

STORIES OF COASTAL NORWAY

COASTAL AND MARITIME NORWAY



Map: Sverre Mo

Foreword

THIS BOOKLET WAS INITIALLY PUBLISHED in connection with Heritage Year 2009 as the first in a series dealing with important periods and themes in Norway's coastal history. In the run-up to the Constitutional Jubilee in 2014, additional narratives dealing with the framework of the national heritage will appear in a series entitled Stories of Coastal Norway.

The first number in the series – Coastal and Maritime Norway – gives a general description of coast-related economic activities, their relationship to the landscape, the seas, and natural resources, as well as their importance for economic growth, living conditions, and cultural expression. The outstretched coastline from Iddefjord bordering Sweden in the southeast to Grense Jacobselv in the northeast bordering Russia stands out as typically Norwegian in a wider European perspective.

The present text was written by Anders Haaland and Årstein Svihus; Sølvi Vik organized the illustrations; all three from Museum Vest in Bergen. Piers Crocker and William H Hubbard rendered the original Norwegian text into English. An editorial board consisting of representatives from the three networks of national maritime museums – Pål Christensen from Museum Nord (Lofoten and Vesterålen), Jo van der Eynden from Lindesnes Lighthouse Museum, Per G. Norseng from the Norwegian Maritime Museum (Oslo), and Bjørg Christophersen, Anders Haaland, and Årstein Svihus from Museum Vest (Bergen) – watches over the series to uphold the quality of its contents, while Museum Vest has responsibility for coordinating the series as a whole.

The Ministry, the Administration, and the network museums hope that these national framework narratives will provide enjoyment, material for reflection, and benefit for all those interested in the country's coastal culture, and that they can provide a historical perspective on the challenges of the present. The institutional sponsors welcome questions or comments about this ongoing project.

Arts Council Norway



The Norwegian Coastal Administration - NCA



The Directorate for Cultural Heritage



Directorate of Fisheries



Front-page picture: Stockfish on the drying rack. Photo: Kjell Ove Starvik. Norwegian Seafood Export Council

Coastal and maritime Norway

Freehold farmers and coastal women

Memories and stories from the past are an important part of reality in most cultures. There are many reasons why this is so, but a widespread explanation for the significance of historical documentation in the form of memories and cultural monuments in a broad sense is that such knowledge helps us to understand the world we live in and to define who we are. Our historical background constitutes an important and essential part of our identity. But is there anything now that is “typically Norwegian”? Can we speak of a shared Norwegian identity, a distinctive characteristic that separates Norwegians from all other nations and ethnic groups? The answer is both yes and no. A society consists of many cultures, and cultures – and societies – are constantly changing. Those parts of the past we choose to identify ourselves with are reflected in what we choose to preserve and in which histories we choose to tell about our own origins.

A major theme in the writing of Norwegian history has been the development from the “great age” of the Vikings through the economic and political collapse caused by the Black Death to the modern period when the country “slowly became our own” again. During the struggle for Norwegian independence at the end of the 19th century, a historical line was drawn directly from the clan society of Viking times through to the farmers’ society of the day. The freehold farmer, with a preemptive right to inherit the family farm and property, became the hero in the contemporary national romantic story of culture and identity in Norway.

This story was in many ways both correct and significant for its time. But today it seems somewhat strange that there should have been so much focus on agriculture and the boy heir to the farm and so little attention paid to the young sailor or young fisher. After all these were the years when Norway became one of the world’s leading seafaring and fishing countries and when considerable technological advances in ocean fisheries occurred.

We would argue that it is impossible to understand the development of Norwegian culture and society without taking into consideration the central role played by maritime economic

activities. This is true for the understanding of both how Norway differs from other European countries and what connects Norway and Norwegians to the rest of the world throughout history. From this perspective it is off track to set peasant culture against coastal culture or seafaring culture. To understand Norwegian culture and lifestyle we must look at the interplay between these different ways of living. Thus we must begin by examining the possibilities and limitations that nature and natural resources have set for the people in this country, especially along its coast.

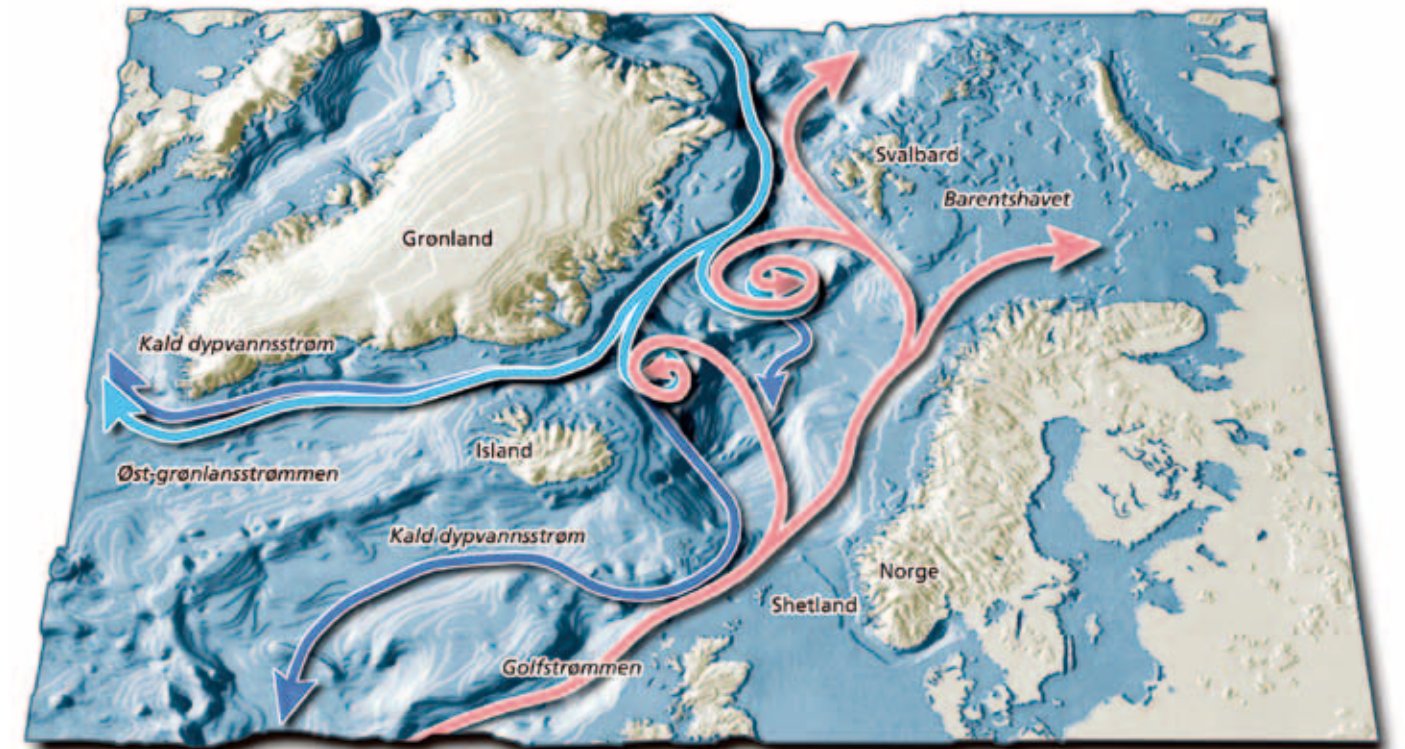
A country far north

Norway is a medium-sized, long and narrow country. It stretches from roughly 58 to 71 degrees latitude north. At a first glance at the map one might perhaps think that the northern parts could hardly support human settlement at all. However, the fact is that northern Norway has a far milder and more hospitable climate than other land areas at the same latitude. The main reason for this difference is the Gulf Stream, which brings large quantities of warm seawater northwards along the entire west and north coasts.

“A sea current with good supply of warm water...”

