghether	34	26,5	20,6	52,9
Widow (er), single, divorced	88	30,7	25,0	44,3
Are you studying or do you work?				
Study	78	34,6	20,5	44,9
Work	114	25,4	20,2	54,4

How pleased or displeased are you with leisure and recreational opportunities in the East Region with reference to the community you live in at present ?

	Number	Percen-tage	Confidence-range
Very pleased	22	10,8	4,3
Rather pleased	38	18,7	5,4
Neutral	43	21,2	5,6
Rather displeased	63	31,0	6,4
Very unhappy	37	18,2	5,3
Total	203	100	

* Percentage of respondents

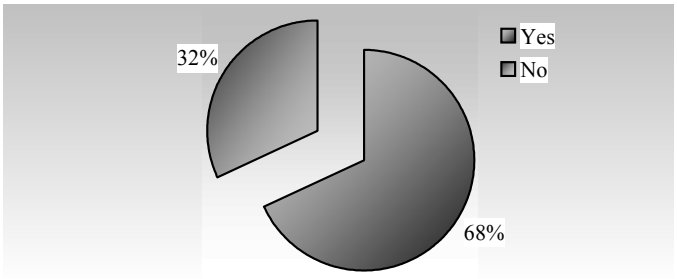


Sex	**Number**	**Pleased**	**Neutral**	**Displeased**
Male	91	57,1	19,8	23,1
Female	109	55,0	11,9	33,0
Age				
18-19	54	51,9	16,7	31,5
20-22	53	41,5	22,6	35,8
23-25	38	52,6	10,5	36,8
26-28	54	77,8	11,1	11,1
Residence				
Sub-region 1	78	69,2	10,3	20,5
Sub-region 2	17	64,7	11,8	23,5
Sub-region 3	75	45,3	21,3	33,3
Sub-region 4	27	40,7	18,5	40,7
Likely future occupation				
Manual / retail / mechanical	33	60,6	6,1	33,3
Tradesman / farming / fishing	37	56,8	13,5	29,7
Office / specialised jobs	31	51,6	25,8	22,6
Professional, technical, management,other	64	48,4	15,6	35,9
What is your marital status?				
Married/co-habiting	77	66,2	10,4	23,4
In a permanent relationship but not living toghether	34	47,1	26,5	26,5
Widow (er), single, divorced	88	50,0	15,9	34,1
Are you studying or do you work?				
Study	79	57,0	13,9	29,1
Work	113	55,8	17,7	26,5

Have you over the last two years considered leaving the Central East Region?

	Number	Percentage*	Confidence-range
Yes	136	68,0	6,5
No	64	32,0	6,5
Total	200	100	

* Percentage of respondents

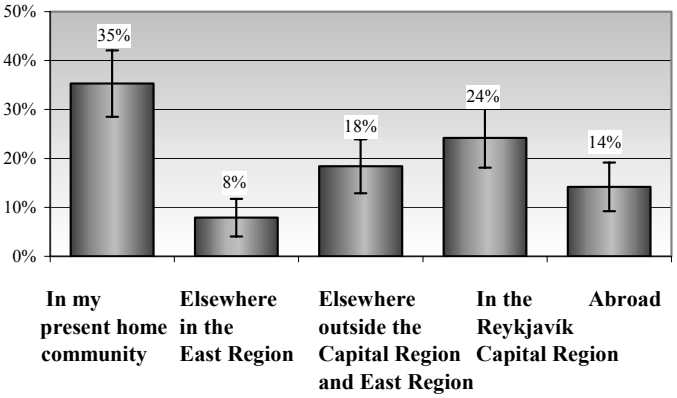


Sex	**Number**	**Yes**	**No**
Male	92	67,4	32,6
Female	108	68,5	31,5
Age			
18-19 years	55	69,1	30,9
20-22 years	54	88,9	11,1
23-25 years	37	70,3	29,7
26-28 years	53	43,4	56,6
Residence			
Sub-region 1	80	58,8	41,3
Sub-region 2	16	68,8	31,3
Sub-region 3	74	77,0	23,0
Sub-region 4	27	70,4	29,6
Likely future occupation			
Manual / retail / mechanical	34	44,1	55,9
Tradesman / farming / fishing	37	59,5	40,5
Office / specialised jobs	31	87,1	12,9
Professional, technical, management,other	64	70,3	29,7
What is your marital status?			
Married/co-habiting	78	64,1	35,9
relationship but not living toghether	34	73,5	26,5
Widow (er), single, divorced	87	69,0	31,0
Are you studying or do you work?			
Study	79	75,9	24,1
Work	113	61,9	38,1

Where do you think you will most likely live after 10 years?

