

Summary

Business and industry in Northern Norway can expect considerable growth and development. Growth is expected in the seafood industry, the mining and metallurgical industry and the petroleum industry. Tourism also shows a positive trend. The transport system should be adapted to support industrial development. Against the background of the report, we wish to point out the following conclusions with regard to key measures to be taken:

- The capacity of the Ofoten railway must be expanded in accordance with the expected increasing volumes of iron ore, and adapted to further development of other types of trains (fish and container transport, passenger trains). Required measures include railway crossings and double-track lines. Most of these should be implemented before 2023. A double-track study for the Ofoten railway should be initiated immediately in cooperation with Swedish authorities.*
- Through capacity expansion and other measures, the Nordland railway must be developed to accommodate future demand for cargo and passenger transport. Distance control on the Nordland line must be implemented as soon as possible.*
- Priority must be given to further expansion of the transport nodes in Narvik, Tromsø and Bodø to increase sea and railway transport. Mo i Rana and Kirkenes will also play a larger role in improving the efficiency of cargo transport. There must be easy access to terminals. The main shipping lanes should comply with national standards.*
- The airport structure in Northern Norway is not adequate. This issue has been included in a separate study of a future-oriented development of Avinor's airports, and will be included in the planning proposals submitted by the agencies and Avinor.*
- European highway E 6, including access roads, must have high regularity. Winter maintenance, prevention of avalanches and preparedness, as well as improvement of bottlenecks and the ferry network are given emphasis.*
- The transport system should be developed within six defined industrial growth areas. This could contribute to favourable development in these areas, which have the greatest potential for development of complementary labour markets.*

- *Land-based cargo transport to/from Northern Norway depends on routes through neighbouring countries, and is hence dependent on infrastructure priorities in these countries. International cooperation is therefore essential.*

Transport

The great distances in Northern Norway set this region apart from other parts of the country. This makes domestic aviation far more important for passenger transport than in other regions. Road transport dominates in intra-regional cargo transport, whereas exports are mainly transported by sea. The transit of iron ore from Kiruna through Narvik is especially important. Troms and Finnmark counties have no railways linked to domestic or international railway networks.

Business and industry

Northern Norway derives a large proportion of its value creation from the export of seafood which is caught and processed in the region. In terms of value, seafood and manufactured goods are the main exports from Northern Norway. Fresh fish is the single most valuable product. The region accounts for one-third of Norwegian aquaculture, and this proportion is expected to rise. Aquaculture is undergoing strong growth, which generates a need for rapid transport to Asia and Europe.

Norway's petroleum activities are moving northwards and eastwards. This is expected to produce add-on effects in the region. Oil and gas activities in the North will be concentrated in four petroleum clusters: Helgeland, Central Hålogaland, Hammerfest and Kirkenes. The volume of deliveries from manufacturers in Northern Norway to Norwegian and Russian operators is expected to increase in the years to come. In Northern Norway, extraction of minerals and ores will increase. It will be advantageous to exploit the large deposits of iron ore in Sweden and Finland with the aid of transport from ice-free ports and deep shipping lanes in Norway. Nordland County is the manufacturing powerhouse in the region with a broad spectrum of industries, ranging from fish processing to metalworking and process industries. Tourism requires better cooperation and more focused priorities. Cruise traffic is increasing, as is capacity utilisation on Hurtigruten.

Images of the future 2040

Scenarios for four selected industries – petroleum, mining and metallurgy, fishery/aquaculture and tourism – sketched for the period until 2040 describe varying levels of activity, and hence varying transport requirements. The activity described by the scenarios will require increased supply of skilled labour. To attract this labour, the regions must develop diversified housing and labour markets. Regions that succeed in developing complementary labour markets will have an advantage.

Growth regions

Against the background of today's situation and in light of expected future industrial development, six growth regions stand out: Helgeland, Bodø-Salten, Central Hålogaland, Tromsø and environs, Hammerfest-Alta and Kirkenes-Varanger. Today, the growth regions have diversified labour markets as well as industrial clusters that need to be developed further. On Svalbard, the priorities will have an impact on communications, as well as on other fields. In the long term, increased shipping is expected in the Arctic and the Northeast passage. In combination with the relocation of petroleum activities to the Barents Sea, this will produce add-on effects for Northern Norway.

Transport infrastructure

Strongly export-based industries, as well as the import of consumer goods and input materials to Northern Norway, depend on transport through the neighbouring countries and their priorities in terms of infrastructure. The positive future prospects for mining and mineral-based industrial development on the North Calotte and in north-west Russia require a transport system with ample capacity and expansion of the infrastructure in order to succeed. To allow Northern Norway to participate in this growth process, we need to develop the transport system internally in the region as well as cooperating with our neighbouring countries. This applies first and foremost to railways and sea transport. From the Finnish side of the border a railway link to Norway will be considered, with a view to establishing access to ice-free ports and shipping lanes that offer sufficiently deep water for shipments of ore. This is because of the limitations with regard to ice cover and sea depth of the Baltic Sea.

The opportunities for commercial shipping through the Northeast Passage are expected to entail stronger priorities in terms of infrastructure in the neighbouring countries. This will provide opportunities for reloading in the ports of Northern Norway, as well as for other maritime support industries along the Arctic Ocean. The agreement between Norway and Russia on the maritime boundary in the Barents Sea and the start of petroleum exploration on the Norwegian side of the boundary are expected to generate industrial development and cooperation, especially with Russia. This will provide opportunities for growth to business and industry in Northern Norway.