The Gulf Stream is one of the large global sea currents that are created by the earth’s rotation in an intricate interplay between different climatic zones. In the area around the equator huge masses of water flow westwards across the Atlantic Ocean. This warm water is then forced through the narrow Florida Strait northwards along the North American continent before being conducted eastwards into the northern part of the Atlantic, where it gradually mixes with colder waters from the Arctic Ocean. Warm water from the Atlantic flows into the North Sea both to the north of Scotland and up through the English Channel, from where it continues along the Norwegian coast right up to the Barents Sea. At its most concentrated the supply of water in this sea current is twenty times greater than the volume of water in all the world’s rivers combined!

These enormous quantities of warm seawater created conditions that made agriculture and permanent settlement possible much farther north in Norway than in other places on the globe, providing ice-free harbours and sailing channels along the whole of the west and north coasts all the way to the Russian border. The



■ The Gulf Stream ■ The East-Greenland Stream. ■ Cold deep sea streams Illustration: Tor Sponga.

confluence of the warm, salty Atlantic waters with fresher and colder mineral-rich waters from the Arctic Ocean and the rivers of Siberia contribute to make the Barents Sea one of the world’s most productive fishing grounds.

As a result of their position in the north, Norwegians have throughout history had easier access to arctic marine resources such as seals, whales and various fish species than other peoples. Norway has also played a significant role as a “polar nation”, sponsoring voyages of discovery and research activity in arctic regions with consequent territorial claims: Svalbard, the occupation of East Greenland in the 1930s, and the claiming of Queen Maud Land in Antarctica. Norway’s position “at the top of Europe” also came to have great significance in the 1970s, when the coastal nations of the world obtained dominion over their adjacent maritime areas and thereby over the fish and other natural resources found there.

The underwater landscape

In addition to the Gulf Stream there are other important natural features that affect settlement and economic activity along the coast. In the sea off the south and west of Norway beyond the deep but not very wide Norwegian Trench, there is a large, relatively shallow continental shelf with a number of even shallower fishing grounds. Along the coast west of Karmøy and Haugesund and from the mouth of Sognefjord right up to Varangerfjord there is also a reasonably wide stretch of shallow water (less than 200 metres deep) and a number of important and even shallower banks, some lying in this belt and some lying farther out to sea. This is significant because deeper waters are generally poorer in exploitable fish resources.

The topography of the seabed has also been important for the growth of the new Norwegian petroleum industry from the late 1960s, for in the first decades there were limits to how deep drilling

could be carried out and installations positioned. The seabed's topography and exploitation have also had great consequences for the extension of the national maritime boundaries that Norway experienced in the second half of the 20th century. Whereas the land borders of Norway have remained virtually unchanged since the 18th century, there has been a comprehensive expansion of maritime territory since the 1960s: from controlling a small belt of territorial waters, extending four nautical miles beyond the outermost coastline, to today's "blue Norway" with a sea area five to six times greater than the country's landmass. The two most important contributors to this development were the divisioning of the continental shelf in accordance with the midline principle in 1965, which decided the rights to oil and gas resources under the seabed, and the establishing of a 200-mile economic zone in 1977 whereby large quantities of the fish resources that it contained came under Norwegian control.

The coastal topography

Norway has the longest coastline in Europe. When reduced to a series of straight lines it measures 2,532 km. But the shoreline – that is, the coastline including all the fjords, inlets, islands, and islets – measures a total of 83,281 km. That corresponds to a distance longer than twice the earth's circumference. The long shoreline contains an extremely varied coast, which with few exceptions is studded with islands and fjords that cut deep into the mainland.

The many deep fjords that penetrate far into the landmass are one of the features of the Norwegian landscape that makes the strongest impression on the country's tourists. Fjords such as Hardangerfjord and Sognefjord are sea arms that go right into the mountains and glacial areas.

The fjords have thus since the dawn of time provided effective sea routes connecting the different ecological regions across the coastline and enabling an associated economic division of labour between Norway's inner, middle, and outer districts. Both resource situations and their connected skills varied according to the distance from the coast. This was particularly important for the production of the necessary tools and equipment for the cod and herring fisheries, such as boats of different sizes, and barrels and crates. Both agricultural products and fish became important items for exchange and trade

between the communities of the inner fjord and the outer coast as well as between the fjords and the valleys on the eastern side of the mountains.

The varied and deeply indented coastline created not least good possibilities for seaborne transport, even with very small sailing boats, both deep into the mainland and along the coast. Indeed, this situation is the origin of the country's name: "Norge" comes from the Old Norse "Nordveg" (north way), meaning the way or the shipping lane towards the North, hence Norway in English. This system of sea routes for trade and communication was vital for the country's development since a comprehensive system of adequate roads for most of coastal Norway was not in place until the second half of the 20th century.

The indented and sheltered coast also made it possible for to carry out fishing even on a large scale with remarkably small boats; in other words "everyone" – even the poorest coastal dwellers – could participate.

The topography of the coastal waters and favourable oceanographic conditions such as water temperature, salinity, and current are contributing reasons why two of Europe's largest fish populations, the Norwegian-Arctic skrei (spawning cod) and the Norwegian spring-spawning herring, have since time immemorial had their most important spawning grounds in Norwegian coastal waters. Vest Fjord, a large inlet of the Norwegian Sea located between Lofoten and the mainland, is a large underwater valley with especially good conditions for spawning.

The sheltered ice-free coast with its nourishing salt water was also a necessary precondition for using the sea for fish farms, raising predominantly salmon and trout. In the course of approximately a generation since 1960 this economic activity has developed into an industry with greater primary value added than all other saltwater fisheries combined: "the blue fields".

Taken as a whole the Norwegian coast is unique when compared with the situation in other large European coastal countries, which with few exceptions lack fjords and compact skerries. On the Continent, the substitute for fjords is estuaries, where large harbour and fisheries towns were established early on and where today one finds the largest installations for farmed shellfish and mussels.



Salmon fish farm in Loppa. Photo: Per Eide Studio. Norwegian Seafood Export Council.

Industrial structure – multiple activities based on resource availability

Seasonal activity in agriculture and fishing

The topography and the favourable climatic conditions have also led to a large part of the population living along the coast, first in scattered settlements and from 1850 onwards increasingly in towns. Outside the towns the vast majority of coastal dwellers lived on family farms.

Because of the climate Norwegian agriculture has traditionally been seasonal work with intense activity in spring, summer, and

autumn. Fishing was also for a long time seasonal but with an "opposite" timing: both herring and cod have their main spawning waves in winter and early spring – the off season for agriculture. These waves were at the same time so large that in pre-industrial times their catch required far more manpower than could live by year-round hunting and fishing. This was true even when there developed after 1880 in favourably situated regions such as Sunnmøre around Ålesund maritime operations that combined different fisheries with seal and whale hunting.

In other words the fisheries needed a flexible workforce. At the same time coastal agriculture in most places needed additional sources of livelihood, since access to arable land was in general more limited and geographically dispersed than in the inland valleys and



On coastlines with little arable land it was common to cut the grass on the islands. Here we see an M/B "Duen" SF-25B off Veststeinen, Vetvik in Bremanger in 1935. The boat is loaded with dried hay. Such a cargo was called "hay farm".
Photo: Fylkesarkivet i Sogn og Fjordane.

lowlands. A lot of the settlements along the coast expanded on the basis of the combination of fishing and agriculture. Fish was a crucial trading item for all who were not self-supporting in grain or other foodstuffs, while the soil provided the most necessary foodstuffs in the years when the catches failed. It was this combination that gave settlements along the barren Norwegian coast a stability that neither fishing nor agriculture alone could have provided.

Marine adaptation in town and country

Up till the interwar years the majority of Norwegian fishermen lived on farms – that is, they were fishermen-farmers. On the fisherman's farm it was the wife who had the main responsibility for operations while the husband was away. She was helped by children and the elderly, and could also do some fishing herself for home use. The women contributed to fitting out the fisherman-farmer by producing suitable food, clothes, and to some extent equipment. In districts near to good fishing grounds it was common for the men to also take part in other fisheries in addition to the great seasonal fishery, whether that be skrei-cod in Lofoten or spring herring in Western Norway (Vestlandet). This division of labour provided an efficient use of the household labour force in scarce economic circumstances.