	Number	Percen-tage	Confidence-range
Home community	67	35,3	6,8
East Region	15	7,9	3,8
Rest of Iceland	35	18,4	5,5
Capital Region	46	24,2	6,1
Abroad	27	14,2	5,0
Total	190	100,0	

* Percentage of respondents

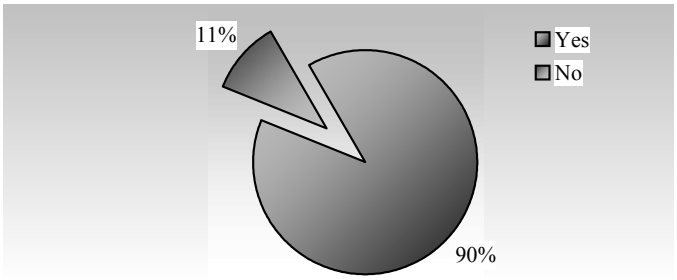


Sex	**Number**	**In the East Region**	**Not in the East Region**
Male	83	47,0	53,0
Female	107	40,2	59,8
Age			
18-19 years	50	40,0	60,0
20-22 years	51	31,4	68,6
23-25 years	38	39,5	60,5
26-28 years	50	62,0	38,0
Residence			
Sub-region 1	79	60,8	39,2
Sub-region 2	16	25,0	75,0
Sub-region 3	66	28,8	71,2
Sub-region 4	26	38,5	61,5
Likely future occupation			
Manual / retail / mechanical	32	68,8	31,3
Tradesman / farming / fishing	36	44,4	55,6
Office / specialised jobs	32	31,3	68,8
Professional, technical, management,other	60	35,0	65,0
What is your marital status?			
Married/co-habiting	77	53,2	46,8
relationship but not living toghether	31	48,4	51,6
Widow (er), single, divorced	81	32,1	67,9
Are you studying or do you work?			
Study	76	32,9	67,1
Work	108	50,9	49,1

Are you more likely to stay in your home community if more and better employment opportunities are created?

	Number	Percentage*	Confidence-range
Yes	85	89,5	6,2
No	10	10,5	6,2
Total	95	100,0	

* Percentage of respondents

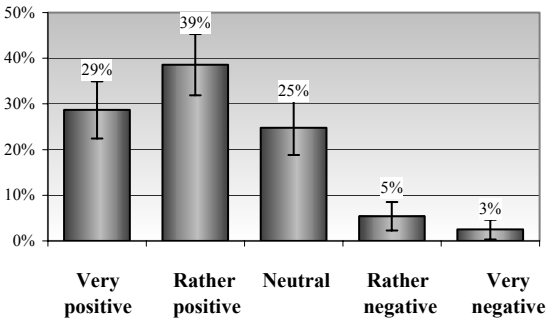


Sex	**Number**	**Yes**	**No**
Male	43	90,7	9,3
Female	52	88,5	11,5
Age			
18-19 years	28	96,4	3,6
20-22 years	32	81,3	18,8
23-25 years	16	87,5	12,5
26-28 years	19	94,7	5,3
Residence			
Sub-region 1	21	90,5	9,5
Sub-region 2	10	90,0	10,0
Sub-region 3	49	85,7	14,3
Sub-region 4	14	100,0	0,0
Likely future occupation			
Manual / retail / mechanical	10	100,0	0,0
Tradesman / farming / fishing	17	94,1	5,9
Office / specialised jobs	18	77,8	22,2
Professional, technical, management,other	34	88,2	11,8
What is your marital status?			
Married/co-habiting	32	93,8	6,3
relationship but not living toghether	14	85,7	14,3
Widow (er), single, divorced	48	87,5	12,5
Are you studying or do you work?			
Study	42	81,0	19,0
Work	48	97,9	2,1

Are you in general positive, neutral or negative towards the present large power-intensive industries in Iceland?

	Number	Percentage*	Confidence-range
Very positive	58	28,7	6,2
Rather positive	78	38,6	6,7
Neutral	50	24,8	6,0
Rather negative	11	5,4	3,1
Very negative	5	2,5	2,2
Total	202	100,0	

* Percentage of respondents

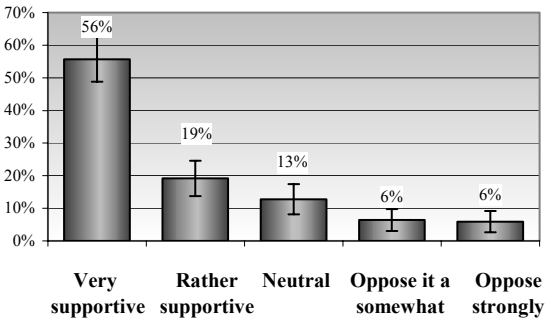


Sex	**Number**	**Positive**	**Neutral**	**Negative**
Male	91	69,2	22,0	8,8
Female	111	65,8	27,0	7,2
Age				
18-19 years	55	61,8	25,5	12,7
20-22 years	55	56,4	38,2	5,5
23-25 years	38	73,7	15,8	10,5
26-28 years	53	79,2	17,0	3,8
Residence				
Sub-region 1	81	64,2	25,9	9,9
Sub-region 2	17	58,8	23,5	17,6
Sub-region 3	74	68,9	25,7	5,4
Sub-region 4	27	77,8	18,5	3,7
Likely future occupation				
Manual / retail / mechanical	34	67,6	29,4	2,9
Tradesman / farming / fishing	37	75,7	24,3	0,0
Office / specialised jobs	32	62,5	31,3	6,3
Professional, technical, management,other	63	71,4	23,8	4,8
What is your marital status?				
Married/co-habiting	78	73,1	20,5	6,4
In a permanent relationship but not living toghether	34	61,8	29,4	8,8
Widow (er), single, divorced	89	64,0	27,0	9,0
Are you studying or do you work?				
Study	79	63,3	22,8	13,9
Work	115	70,4	25,2	4,3