Maritime measures

Several areas along the Northern coast have been identified as potential sites for oil terminals or supply bases. A feasibility study for Eastern Finnmark shows that Skogerøya island near Kirkenes could be well suited as a location for a petroleum base, while six other locations could be suitable for service and supply bases. Several ports require upgrading to provide satisfactory services to future users. Few ports have the financial strength to commit themselves to the necessary investments. Funding of the maritime infrastructure is essential in order to benefit from the opportunities in the North. Development of aquaculture increases the pressure on available waters, in addition to the need for space within the traditional fisheries. At the same time, the petroleum industry is moving northwards. New industries and new technology for energy production will also require allocation of geographical areas.

Increasing petroleum activities at sea will mean increased traffic to onshore bases. Even if the oil and gas are brought to shore in pipelines, they must be transported to the markets by ship. The increasing volume of ore from Narvik and elsewhere must be shipped on large vessels. This development generates a need for expansion and upgrading of piers and ports. This applies to the growth regions in particular.

Aviation

Seen in relation to the size of the population, Norway has a far higher volume of airline travel than other countries. In the last decade, air travel frequency in Northern Norway has increased significantly and more than in the country as a whole. An airline network with frequent departures is a precondition for industrial development in this region and for achieving the stability of settlement that business and industry require.

As the petroleum activities increase in scope in the region, the need for good airline connections increases. Today, there are major petroleum-related activities off the coasts of Helgeland and Western Finnmark. The discovery of exploitable deposits in present and future

concessions will give rise to increasing activity also in other areas. This requires capacity expansion, regular and stable communications and facilitation of helicopter transport to and from the offshore fields. There will also be a need for east-west airline connections inside the region, as well as north-south connections to the other Nordic countries and Russia. Better airline connections between Northern Norway, Northern Sweden and Northern Finland will be essential to link research institutions from these countries in the context of the increasing petroleum activities. The regional airline network must have good connections between the growth regions and the knowledge centres of the petroleum industry. Industries such as petroleum, fishery/aquaculture and mining/metallurgy report development trends that will challenge the current air transport network. In the scenarios for moderate and high growth in the seafood industry, it will be relevant to establish air transport to Asia and other remote markets. Harstad/Narvik airport and Banak airport in Lakselv are potential export terminals for fresh seafood.

Railways

The strong increase in industrial activity in the entire Barents Region necessitates a focus on existing railways, but should also include assessments of new railway lines. The railways are competitive on long-haul transport routes. There is substantial potential for transporting a higher proportion of the cargo volumes by railway.

On the Norwegian side of the border, the main strategy has consisted in developing the Ofoten line by investing in capacity and quality improvement. The ore companies have signalled a large increase in their transport requirements for the coming years. There is also a need to expand the capacity of the Nordland line.

Against the background of the large ore deposits in Sweden and Finland, various initiatives have been launched to establish new railway lines to meet the need for transport. An initiative has also been launched to assess construction of the Troms line and the Northern Norway line. The analyses show that a linkage between Fauske, Narvik and Tromsø could result in an increased transfer of cargo volumes from road to rail, seen in a perspective extending to 2040. However, the transport volumes still appear too limited to make construction of these railway lines defensible. Part of this volume would consist in transfer of cargo transport from the Ofoten line or from coastal shipping.

The construction of new railway links to the neighbouring countries would mean that other parts of the region gain easier access to international railway networks, with obvious benefits. In our calculations, we have not identified transport needs on the Norwegian side of the border that would be sufficient to indicate that Norway should go forward with these projects. Regional initiatives for new railway links have already been put on the table, and Norway should discuss with neighbouring countries whether there is a basis for initiating cooperation on long-term development of the railway structure.

Roads

A major increase in industrial activity in the region will require an adequate road network that can provide predictable and safe transport. Improvement of traffic safety and accessibility will constitute major challenges. The most important north-south connection within Norway is European highway E6; in terms of time spent on the road, the Swedish and Finnish road networks are essential road connections to and from Northern Norway. The E105, which is Norway's only direct road connection to Russia, is increasing in importance for contact between the two countries. Increases in cargo transport volumes will require a high degree of

regularity. Avalanche prevention and improvements of stretches at high altitudes will be key measures. For reasons of preparedness, higher priority must be given to provision of alternative routes along the network of national roads. The strongly increasing traffic volumes and an increasing proportion of wide, long and heavy vehicles require comprehensive measures.

The additional growth of business and industry described in this report indicates that the measures planned for the road network should be accelerated.

In the growth areas, which include several cities with traffic problems, developing a road network that can help them function optimally will be crucial to their role in the development of business and industry in the region.

Nodes

In developing an efficient transport network in the North, the transport nodes will play a key role when establishing adequate and environmentally friendly transport solutions and for ensuring rapid outbound transport of fresh seafood in particular. Good coordination of shipping, road transport, airline and railway solutions is a prerequisite. The future will see major growth in the transport volumes of fresh seafood, but this type of cargo is highly sensitive to transit times. Efficient terminals must therefore be established. With the increase in volumes, opportunities for direct export from Northern Norway to Europe will also grow. In the growth areas in Northern Norway, conditions are favourable for establishing efficient cargo terminals. The government should take a larger share of the responsibility for coordinating the planning and construction of transport nodes, and in this context also assume a greater financial responsibility.

Against the background of the key role played by the transport nodes for the flow of transport, priority should be given to development of the transport nodes in Narvik (rail, sea, road) and Tromsø (sea, road, air). Mo i Rana and Kirkenes are nodes that fulfil key regional functions.