With the exception of Ålesund and a number of fishing villages and small towns in Finnmark, the Norwegian fisheries industry was based in scattered rural settlements. By contrast, in countries such as Great Britain, Germany, France, and even Denmark, most fishermen lived in towns and villages. However, packing of fish for export, as well as a good deal of processing, took place either in or near to coastal towns. Between 1850 and 1950 nearly all Norwegian towns west of Lindesnes, the country's southernmost point, were based on the processing and export of fish and/or on shipping and shipbuilding.

East of Lindesnes forestry and timber production played the same role as fishing and hunting in the west and north: the forest was largely owned by the bigger farmers, and tree felling and log floating were carried out by members of the farming community in winter and spring. However, along the Skagerrak during the 19th century persons' multiple occupations became much more diverse. Many from these coastal regions were involved in the new driftnet fishing for mackerel from the 1830s. The larger catches – first mackerel and then herring in the last part of the century – were exported as fresh fish to England as well as to the growing population of workers in the eastern coastal towns. As the railway network expanded it also became possible to reach inland areas of Eastern Norway (Østlandet) with fresh fish. The combination of concentrated settlement and improved infrastructure created a home market that was unequalled in the rest of the country except around Bergen and provided the living for a number of year-round fishermen in the Skagerrak/Oslofjord area around the turn of the century.

In Eastern Norway, particularly along the coast of Telemark around Larvik and in the villages around the innermost part of Oslofjord north of Moss, natural ice was also an important export item from the mid 19th century. At its height, just before 1900, the yearly export of natural ice from this area exceeded 500,000 tonnes. Norway thus completely dominated the market for natural ice in western and northern Europe. This trade provided the foundation for multiple occupations also in the coastal districts east of the dividing mountain range, which, as with the combination of farming and fishing in other parts of the country, made it possible to sustain far more people than farming alone could have managed.

Marine resources and forestry, production of natural ice, and



Taking a breather during the drying of klipfish at Joffjora on the island of Giske in the 1940s. Photo: FylkesFOTOArkivet i M&R, Arnhild Sæther

other primarily coastal industries such as mining and quarrying can be considered as special cases of another important side of Norway's traditional rural economic culture that distinguish it from the agricultural practices of almost every other country in Europe, namely the use of low-productive outlying areas. Such land had a large and increasing significance for farm activities, and around 1800 constituted a large reservoir of resources. In Norway agricultural land amounted to a modest 2–3 per cent of the country's total territory, a markedly smaller proportion of arable land than found in other European countries. Although much of the rest – the high mountains, glaciers, and lakes – was truly barren, there were still large areas of both open countryside and wide-stretching forests that could support summer pasturage for domestic animals and the foraging of additional fodder such as wood shavings, twigs, leaves, and lichens as well as give opportunities for hunting and freshwater fishing.

The economic exploitation of outlying areas together with the combined occupation of fishing-farming paved the way for an explosive growth of the Norwegian rural population in the years 1814–70, which occurred without the transition to more modern ways of economic management and without a decrease in the standard of living. In Europe, only Ireland had a greater increase in population after 1814, but there it ended in catastrophe with the great potato famine in 1845–49 and a resultant fall in the population of several million. In Norway between 1814 and 1870, the abundant shoals of spring herring that invaded the western coastal waters played an important part in the population growth just mentioned. In the best years, the catch was up to a million barrels. Herring money rained down on the region's farming communities, hastening the transition to a monetary economy and resulting also in strong urban growth: Stavanger multiplied its population many times over in these years;

Bergen received a boost, and whole new communities sprang up, such as Kopervik, Skudeneshavn, Haugesund, Florø, and Ålesund.

An eye to international markets

In a European perspective Norway became the big country with the small population, a description that still applies today. The country has fewer than five million inhabitants in an area of 325,000 square kilometres, excluding Svalbard. In comparison, Germany has a population of 82 million and an area of 350,000 square kilometres. This means that throughout recent history Norway has had much greater access to natural resources such as fish, timber and certain minerals and ores than it could use itself. That fact in turn has resulted in massive international trade per capita during the entire period 1600–2000.

It is particularly notable that fish, seasonally caught near the beach by smallholders, their sons, hired men, and crofters, after first being processed into various products such as salted and fresh herring and other fish, stockfish (dried fish), klipfish (split, boned, dried, and salted cod), cod liver oil, cod roe, herring oil, herring meal, sprats and kippers, ended up in the marketplaces of Sweden, Germany, Russia, Italy, Spain, Portugal, the West Indies, North and South America, Nigeria, and not least Great Britain with its Dominions on four continents.

Processing was carried out partly in simple ways near the fishing grounds (stockfish, salted fish, iced fresh herring) and partly in more complex ways (klipfish). After 1880 portions of the catch also underwent industrial processing in canneries, cod liver oil and herring oil refineries, and – from 1950 – also filleting factories. Operations were spread over several thousand fishery works, salteries, and factories. Canneries alone numbered over 220 in the interwar period, and there were more than 70 herring oil refineries in the 1950s. Hundreds of boat building and repair workshops, engine factories, equipment factories, packaging producers (barrels, crates, and tinsplate cans), and additional supporting industries delivered materials to fishermen and processors. These small firms, along with ship chandlers and general stores, were scattered among all coastal towns and bordering hinterlands as well as along the connecting transport routes.

In much of the processing work women played a vital role.

They salted herring and other fish, carried out most of the work involved in the preparation of klipfish, dominated the often large number of employees in the canneries, and were indispensable in the filleting factories. Women had the necessary dexterity and their casual relationship to employment outside the home facilitated the operational flexibility that processing required given the seasonality of the fisheries. Frozen storage of raw fish was not common until after the Second World War.

With nearly 90,000 fishermen in 1900 and 120,000 in 1939 the Norwegian fishing industry was among Europe's largest. Since the other great fishing nations consumed most of their catch themselves, the quantity of Norwegian exported seafood was probably the greatest in Europe, if not the world. Norway used only about a tenth of its commercial catch; likewise it used only a small fraction of its forestry products.

The country's location in the far north of Europe was a precondition for the large catches of fish. However, this created problems for export since the journeys to the large and profitable markets of western Europe and America were very long. Before the establishment of refrigeration facilities, it was difficult to provide the consumer with fresh fish. Such a product would have given the fishermen a much better price than the traditional stockfish, klipfish, or salted herring. Another problem was that the dispersed and decentralized structure of catching activities resulted in the processing, and therefore export, being spread among a large number of independent businesses. Individually these were small in relation to the distance to and, not least, the size of many of the markets served. This situation weakened the bargaining power of the Norwegian suppliers to the advantage of the big buyers abroad.

“National route no. 1”

An important prerequisite for the development of the fishing industry in the latter half of the 19th century was the state's contribution to the

Chr. Bjelland & Co.'s sardine factory no. 2 in Stavanger and its workforce, ca. 1900. The Norwegian sardine production began in this town in 1879, and in the interwar years there were 60–70 sardine factories here. Tinned fish was at that time one of the fishing industry's products that yielded the highest export value. Photo: “Stavanger og omegns industri”.



“From the Arctic to the Equator”: Nigerian merchant in a stockfish loft in Bergen in the 1950s. Photo: Norwegian Fisheries Museum



Lindesnes lighthouse during a storm. Photo: Rolf Dybvik

building of new fishing harbours and the improving of older ones. Even though the Norwegian coast is well endowed with natural harbours, the waves and winds are in many cases so difficult that protective measures are needed in the form of breakwaters, deepening of entrance channels and sheltered basins, building of jetties and the like. In 1900 there were 90,000 fishermen with 100,000 boats, 80 per cent of which had fewer than four pairs of oars, and only 3,500 had a deck. There were no more than 100 steam fishing boats, as against thousands in countries like Great Britain. Dependence on oars and sails required safe harbours near to the fishing grounds. As the fishing fleet was rapidly motorized after 1905, demands on harbour facilities increased further still. In the 150 years between 1840 and 1990 the State Harbour Authority invested enormous sums in 750 fishing harbours along the Norwegian coast. Most facilities were of course in the counties of Rogaland, Møre og Romsdal, Nordland,

and Finnmark, where most of the fish was landed.