Do you support, are you neutral or do you oppose the plans to build an aluminum plant in Reyðafjörður?

	Number	Percentage*	Confidence-range
Very supportive	113	55,7	6,8
Rather supportive	39	19,2	5,4
Neutral	26	12,8	4,6
Oppose it somewhat	13	6,4	3,4
Oppose strongly	12	5,9	3,2
Total	203	100,0	

* Percentage of respondents

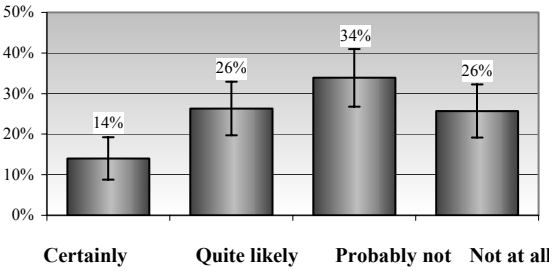


Sex	**Number**	**Supportive**	**Neutral**	**Strongly**
Male	92	75,0	14,1	10,9
Female	111	74,8	11,7	13,5
Age				
18-19 years	55	70,9	12,7	16,4
20-22 years	55	70,9	16,4	12,7
23-25 years	38	71,1	13,2	15,8
26-28 years	54	85,2	9,3	5,6
Residence				
Sub-region 1	81	64,2	18,5	17,3
Sub-region 2	17	70,6	5,9	23,5
Sub-region 3	75	82,7	9,3	8,0
Sub-region 4	27	88,9	7,4	3,7
Likely future occupation				
Manual / retail / mechanical	34	79,4	20,6	0,0
Tradesman / farming / fishing	37	78,8	10,8	10,8
Office / specialised jobs	32	68,8	18,8	12,5
Professional, technical, management,other	64	76,6	10,9	12,9
What is your marital status?				
Married/co-habiting	79	82,3	10,1	7,6
In a permanent relationship but not living toghether	34	70,6	14,7	14,7
Widow (er), single, divorced	89	69,7	14,6	15,7
Are you studying or do you work?				
Study	80	67,5	12,5	20,0
Work	115	80,0	12,2	7,8

If an aluminum plant will be built in Reyðarfjörður will you be interested in working there?

	Number	Percentage*	Confidence-range
Yes, certainly	24	14,0	5,2
Yes, quite likely	45	26,3	6,6
No, probably not	58	33,9	7,1
No, not at all	44	25,7	6,5
Total	171	100,0	

* Percentage of respondents

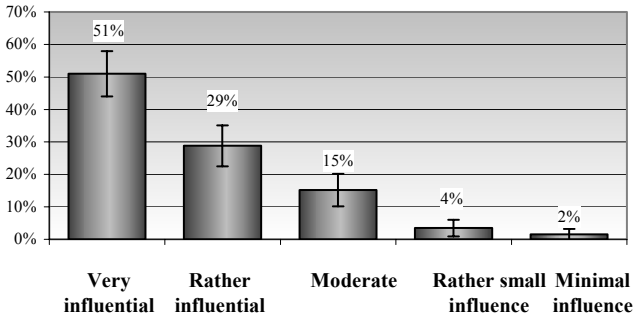


Sex	Number	Certainly / quite likely	Probably not / not at all
Male	81	53,1	46,9
Female	90	28,9	71,1
Age			
18-19 years	48	50,0	50,0
20-22 years	47	34,0	66,0
23-25 years	33	36,4	63,6
26-28 years	42	40,5	59,5
Residence			
Sub-region 1	67	25,4	74,6
Sub-region 2	17	41,2	58,8
Sub-region 3	61	52,5	47,5
Sub-region 4	24	50,0	50,0
Likely future occupation			
Manual / retail / mechanical	26	65,4	34,6
Tradesman / farming / fishing	29	37,9	62,1
Office / specialised jobs	27	18,5	81,5
Professional, technical, management,other	58	37,9	62,1
What is your marital status?			
Married/co-habiting	63	42,9	57,1
In a permanent relationship but not living toghether	31	29,0	81,0
Widow (er), single, divorced	77	42,9	57,1
Are you studying or do you work?			
Study	70	27,1	72,9
Work	96	49,0	51,0