Fishermen also benefitted from the public commercial harbours, which were built up from the 1880s onward in the coastal towns to handle the rapidly growing traffic of steamships that carried cargo, passengers, and mail to overseas, coastal, and local destinations.

The many long fjords and mountainous massifs such as Langfjella, the Romsdal Alps, and Dovre as well as the harsh winter climate of the highlands created difficulties for the construction of both roads and railways between different parts of the country and along the coast. The important Bergen Line (Bergensbanen) was first opened in 1909, the Sørland Line between Oslo and Stavanger was completed in 1944, and the Nordland Line from Trondheim to Bodø in 1962. As late as 1930 one could not drive farther than 30 kilometres from Bergen before reaching either the sea or the mountains. At the same time the town had 80-90 coastal steamers

The brig "Leon" was built in Larvik in 1880 for a shipping company in Arendal, which at the time was Norway's greatest seafaring town. After 1900 the ship was sold first to a company in Kragerø, then to Solum, and lastly to Porsgrunn. Under a voyage with coal from Great Britain to Porsgrunn in autumn 1915 it sprang a leak and sank in the North Sea
Foto: Norwegian Maritime Museum



servicing 700 destinations in all the fjord arms, channels, and inhabited islands in the counties of Hordaland and Sogn og Fjordane. This special regional sea-based transport system was presumably the largest of its type in the world. The town's own shipping line for long-distance commercial traffic, the Bergen Steamship Company (Det Bergenske Dampskibsselskab), was founded in 1851; by the time of the outbreak of the Second World War it had a fleet of 50 sea-going steam- or diesel-driven ships. They served all the harbours along the Norwegian coast, the most important ports on the North Sea and the Baltic, and a few cities even farther away. Bergen was the central hub of the fine-meshed, complex network of steamer routes. Until the 1960s the situation was largely similar in the other coastal towns that functioned as regional or county junctions, with variations according to differences in the towns' size and location.

By far the majority of the approximately 65 Norwegian towns were located on the coast. Of the eight inland towns, only Hamar, Kongsberg, and Gjøvik were of any size. Most of the coastal towns had grown up round a good natural harbour as a collection point and shipping station for products from the fishing industry, forestry, and mining. The largest of them became also ports of entry and distribution centres for many sorts of imported goods needed by a small population so far north in Europe: grain, salt, hemp, groceries, and much else besides. Taking into consideration that overland communications and economic integration were so poorly developed, a well-known Norwegian historian has called Norway up to 1860/70 "a periphery without a centre". Individual coastal towns often had closer economic and cultural connections with their most important trading centres abroad than with their country's own capital city Kristiania (renamed Oslo in 1925).

This urban pattern, together with the difficult inland topography, made the sea and coastal waters the country's most important transport arteries for passengers, mail, and freight until relatively recent times. In other European countries most domestic freight was transported along inland routes: barges on rivers and canals, railways, and more recently lorries using a steadily more efficient network of roads and motorways.

As already mentioned, traffic along the coast is as old as the country itself. When the new Norwegian state was established in 1814, one of its first tasks was to prepare the groundwork for the

most efficient and safest ship traffic along the inner seaways, in the fjords, and in the seaward approaches to the towns. The state-run Directorate of Canals, Ports, and Lighthouses was established as early as 1811. A few decades later it was split into three separate governmental services: the Director of Lighthouses in 1841; the Director of Canals and the State Port Authority in 1846.

The oldest lighthouse in Norway was built at Lindesnes in 1656. Three new lighthouses were set up with private means in the 18th century, and the large-scale state-sponsored building of stone and iron-frame lighthouses started in the 1830s. Some hundred years later there were 136 lighthouses and one lightship, all manned. Shipping lanes were provided with 2,500 sector lights, more than 60 light and sound buoys, 90 foghorn stations, and 12,000 fixed and 2,000 floating beacons. Together with the 60 commercial ports and the many hundreds of fishing ports, this constituted a formidable technical infrastructure – "National Route No. 1". Its development was an major part of the state's organising of sea-based industry and an important contribution to nation-building. The Pilotage Authority (Losvesen) and the Maritime Survey (Sjøkartverk) are also a part of this development. The obligation to provide pilotage into and out of major ports dates from the 16th century. From 1725 all ships going to or coming from abroad had to have a pilot. The modern Pilotage Law was promulgated in 1824, but for a long time pilots had to compete among themselves for assignments and provide their own boats.

Cargo carriers on the world's seas

From the 17th century the age-old coastal trading with traditional small boats and the new export trade in timber, herring, and other new fish products joined forces to generate the development of an internationally oriented merchant fleet under Norwegian ownership. The fleet expanded especially rapidly in times of war when the kingdom of Denmark-Norway was neutral. However, prevailing mercantilist legislation limited foreign shipping to the larger towns.

The liberalization of international trade around 1850 gave Norwegian shipping a powerful boost. In the course of the next 30 years Norway built up an enormous merchant marine of sailing ships based on traditional domestic technology. A large proportion of the ships were built at hundreds of small and large shipyards in the coastal towns and country areas with easy access to suitable timber.

In addition, much cheap tonnage was bought from richer maritime nations, which were shifting from wooden sailing ships to steel steamships. Around 1880 Norway owned the world's third largest merchant marine according to tonnage. Operations were no longer dependent on carrying goods to and from Norwegian ports. By far the largest number of ships now travelled between foreign ports, usually in distant waters such as the Atlantic, the Indian, and Pacific Oceans. Norwegians became known as "cargo carriers on the world's seas".

This shipping boom was concentrated on the southwestern and southern coast between Bergen and the Oslo Fjord, with Arendal and Stavanger as the two largest shipping towns. Fleets of significant size were also to be found in other towns such as Bergen, Haugesund, Tønsberg, and Kristiania as well as in a number of smaller towns and villages along the Skagerrak opposite Denmark.

In Agder county the shipping boom mobilized a great deal of the natural resources, manpower, and competence found on the county's coast. Even the inland forest districts were involved. Like the spring herring fishery, this boom brought a comprehensive mobilization of resources and contributed to the modernization and urbanization of all of Western Norway. The significance of shipping for the local economy in Stavanger is demonstrated by the fact that the town's merchant fleet of 600 large and small sailing ships in 1880 had an insurance value 40 per cent greater than that of all the buildings in the town, including homes, industrial buildings, and both public and private buildings. In Bergen the proportion of the city's total estimated income generated by shipping in 1913 was nearly 30 per cent, and in Haugesund the proportion was probably even greater.

The shipping boom of the 19th century thus had a material basis in Norwegian natural resources: fish and timber processed to be



Gymnastics and play on a sailing ship. First-voyage boys were young, often confirmation age (14–15 years old). Photo: Gift from Per Arne Olaussen. Norwegian Maritime Museum.

export commodities. Another precondition was of course the country's rich and age-old competence in the building and navigating of vessels and the associated seamanship, which was in itself the natural result of the life and work of countless generations who had inhabited the fjords, sounds and islands. The rowing boat and the small sailboat were the cars, buses, and lorries of their time. Norwegian forefathers rowed and sailed in open boats to the Western Isles and Iceland in the 9th century, to Greenland a couple of decades before 1000, and to Newfoundland in around 1000.

The Norwegian shipping industry, however, did lag behind in the transition from sail to steam in the decades up to 1914. For many shipowners it was natural to hold on to what they knew best, namely a wooden hull and sails for propulsion, as long as there were possibilities for remuneration from that type of freight transport. In most places, iron/steel bodies and steam engines represented a completely new technology. In addition, the capital required for the purchase or building of new steamships exceeded the economic

means of many shipowners and dockyards in the smaller sailing ship towns. In the large and medium-sized towns where the transition was successful, it brought with it the development of a modern shipbuilding industry. In Bergen the two largest builders of iron-hulled ships produced 170 steamships in the 25 years after 1890, the majority of them for the town's own shipowners.