How influential do you think the fishing industry can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	101	51	7,0
Rather influential	57	28,8	6,3
Moderate	30	15,2	5,0
Rather small influence	7	3,5	2,6
Minimal influence	3	1,5	1,7
Total	198	100,0	

* Percentage of respondents

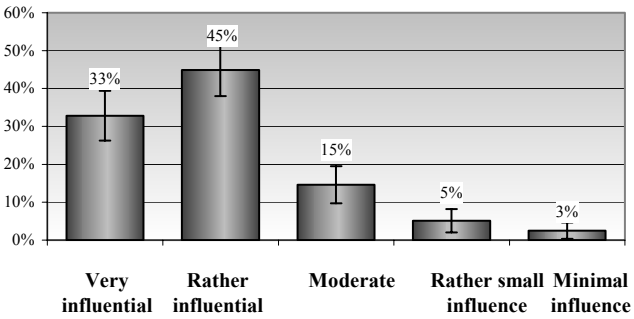


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	90	78,9	17,8	3,3
Female	108	80,6	13,0	6,5
Age				
18-19 years	55	78,2	12,7	9,1
20-22 years	55	74,5	23,6	1,8
23-25 years	37	94,6	5,4	0,0
26-28 years	50	76,0	16,0	8,0
Residence				
Sub-region 1	79	74,7	21,5	3,8
Sub-region 2	17	82,4	17,6	0,0
Sub-region 3	73	83,6	8,2	8,2
Sub-region 4	26	84,6	11,5	3,8
Likely future occupation				
Manual / retail / mechanical	34	76,5	11,8	11,8
Tradesman / farming / fishing	35	85,7	8,6	5,7
Office / specialised jobs	31	80,6	19,4	0,0
Professional, technical, management,other	62	80,6	14,5	4,8
What is your marital status?				
Married/co-habiting	77	80,5	15,6	3,9
rmanent relationship but not living toghether	33	78,8	18,2	3,0
Widow (er), single, divorced	87	79,3	13,8	6,9
Are you studying or do you work?				
Study	80	81,3	12,5	6,3
Work	110	79,1	16,4	4,5

How influential do you think tourism can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	65	32,8	6,5
Rather influential	89	44,9	6,9
Moderate	29	14,6	4,9
Rather small influence	10	5,1	3,1
Minimal influence	5	2,5	2,2
Total	198	100,0	

* Percentage of respondents

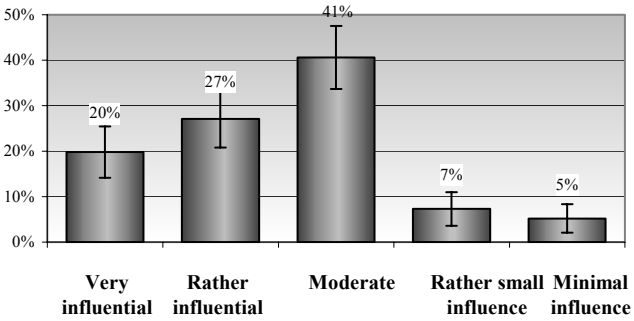


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	89	69,7	16,9	13,5
Female	109	84,4	12,8	2,8
Age				
18-19 years	55	76,4	14,5	9,1
20-22 years	54	79,6	11,1	9,3
23-25 years	37	83,8	13,5	2,7
26-28 years	51	72,5	19,6	7,8
Residence				
Sub-region 1	78	84,6	10,3	5,1
Sub-region 2	17	88,2	5,9	5,9
Sub-region 3	74	63,5	25,7	10,8
Sub-region 4	26	88,5	3,8	7,7
Likely future occupation				
Manual / retail / mechanical	34	73,5	20,6	5,9
Tradesman / farming / fishing	37	75,7	21,6	2,7
Office / specialised jobs	31	77,4	16,1	6,5
Professional, technical, management,other	62	79,0	9,7	11,3
What is your marital status?				
Married/co-habiting	77	77,9	15,6	6,5
rmanent relationship but not living toghether	32	75,0	15,6	9,4
Widow (er), single, divorced	88	78,4	13,6	8,0
Are you studying or do you work?				
Study	79	84,8	8,9	6,3
Work	111	73,0	18,0	9,0

How influential do you think Telework-IT can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	38	19,8	5,6
Rather influential	52	27,1	6,3
Moderate	78	40,6	6,9
Rather small influence	14	7,3	3,7
Minimal influence	10	5,2	3,1
Total	192	100,0	