The transition from steam to diesel went much more smoothly, and the Norwegian merchant fleet grew strongly in the difficult years of the 1930s, a time when shipping tonnage elsewhere in the world stagnated. By the outbreak of the Second World War Norway again had one of the world's largest merchant navies, and probably the most modern, with a large component of diesel-driven tankers and liners as well as a number of smaller groups of specialized ships.

Daring hunting in distant waters

Seal hunting arose out of the fisheries in Sunnmøre and Troms. Sealers hunted in rather small Norwegian wooden boats over an area that stretched from Novaya Zemlya on the eastern edge of the Barents Sea to Greenland and even Hudson Bay in the west. Around 1920 the sealing fleet comprised 80 vessels. It was a risky business: in 1928 as many as 21 Norwegian seal-hunting craft were wrecked on the West Ice in the Greenland Sea, and as late as 1952 five vessels and 79 men were lost without trace on the West Ice. In Sunnmøre seal-hunting could be combined with both drift net and purse seine fishing for herring and line fishing for cod, cusk, and ling on the banks farther out to sea; this multiple activity enabled the region early on to establish a leading position in the Norwegian fishing industry.

Whaling also had its beginnings in coastal fishing and hunting. When Norwegian legislation shortly after 1900 prohibited whaling in the waters north of Troms and Finnmark, the country's whalers discovered new and much more profitable whaling grounds in the Southern Ocean surrounding Antarctica. After an initial phase operating out of land stations on islands, Antarctic whaling developed pelagic hunting from large mother ships. The industry assumed huge proportions: in the latter 1920s about 6000 whalers with 31 floating factories and 166 whaling ships produced a gross catch value almost twice as large as that generated by more than 100,000 Norwegian fishermen in home waters. In 1929 the catch was the equivalent of more than 30,000 blue whales. In other words, the combined amount of meat was about the same as four million oxen! Most of this valuable meat was dumped into the sea. The main focus was the blubber, which was boiled to produce whale oil for mainly technical or industrial use. In the period 1920–55 open sea whaling in the Southern Ocean, where Norway was only one of a small number of big operators, must have been one of the first large-scale environmental disasters: the baleen whales, world's largest mammals which feed on some of the world's smallest animals (plankton and krill), were nearly wiped out. Both whalers and factory ships, increasingly equipped with a stern slipway, provided significant orders for the shipyards in Oslofjord in difficult times. The whale factory ships were among the largest and most technically complex vessels in the Norwegian merchant fleet. A number of the whaling companies also got involved in tanker transport.

The strong international orientation of these economic activities that grew out of a long rather primitive agricultural sector resulted in Norway's becoming in the decades around 1900 one of Europe's biggest fish exporters, a leading sealing and whaling country, one of the world's largest seafaring nations, and a significant exporter of forestry products as well as electrochemical and electrometallurgical products. In 1936 a Norwegian professor in colonial economics published a book with the curious title *0,86%*. It referred to Norway's estimated share of world trade both at that time and in the 1880s. The country had a mere 0.1 per cent of the world's population, yet close to ten per cent of the world's shipping tonnage. Thus, foreign business constituted a relatively large part of the Norwegian national product, more than was typical for western industrial societies at the time. Little Norway had a large overseas sector long before the age of globalization.

The significance of coastal resources

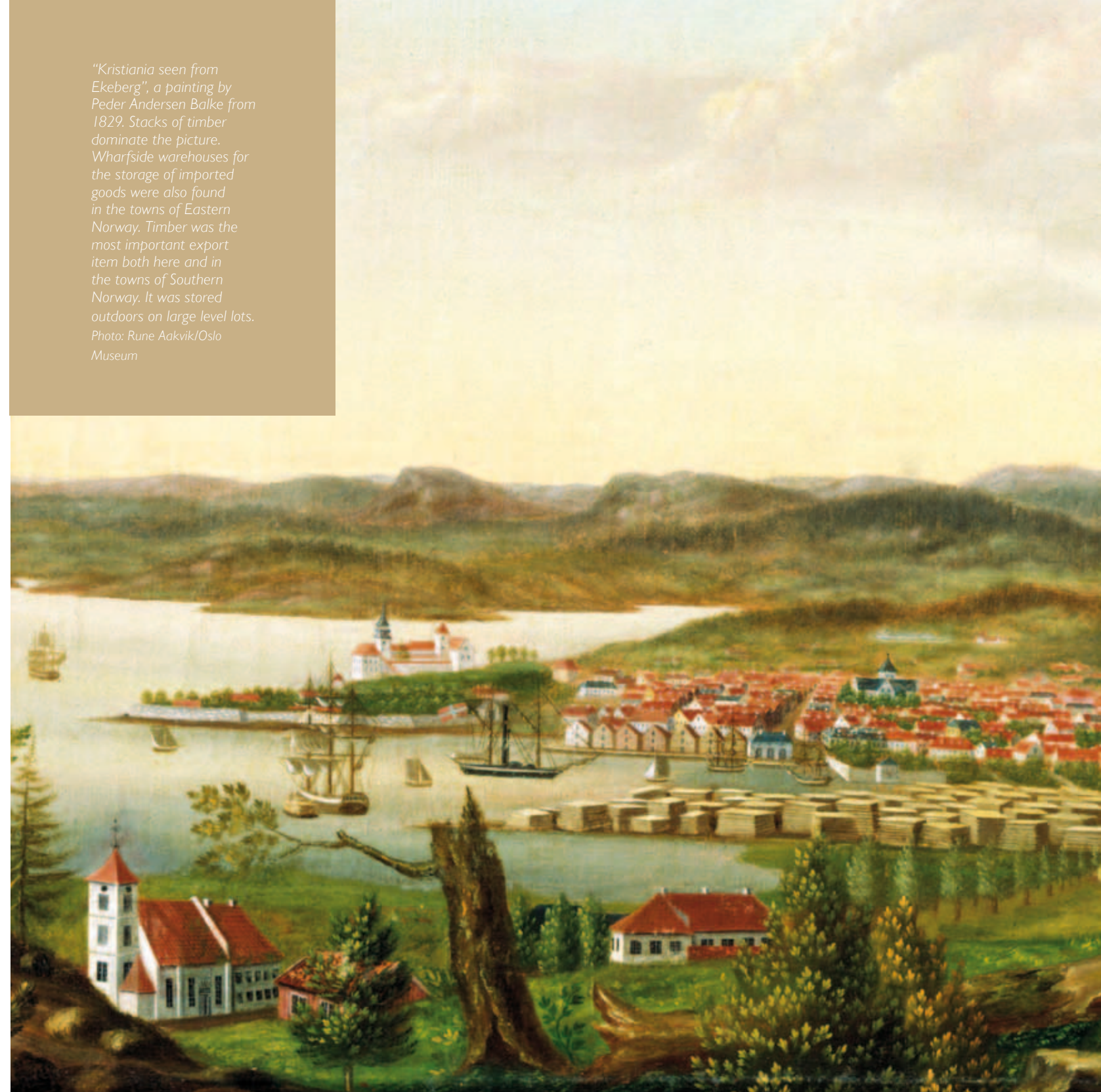
In addition to the rich stands of fish, herring, and sea mammals and the ice-free and varied landscape, there were also a number of relatively nearby forests that belonged to the historic primary resource base of coastal Norway.

Norwegian timber export began along the country's southern and southwestern coasts. Here were the areas of the great European belt of coniferous forest that lay closest to the most important overseas markets: the Netherlands, the British Isles, and France. Moreover, nearly all of these forest resources were near to navigable fjords and coastal waters. Even the much larger forests in Eastern Norway had the advantage of being relatively close to the coast and open, ice-free sea, when compared with the still more extensive forests of Sweden and Finland, not to mention Russia. The significance of proximity to the sea for transport economics is best illustrated by the fact that, before the opening of the first railway connection in 1852, it was cheaper to transport a barrel of salt from Spain to Kristiania (over 3,000 km) than from Eidsvoll to Kristiania (about 60 km).

A special waterways geography

For the transport of timber the country's geography and climatic conditions were also important in another way: the significant precipitation on a physical landscape as varied as the Norwegian

"Kristiania seen from Ekeberg", a painting by Peder Andersen Balke from 1829. Stacks of timber dominate the picture. Wharfside warehouses for the storage of imported goods were also found in the towns of Eastern Norway. Timber was the most important export item both here and in the towns of Southern Norway. It was stored outdoors on large level lots. Photo: Rune Aakvik/Oslo Museum





coastline with great massifs covered by glaciers and winter snow in the background provided a network of waterways, rivers and waterfalls with suitable drops that hardly any other European country could come near. The Alps had both many suitable waterfalls and adequate precipitation, but they are a long way from the sea. In Western Norway water was the motive power for countless vertical frame saws located near the sea. In the course of the sixteenth and seventeenth centuries this saw revolutionized the Norwegian timber export business. Coastal access to forests and waterfalls that could drive sawmills was also important in other parts of the country. In Southern and Western Norway and in Trøndelag (Mid-Norway), waterways provided practical and cheap transport whereby logs could be floated from the inland districts down to the sawmills and, later on, to other types of wood-processing plants nearer the sea.

Waterways supplied the mechanical energy for much of the new factory-based industry established after 1850. Water power directly drove the machinery in flour mills, in textile factories, and in wood pulp and cellulose factories. Waterfalls became Norway's "white coal".

From the turn of the 20th century the energy supply was increasingly generated by transforming mechanical water power into electricity. This development led in turn to truly big industry in which the main resource was enormous quantities of electric power. The choice of product was partly dictated by the minerals most easily available, but mostly by demand from the world market. In one extreme case, the output product changed in the course of two decades from carbides to nitrogen, then to ferrosilicon, and finally to

High-voltage power masts at Tveit near Tyssedal, 1915. The factories in Odda and Tyssedal got their electric power from the Ringedal water system, which drained a number of large and small lakes in the south-western area of the Hardanger Plateau. From the shoreline power station, AIS Tyssefaldene (in the background), the 12,000 volt current was transported over 6-7 kilometre-long cables, which were laid out in 1906-08 and 1909. They were in use until 1995. Photo: AIS Tyssefaldene. Norwegian Museum of Hydro Power and Industry.



Ocean kayaking. Coast adventure for the energetic. Photo: Julie Skadal.

aluminium at one and the same plant. Since technology enabling the transmission of electricity without significant loss of power was not available before 1910-20, many of these large plants were established either where waterfalls flowed into a fjord or close by a fjord that was deep enough to function as a transport artery for seagoing ships. In turn the companies built up towns that were dominated by water power-dependent big industry, such as Rjukan/Notodden, Eydehavn, Jørpeland, Sauda, Odda/Tyssedal, Ålvik, Høyanger, Årdal, Svelgen, Sunndalsøra, Glomfjord, and others.

Scenic tourism

The unique coastal landscape with deep fjords, rich salmon rivers, waterfalls and glaciers, together with the midnight sun in the north,

stimulated the growth of a significant sea-based tourist industry long before the modern service society. The seasonal tourist invasions started with the British (1860s), then the Germans (1890s), and later other foreigners. Foreign tourist steamships visited the fjords and the North Cape, and Norwegian local and coastal steamer routes connected with the same tourist destinations. A number of tourist hotels – some of them spectacular – were raised at strategic places along the fjords. Tours by carriage in the grand style were organized from the hotels or landing wharves to the most important sights. Staging posts sprang up along the longer routes, along with hotels, restaurants, and other tourist-related businesses in many of the towns. In the most recent decades a significant and varied tourist industry has developed along the coast. Opportunities for experiences in the



wild, sport fishing, and general recreation have in many places become a more important resource than the traditional coastal industries. To a large extent the old industrial buildings have also been turned into overnight accommodation for travellers.

Changes in the Resource Base and Adaptive Ability

From nature's side the resource base has changed little since historic times. Coast-dwellers have thus lived under relatively stable conditions, largely determined by the sea and the landscape. In a shorter time frame, however, powerful fluctuations – both naturally caused and created by man – have demanded an ability to adapt and adjust.

All fisheries are subject to variations in catch from year to year, as is the case with all of nature's bounties. Even so, historically speaking, the changes within the herring fishery have been particularly dramatic. While the cod fishery can vary significantly from one year to the next as regards both quantity and geographic distribution, the herring fishery can go from occupying large numbers of a local community or region one year to disappearing completely the next. Thus it was that the spring herring was absent from the Norwegian coast between 1784 and 1808, and round 1870 a 60-year herring boom stopped abruptly – again for a couple of decades. That is why one talks of herring periods, interrupted by years of scarcity.

In these early periods the reasons for variations must have been biological or oceanographic factors outside human control. By contrast, overfishing was a major reason why both the herring population collapsed and other pelagic fish species were threatened with extinction in the years 1955–80/90. The breeding stock of Norwegian spring-breeding herring was reduced from 13.5 million tonnes in 1955 to less than 10,000 in 1975! The collapse was made possible by – seen

“The sea's silver”. Big throw of winter herring on the Western Norwegian coast in the 1950s. The purse seine is fastened to the purse boats and is hauled up (“dried”) by hand into the two open boats in order to scoop the herring into the main vessel. The two other fishing smacks have been summoned by radio to take in whatever of the catch can not fit into the purse boat's hold. Photo: Norwegian Fisheries Museum

in isolation – an impressive will to adapt and improve the efficiency of the herring fishing fleet. The more effective fishing techniques, combined with a growing world market and researchers' inadequate understanding of the sea's biological-oceanographic mechanisms, provoked the collapse. Similar mechanisms were responsible for the breakdown of pelagic whaling in the 1950s.

The unpredictable market

Norway's coastal industries are outward-looking and have always been intimately connected to the development of international markets. One had to adjust to rapid changes resulting from wartime blockades, international recession, changes in customs policy, introduction of new, competing products, and not least the declining demand, even in good times, for well-established products in the traditional markets. The fishing industry contains several examples of such adjustments. The gradual change in the processing of skrei-cod from stockfish (dried fish) to klipfish (split, dried, and salted fish) in the three centuries after 1700 occurred in response to the competition from the salt fish and klipfish that came from the large new cod fisheries off Newfoundland. By the mid 19th century klipfish had become a far more significant product for the fishing industry than stockfish, which also gradually had to find new markets in Italy and Africa. This change led to the northern parts of Western Norway assuming a greater role in the processing and export of fish than earlier and was crucial for the growth of the towns of Kristiansund and Ålesund.

From the 1950s both klipfish and stockfish had to compete for their raw fish against a completely new product: frozen fish. The development of integrated freezer facilities (freezer trucks or vans, refrigerated display counters, and home fridges) in western industrialized countries encouraged an emphasis on the fish filleting industry in the post-war reconstruction of northern Norway. Freezing fish solved the problem that the lucrative markets for fresh fish were far away. The change-over also strengthened again the position of northern Norway in the processing stage. In the past few decades an increasing number of quality-conscious and fastidious customers, who also make new demands regarding the methods of catching and processing, has sprung up. Stockfish and klipfish probably have a bright future ahead of them as “slowfood” products with a long cultural history.

Norway as a nation of technologically advanced primary industry

Economic growth involves technological progress, increasing income, and changing consumer habits. After the first industrial revolution, which occurred in Great Britain in the decades following 1760 and quickly spread to other countries in western Europe and North America, a major characteristic of the history of both the Western world and Norway has been strong, and for the most part, long-lasting, even accelerating, economic growth – growth and changes. Norway has in fact managed better than most European countries during this long-term process of growth.

A notable feature of the process in Norway is that, right up to today, it has for the most part been linked to the constant development of new ways of exploiting the country's marine-maritime resources and the competence found within fishing, hunting, seafaring, and maritime engineering. Moreover, this characteristic has continued as the rest of the world increasingly emancipated itself from the limitations of natural resources. The two most striking examples of the opposite trend are Japan and South Korea, two of the most impressive post-war “economic miracles”, which have happened practically speaking without any foundation in local natural resources.

Norway has also today a very strong foreign sector even though, because of the increasing globalization worldwide, it is less exceptional now than it was a hundred years ago. However, in Norway this sector is still to a very large extent linked to marine and maritime resources, in fact more so than 30 years ago.