* Percentage of respondents

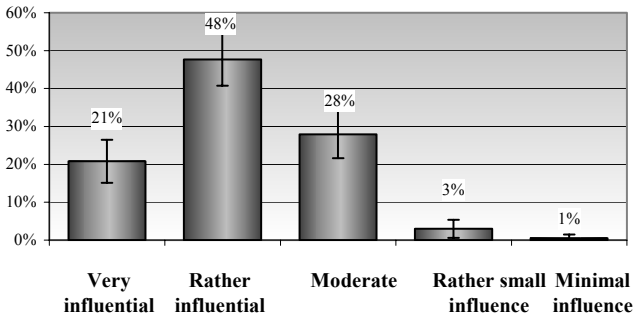


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	88	30,7	50,0	19,3
Female	104	60,6	32,7	6,7
Age				
18-19 years	55	40,0	43,6	16,4
20-22 years	51	43,1	52,9	3,9
23-25 years	35	62,9	31,4	5,7
26-28 years	50	48,0	30,0	22,0
Residence				
Sub-region 1	77	53,2	36,4	10,4
Sub-region 2	16	50,0	31,3	18,8
Sub-region 3	70	40,0	44,3	15,7
Sub-region 4	26	46,2	46,2	7,7
Likely future occupation				
Manual / retail / mechanical	34	35,3	44,1	20,6
Tradesman / farming / fishing	34	52,9	44,1	2,9
Office / specialised jobs	29	48,3	41,4	10,3
Professional, technical, management,other	59	47,5	33,9	18,6
What is your marital status?				
Married/co-habiting	75	54,7	34,7	10,7
rmanent relationship but not living toghether	31	51,6	45,2	3,2
Widow (er), single, divorced	86	38,4	44,2	17,4
Are you studying or do you work?				
Study	76	50,0	39,5	10,5
Work	108	46,3	38,9	14,8

How influential do you think retail and services can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	41	20,8	5,7
Rather influential	94	47,7	7,0
Moderate	55	27,9	6,3
Rather small influence	6	3,0	2,4
Minimal influence	1	0,5	1,0
Total	197	100,0	

* Percentage of respondents

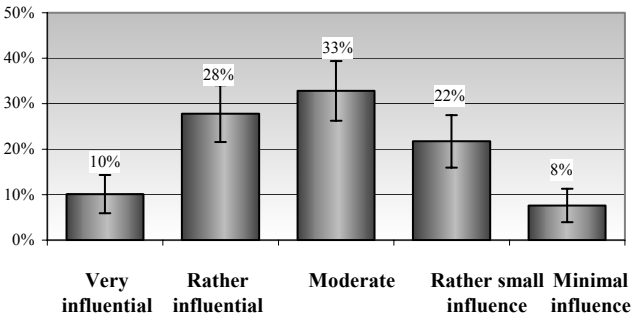


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	90	56,7	37,8	5,6
Female	107	78,5	19,6	1,9
Age				
18-19 years	55	78,2	20,0	1,8
20-22 years	55	72,7	23,6	3,6
23-25 years	35	68,6	31,4	0,0
26-28 years	51	52,9	39,2	7,8
Residence				
Sub-region 1	80	71,3	26,3	2,5
Sub-region 2	17	52,9	47,1	0,0
Sub-region 3	72	69,4	23,6	6,9
Sub-region 4	25	64,0	36,0	0,0
Likely future occupation				
Manual / retail / mechanical	34	70,6	26,5	2,9
Tradesman / farming / fishing	36	75,0	25,0	0,0
Office / specialised jobs	30	76,7	20,0	3,3
Professional, technical, management,other	62	66,1	25,8	8,1
What is your marital status?				
Married/co-habiting	77	71,4	27,3	1,3
rmanent relationship but not living toghether	33	78,8	21,2	0,0
Widow (er), single, divorced	86	61,6	31,4	7,0
Are you studying or do you work?				
Study	79	75,9	19,0	5,1
Work	110	61,8	35,5	2,7

How influential do you think farming can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	20	10,1	4,2
Rather influential	55	27,8	6,2
Moderate	65	32,8	6,5
Rather small influence	43	21,7	5,7
Minimal influence	15	7,6	3,7
Total	198	100,0	

* Percentage of respondents

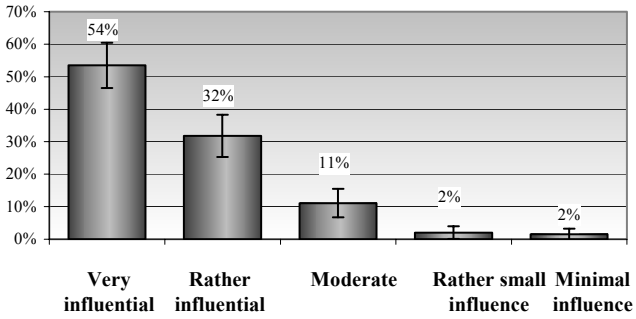


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	90	31,1	32,2	36,7
Female	108	43,5	33,3	23,1
Age				
18-19 years	55	40,0	32,7	27,3
20-22 years	54	29,6	35,2	35,2
23-25 years	37	43,2	37,8	18,9
26-28 years	51	41,2	25,5	33,3
Residence				
Sub-region 1	80	42,5	33,8	23,8
Sub-region 2	17	29,4	41,2	29,4
Sub-region 3	72	34,7	30,6	34,7
Sub-region 4	26	38,5	26,9	34,6
Likely future occupation				
Manual / retail / mechanical	34	41,2	26,5	32,4
Tradesman / farming / fishing	36	52,8	30,6	16,7
Office / specialised jobs	30	40,0	36,7	23,3
Professional, technical, management,other	62	27,4	32,3	40,3
What is your marital status?				
Married/co-habiting	79	46,8	32,9	20,3
rmanent relationship but not living toghether	32	46,9	31,3	21,9
Widow (er), single, divorced	86	25,6	33,7	40,7
Are you studying or do you work?				
Study	80	36,3	32,5	31,3
Work	110	38,2	34,5	27,3