Since 1980 the offshore petroleum sector has taken over as the engine of economic growth and the country's most important economic fundament by far, with crude oil alone being responsible for almost 40 per cent of the value of all exports in 2009 and natural gas for an additional 27 per cent. Norway is still a leading maritime nation – its proportion of the world's shipping tonnage lies between five and ten per cent. The fleet's structure is constantly adjusting to both the shifting needs of the native petroleum industry and the changes in the transport needs of the growing global economy. Norwegian shipowners earned good money from the ongoing major transfer of industrial production from Europe and North America to the Far East. Norwegian dry-cargo ships carry ores, minerals,

timber, and other bulk products to the East, while a large proportion of the cars exported to the West travel on the approximately 200 specialized Norwegian car-transport ships. Seafood is the country's third largest export item. High-tech saltwater fisheries, which have strictly limited catch quotas, are supplemented by marine fish farming, whose market value has already exceeded that of the traditional fisheries and which has in addition the potential to increase production many times over.

One should not, however, exaggerate the importance of the marine-maritime resources in a truly globalized economy. Over the last 30 years neighbouring countries such as Sweden and Finland have managed almost as well as Norway without the benefits of oil and natural gas and in the main without fisheries and seafaring. At the same time growth in Scandinavia has been stronger than in the rest of Europe. In this connection it is probably important that the Norwegian way to the affluent society still goes through the intensified exploitation of marine/maritime resources.

Norway is thus in a fortunate situation because of its access to rich natural resources, but growth and prosperity depend on a lot more than just luck and chance. Industrial adaptation has been followed up and prepared by a government that is both willing to control and thinks long term, especially as regards the petroleum industry. It is remarkable that a small country like Norway managed, right from the start in the mid-1960s, to secure government control and thereby a socially balanced economic development of the extraction of oil from the North Sea, which technologically is extremely demanding. It was a field that until then had been dominated internationally by some of the world's largest private and “imperialist” companies, “The Seven Sisters”. Further to this image, that same little country has been able to carry out steadily more technically demanding and complicated extraction and pipe-laying projects over the last 20–30 years. A spectacular example is the Troll A platform from 1985, which is 472 metres high with 15 times more iron reinforcement

Ekofisk 2/4 T was the world's first concrete construction built for petroleum operations. It was built in Stavanger in 1971–73 as a storage tank for oil when bad weather prevented the use of loading buoys. In 1989 an extra concrete protecting wall was added around the tank because the seabed had sunk. Ekofisk 2/4 T was closed down in 1998. Photo: Norwegian Petroleum Museum/Husmo Foto



than the Eiffel Tower. During the towing from its construction site at Hinnavåg near Stavanger to the designated field in the North Sea, the superstructure – a massive processing plant built by Aker Stord – was lifted into position with millimetre precision at Vats in Vindafjorden. This is the largest structure ever moved by man: nothing else comes anywhere close. We may also add that the Troll Field was, until the discovery of today's Stokhman Field, the world's largest gas field at sea, and that Statfjord was for a time the world's largest oilfield at sea. Today's extraction technology is even more advanced, using remote-controlled underwater devices having no need for platforms. The world's longest underwater pipeline, the Langeled pipeline, joins the gas field Ormen Lange, north of Kristiansund, to Easington in northern England, a distance of about 1,200 km.

Transfer of knowledge from traditional industry to global actors

A continuing characteristic of Norwegian industrial history has been, and still is, the transfer of experience from one field to another. The historic connection between the export of fish and timber and overseas shipping has already been mentioned. From the 1870s Norway became one of the leading producers of wood pulp because the country had a significant water-driven milling industry; the technology was basically the same in the two industries. A hundred years later fish farming took off when herring fishermen with competence in making seines got involved and developed efficient and robust floating fish cages. The petroleum sector, not least, was also able to benefit from the knowledge and skills of the older industries. Thus it was important for the building up of Norway's own capacity as an oilfields operator that the country had had, before the start of the North Sea oil boom, an international shipping business that in the course of the 20th century had developed precisely the large-scale transport of crude oil, liquid gas, and chemicals as leading specialties. A large, technically advanced shipbuilding industry pulled in the same direction. The development of the huge concrete platforms had an important foundation in the many decades of large-scale building of concrete dams with tunnels and pipelines to power stations and big industries based on hydroelectricity. Finally, the experience of deep-sea fishermen with medium-sized

steel boats and the North Sea's harsh waters could be drawn upon when the fleet of different types of offshore vessels was to be built: stand-by boats, supply boats, tugs and anchoring boats, and more.

The significance of coastal industries for social structure and political mobilization

Today Norway is a society that highly values the ideal of equality. Is it reasonable to think that the historical development of coastal industries has contributed to creating more egalitarian social conditions than the agriculture, forestry, industry, and mining in the inland districts?

Right up to the 1980s and '90s the resources of the fisheries industry were considered to be "common property" that everyone had access to. The special working conditions, both physically demanding and economically risky, encouraged a strong element of cooperation in the industry. Purse-seine fishing for herring was based on a division of labour among equals, and the profits were shared out fairly according to the work done and the proportion of equipment and boats contributed. The most skilful herring-sighter, who also had the ability to coordinate the complex operation of catching, was the foreman – the master seiner – and received a double portion. The system of apportioning was also widely used in other fisheries; fixed salaries were very uncommon. Joint-ownership of boats and cooperation were probably necessary responses to the limited access to capital in the age of the fishermen-farmer, making a virtue of necessity. As late as the 1960s, when the herring fisheries underwent the expensive change from relatively modest-sized, hand-hauled purse seines to huge motor-hauled ring nets that required even larger boats, having the reputation of being a skilful master seiner earned a better credit rating at the bank than having capital or business skills. Even in its new and more capital-intensive phase the herring fishery was an occupation for active fishermen, which underscored the continuing importance of expertise. Growth in the business often resulted in a division into several units, each with just one or two boats, preferably with younger family members as the new shipowners.



The fleet of small fishing boats in the Lofoten, 1947. Into the 1950s Norwegian fisheries were dominated by small and medium-sized boats, owned by the fishermen themselves. Photo: Lundqvist. The Lofoten Museum

Coast, sea and politics

The relatively even structure in the fishing industry has also been important for the continuing political process of democratization. Farmers had been actively drawn into the national political system as early as 1814, but workers and fishermen had to wait their turn until the 20th century. To be sure there was never a "Fishermen's Party" corresponding to the Agrarian Party (Farmers' Party) from 1920, but questions relating to fisheries were nevertheless an important basis for political mobilization. The first parliamentary deputies from the Labour Party (or Workers' Party) were elected in 1903 in the northern counties of Troms and Finnmark partly as a reaction to the growing concentration of capital in the industry. The special challenges of the coast over the ensuing 50 years were also a significant force for mobilization and stabilization, both regionally and nationally. It is against this background that one must view the government's engagement in industrial and district politics to keep the fishing industry open for as many as possible.

This was why the more efficient trawl fisheries were subject to tight restrictions, especially in the first half of the 20th century. The technological modernization of the Norwegian fishing fleet occurred on the fishermen's terms to a much greater extent than was the case

in many other coastal nations, such as Great Britain and Iceland, where a considerable part of the catch was taken by trawlers. To maintain coastal settlements it was for a long time desirable to have more fishermen than strictly speaking were necessary in order to have an economic activity that could be combined with the small-scale farming that was so widespread in the outer reaches of Western Norway and Northern Norway (Nord-Norge). The special structure and social role of the fisheries industry contributed to the development, in the wake of the long-lasting interwar economic crisis, of a statutory complicated regulatory system that gave the fishermen's own sales organization a monopoly on first-hand sales of all types of fish, herring, and shellfish. The regulation, which is still in force, is unique to Norway. The same applies to the legal prohibition against anyone owning a fishing boat other than active or formerly active fishermen – the so-called Participants' Law (Deltakerloven).