How influential do you think large power-intensive industries can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	106	53,5	6,9
Rather influential	63	31,8	6,5
Moderate	22	11,1	4,4
Rather small influence	4	2,0	2,0
Minimal influence	3	1,5	1,7
Total	198	100,0	

* Percentage of respondents

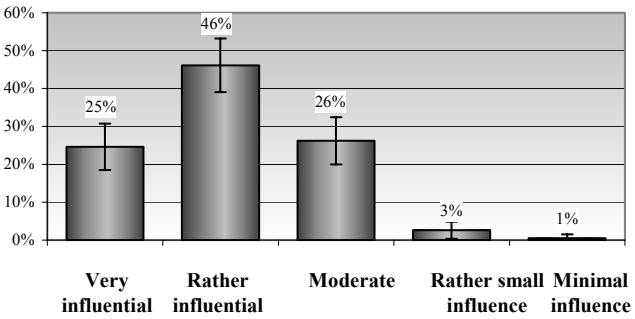


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	91	85,7	12,1	2,2
Female	107	85,0	10,3	4,7
Age				
18-19 years	55	81,8	12,7	5,5
20-22 years	54	79,6	16,7	3,7
23-25 years	37	83,8	10,8	5,4
26-28 years	51	96,1	3,9	0,0
Residence				
Sub-region 1	79	75,9	17,7	6,3
Sub-region 2	16	81,3	12,5	6,3
Sub-region 3	74	91,9	6,8	1,4
Sub-region 4	26	100,0	0,0	0,0
Likely future occupation				
Manual / retail / mechanical	33	90,9	9,1	0,0
Tradesman / farming / fishing	36	86,1	13,9	0,0
Office / specialised jobs	30	83,3	13,3	3,3
Professional, technical, management,other	63	85,7	12,7	1,6
What is your marital status?				
Married/co-habiting	79	91,1	6,3	2,5
rmanent relationship but not living toghether	33	81,8	18,2	0,0
Widow (er), single, divorced	85	81,2	12,9	5,9
Are you studying or do you work?				
Study	80	80,0	12,5	7,5
Work	110	90,0	9,1	0,9

How influential do you think small scale manufacturing can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	47	24,6	6,1
Rather influential	88	46,1	7,1
Moderate	50	26,2	6,2
Rather small influence	5	2,6	2,3
Minimal influence	1	0,5	1,0
Total	191	100,0	

* Percentage of respondents

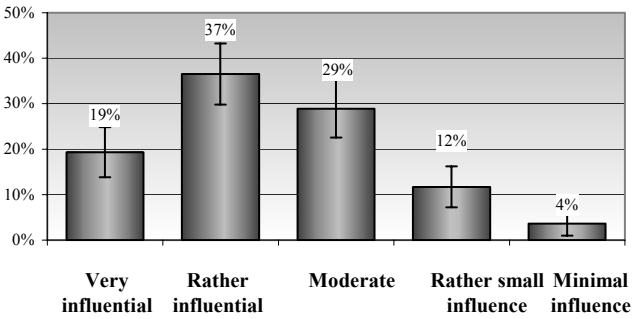


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	88	68,2	27,3	4,5
Female	103	72,8	25,2	1,9
Age				
18-19 years	53	67,9	32,1	0,0
20-22 years	53	58,5	34,0	7,5
23-25 years	36	77,8	19,4	2,8
26-28 years	48	81,3	16,7	2,1
Residence				
Sub-region 1	77	71,4	26,0	2,6
Sub-region 2	15	73,3	20,0	6,7
Sub-region 3	72	68,1	29,2	2,8
Sub-region 4	25	72,0	24,0	4,0
Likely future occupation				
Manual / retail / mechanical	32	81,3	15,6	3,1
Tradesman / farming / fishing	34	79,4	20,6	0,0
Office / specialised jobs	28	60,7	39,3	0,0
Professional, technical, management,other	62	66,1	30,6	3,2
What is your marital status?				
Married/co-habiting	77	81,8	14,3	3,9
rmanent relationship but not living toghether	31	61,3	35,5	3,2
Widow (er), single, divorced	82	63,4	34,1	2,4
Are you studying or do you work?				
Study	78	69,2	28,2	2,6
Work	105	71,4	24,8	3,8

How influential do you think fish farming can be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	38	19,3	5,5
Rather influential	72	36,5	6,7
Moderate	57	28,9	6,3
Rather small influence	23	11,7	4,5
Minimal influence	7	3,6	2,6
Total	197	100,0	

* Percentage of respondents

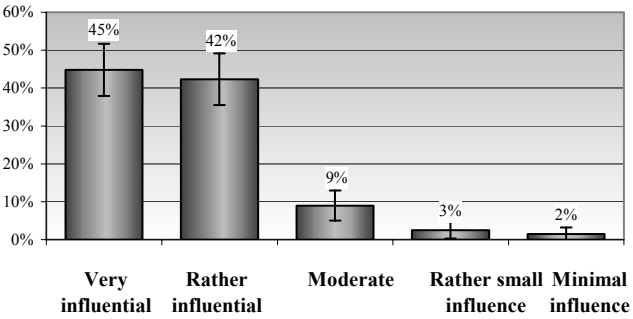


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	91	58,2	25,3	16,5
Female	106	53,8	32,1	14,2
Age				
18-19 years	55	58,2	23,6	18,2
20-22 years	55	49,1	40,0	10,9
23-25 years	36	61,1	27,8	11,1
26-28 years	50	58,0	24,0	18,0
Residence				
Sub-region 1	78	47,4	28,2	24,4
Sub-region 2	17	58,8	29,4	11,8
Sub-region 3	74	63,5	25,7	10,8
Sub-region 4	25	56,0	40,0	4,0
Likely future occupation				
Manual / retail / mechanical	33	57,6	24,2	18,2
Tradesman / farming / fishing	34	64,7	29,4	5,9
Office / specialised jobs	31	41,9	38,7	19,4
Professional, technical, management,other	63	50,8	31,7	17,5
What is your marital status?				
Married/co-habiting	76	55,3	27,6	17,1
rmanent relationship but not living toghether	33	66,7	24,2	9,1
Widow (er), single, divorced	87	51,7	32,2	16,1
Are you studying or do you work?				
Study	80	56,3	27,5	16,3
Work	109	56,0	30,3	13,8

How influential do you think an aluminum plant in Reyðarfjörður will be in strengthening communities and the local economy in the East Region?

	Number	Percentage*	Confidence-range
Very influential	90	44,8	6,9
Rather influential	85	42,3	6,8
Moderate	18	9,0	4,0
Rather small influence	5	2,5	2,2
Minimal influence	3	1,5	1,7
Total	201	100,0	

* Percentage of respondents

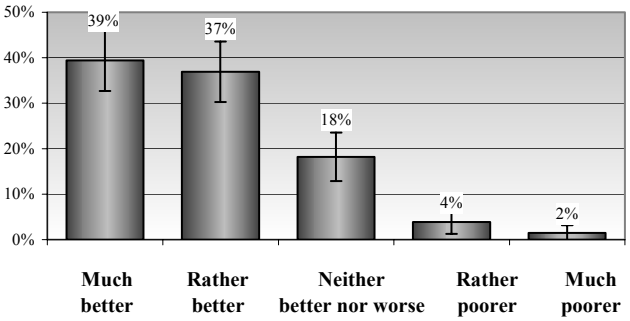


Sex	**Number**	**Very/rather influential**	**Moderate**	**Minimal influence**
Male	90	87,8	8,9	3,3
Female	111	86,5	9,0	4,5
Age				
18-19 years	55	81,8	10,9	7,3
20-22 years	55	85,5	10,9	3,6
23-25 years	38	84,2	13,2	2,6
26-28 years	52	96,2	1,9	1,9
Residence				
Sub-region 1	81	80,2	14,8	4,9
Sub-region 2	16	81,3	6,3	12,5
Sub-region 3	75	93,3	5,3	1,3
Sub-region 4	26	100,0	0,0	0,0
Likely future occupation				
Manual / retail / mechanical	33	93,9	6,1	0,0
Tradesman / farming / fishing	36	91,7	5,6	2,8
Office / specialised jobs	32	84,4	9,4	6,3
Professional, technical, management,other	64	90,6	7,8	1,6
What is your marital status?				
Married/co-habiting	77	90,9	6,5	2,6
rmanent relationship but not living toghether	34	85,3	11,8	2,9
Widow (er), single, divorced	89	84,3	10,1	5,6
Are you studying or do you work?				
Study	80	83,8	10,0	6,3
Work	113	89,4	8,0	2,7

Do you think that an aluminum plant in Reyðarfjörður will improve or lead to poorer community life in the East Region?

	Number	Percentage*	Confidence-range
Much better	80	39,4	6,7
Rather better	75	36,9	6,6
Neutral	37	18,2	5,3
Rather poorer	8	3,9	2,7
Much poorer	3	1,5	1,7
Total	203	100,0	

* Percentage of respondents

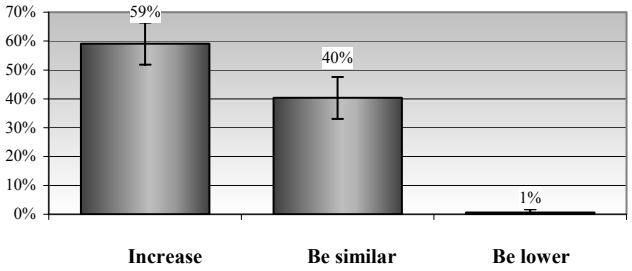


Sex	Number	Better	Neutral	Poorer
Male	92	73,9	20,7	5,4
Female	111	78,4	16,2	5,4
Age				
18-19 years	55	74,5	16,4	9,1
20-22 years	55	80,0	12,7	7,3
23-25 years	38	73,7	23,7	2,6
26-28 years	54	77,8	20,4	1,9
Residence				
Sub-region 1	81	60,5	27,2	12,3
Sub-region 2	17	82,4	17,6	0,0
Sub-region 3	75	88,0	12,0	0,0
Sub-region 4	27	88,9	7,4	3,7
Likely future occupation				
Manual / retail / mechanical	34	73,5	26,5	0,0
Tradesman / farming / fishing	37	89,2	5,4	5,4
Office / specialised jobs	32	71,9	28,1	0,0
Professional, technical, management,other	64	78,1	17,2	4,7
What is your marital status?				
Married/co-habiting	79	77,2	19,0	3,8
rmanent relationship but not living toghether	34	82,4	8,8	8,8
Widow (er), single, divorced	89	73,0	21,3	5,6
Are you studying or do you work?				
Study	80	70,0	18,8	11,3
Work	115	80,9	17,4	1,7

What influence do you think an aluminum plant will have on wage levels in the East Region? Do you think that salaries will in general increase, be similar or be lower?

	Number	Percentage*	Confidence-range
Increase	104	59,1	7,3
Be similar	71	40,3	7,2
Be lower	1	0,6	1,1
Total	176	100,0	

* Percentage of respondents

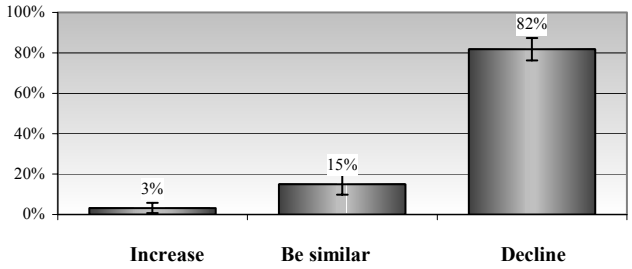


Sex	**Number**	**Increase**	**Be similar**
Male	84	58,3	41,7
Female	91	60,4	39,6
Age			
18-19 years	43	60,5	39,5
20-22 years	48	58,3	41,7
23-25 years	34	50,0	50,0
26-28 years	49	67,3	32,7
Residence			
Sub-region 1	73	52,1	47,9
Sub-region 2	12	50,0	50,0
Sub-region 3	64	67,2	32,8
Sub-region 4	23	69,6	30,4
Likely future occupation			
Manual / retail / mechanical	30	70,0	30,0
Tradesman / farming / fishing	29	72,4	27,6
Office / specialised jobs	28	53,6	46,4
Professional, technical, management,other	56	51,8	48,2
What is your marital status?			
Married/co-habiting	71	62,0	38,0
rmanent relationship but not living toghether	27	55,6	44,4
Widow (er), single, divorced	76	59,2	40,8
Are you studying or do you work?			
Study	65	46,2	53,8
Work	104	67,3	32,7

What influence do you think an aluminum plant in Reyðarfjörður will have on out-migration from the East Region? Do you think that out-migration will increase, be at similar levels or decline?

	Number	Percentage*	Confidence-range
Increase	6	3,2	2,5
Be similar	28	15	5,1
Decline	153	81,8	5,5
Total	187	100,0	

* Percentage of respondents



Sex	**Number**	**Be similar**	**Decline**
Male	85	18,8	81,2
Female	96	12,5	87,5
Age			
18-19 years	45	11,1	88,9
20-22 years	51	19,6	80,4
23-25 years	35	17,1	82,9
26-28 years	49	14,3	85,7
Residence			
Sub-region 1	70	17,1	82,9
Sub-region 2	16	18,8	81,3
Sub-region 3	67	17,9	82,1
Sub-region 4	26	3,8	96,2
Likely future occupation			
Manual / retail / mechanical	30	16,7	83,3
Tradesman / farming / fishing	34	8,8	91,2
Office / specialised jobs	29	20,7	79,3
Professional, technical, management,other	59	16,9	83,1
What is your marital status?			
Married/co-habiting	75	13,3	86,7
rmanent relationship but not living toghether	28	10,7	89,3
Widow (er), single, divorced	78	19,2	80,8
Are you studying or do you work?			
Study	70	18,6	81,4
Work	105	14,3	85,7