Ownership structures and the state intervention

The shipping industry was also partly built up from below. During the sailing ships' age of expansion 1850–1880 the joint-owned shipping company was the most important form of ownership. Because a new company was created for each ship and the amount of shares offered could reach up to 100, a large number of independent contributors could participate in the investments – just about "everyone" could own a share. This increased the mobilization of local resources. Shipping companies owning several ships and having a small number of partners did not appear until the transition to steamships around 1900.

The new form of shipping company made it easier to think long term and to build up larger fleets of ships, while also providing the economic resources to be able to cope with the even more expensive transition from steam to diesel after 1910. But even during the interwar years, when many new, expansive tanker companies based on diesel-powered ships started up along the Oslo Fjord and in certain towns along the south



A globalized business: MT "Front Ardenne", a "Suezmax" crude oil tanker of 153,000 dwt. This is one of the few ships owned by Frontline Ltd. that sails under the Norwegian flag. The company is registered in Bermuda and the norwegian-born main owner has taken Cypriot citizenship. Photo: Frontline

coast, their beginnings were often comparatively modest. Competent businessmen gathered enough small investors to begin their first ship, preferably with as much as 80 per cent credit advanced by the shipyard. Even the build-up in the last 3-4 years of the offshore fleet – at present the most valuable segment of the Norwegian merchant fleet – has very largely developed out of fishing boat shipping companies in the pelagic sector, with a large part of ownership based in small coastal communities such as Herøy, Austevoll, Bømlo, and Skudeneshavn.

We have seen that agriculture in the coastal region was long closely linked with fishing. As well the partitioning of farms was practiced over a longer time in districts with particularly good opportunities for seasonal fishing. The nineteenth-century system of crofting or tenant farming had also had another "milder" version along the coast than in the straight agricultural or forestry districts and was in any case less

widespread here. To keep things in perspective we must remember that Norwegian agriculture, both along the coast and inland, had early on a much higher proportion of freeholders than found in the rest of Europe, with certain reservations regarding the relative size of tenant farming there 1800–1850. Norway's allodial law (odelslov) strictly regulating the ownership of freeholds contributed to this situation. The law functioned as a legal brake on exploiting land as a commercial investment item. Today it is a Norwegian exception and is a remnant of the distant past when it was the family that owned the land rather than the individual.

Hydroelectric heavy industry was a pronounced resource-based industry, but its economic foundation was completely different from that of the traditional coastal industries. It was established after 1900 where sufficiently large waterfalls met navigable fjords. But the scale

of these power-generating and industrial projects far exceeded the financial capacity of the Norwegian banking system. Since the export economy was geographically widely dispersed in the many small and medium-sized coastal towns, the banking system was also split up in many more numerous and smaller units than in neighbouring countries. The expansion of heavy industry, therefore, needed investment from foreign capital: Swedish, German, French, and British.

The state intervened early on also here in the national economy's most dynamic area when it appeared that society's vital interests were threatened. Around 1905 many feared that foreign capital had bought up most of the country's water power. A provisional Concession Law was passed in 1906 – the so-called "Panic Law" – and extended and tightened up in 1909 and 1917. Its terms applied to water power as well as to forests and ores/minerals. After 50–60 years ownership concession of the waterfall and electrical generating station reverted to the State free of charge (right of escheat), regardless of whether the owner was a foreign or a Norwegian private company. In 1917 demands pertaining to welfare and district politics were added: developers must contribute financially to a meeting house for the workers, pay for the organization of teaching, health services, and the services of priests and police in the new industrial area as well as give a discount on sales of electricity to local activities, both public and private.

While the "Panic Law" would secure the national right of disposition over vital natural resources (one year after the dissolution of the union with Sweden in 1905), in 1917 it was important to secure a certain social guiding of the process of industrialization. The problem of monopolies had become a new worry. This involved truly big industry: some of Europe's biggest companies had been amongst the purchasers of waterfalls. The answer to this concern was the Trust Law of 1926, which was supposed to prevent mergers and agreements that inhibited competition and were thus unfavourable for consumers.

Neither the Concession Law nor the Trust Law was peculiar to Norway. However, the latter was one of the world's most ambitious in its day, and was considered controversial economic policy right up till the 1950s. And the Concession Law was regarded as very dramatic in Norway itself because of the unusually great importance of water power for both the establishment of industry and for infrastructure.

It was a useful frame of reference when the state acquired national control over the development of the new oil industry in the North Sea. It was in line with the "participatory democratic" trend in Norwegian

business history that the state-owned company Statoil gradually became the dominating developer and operator on the Norwegian continental shelf and that the state kept proprietary rights over the petroleum resources, administered by the state company Petoro.

Cultural Characteristics

Boats and other vessels

The long and deeply indented coastline has given Norway, internationally speaking, a unique stock of traditional boats. We have seen that a hundred years ago there were 100,000 boats in use by fishermen; by far the majority of them were open wooden boats with from two to five pairs of oars and a sail. Building techniques and design differed from district to district, a result of differences in topography, weather, currents, fishing techniques, and to a degree external cultural influences. Even though the types had undergone certain changes over time, there are, as for example in the case of the so-called oselver from Sunnhordland, clearly traits that go back to the Gokstad boats of more than a thousand years ago. For coastal dwellers the boat was just as important as the horse for inland farmers or the car for present-day Norwegians; it was needed for fishing or other work and all types of transport. On a typical fisherman farmstead along a stretch of the coast such as Tysnes in Hordaland county it was common to have five to six boats: one or two "big boats" with four or five pairs of oars for herring fishing, heavier loads, and the voyage to church; a six-oared boat, and two or three four-oared boats for other fishing activity, "local traffic" etc. The precise design of even a particular boat type like the oselver was affected by the boat's intended use: whether for line fishing or other ways of fishing, use by the master seiner, for fast sailing, or for carrying cargo.

A large fleet of square-rigged cargo boats from Northern Norway, Hardanger sloops, and ketches took care of the heavier freight transport over longer distances, between the fishing grounds and the export harbours, and between rural settlements and the nearest town. Both in Northern Norway and in the county of Sogn og Fjordane it was common to have sloops connecting the individual rural settlements. In Nordland county alone there were as many as 350 sloops operating as late as 1890.

Building boats and other vessels

In rural districts with good access to suitable timber there grew up



The ring net boat hauls in an enormous ring net using a power winch. From the 1960s most catches of herring, mackerel, capelin, and blue whiting were taken with such highly efficient fishing boats. Photo: Norwegian Fisheries Museum

rather large concentrations of specialized boat-builders. Well-known places were Salten, Rana, Bindalen, Åfjorden, Bjørkedalen, Os/Strandebarm, Hardanger, Ryfylke, Lista, Søndeled, Hvaler, and others. And this does not take into account the town shipyards that delivered many of the larger sailing ships for overseas travel in the years of expansion after 1850. Several of these centres of construction picked up ideas from Swedish fishing smacks and imported clipper ships (1865–90) and evidenced considerable adaptability when motorization forced them to produce new, bigger, and stronger wooden boats in the two decades after 1905.

The two to three hundred steam-driven fishing boats were largely built by engineering workshops in the towns, but when especially the herring fishers shifted to steel-hulled boats for deep-sea fishing

in the 1960s, many of the rural wooden-boat builders also took the opportunity to re-organize, at a time when the towns' large shipyards had their hands full with orders for a rapidly expanding merchant fleet. During the international shipping crisis in 1975–87 urban shipyards that could not adapt to producing oil rigs, platform superstructures, and sections were closed down. On the other hand, the fishing-boat yards, especially in Møre and Hordaland but also in towns and villages from Mandal in the south to Harstad in the north, continued to build increasingly larger fishing boats, including some for export, and in time even larger offshore vessels. An internationally acknowledged leading competence was developed in both of these fields as well as in the building of lifeboats and express boats. The country's largest producer of small leisure boats – Henrik



The fishing village of Andenes on the north end of Andøya in Nordland county, early post-war. Here the continental shelf comes closer to shore than at any other place along the coast, a feature that gave rich catches the year round. Between 1894 and 1934 the State Harbour Authority built large jetties around the village, and the resident population grew from 220 in 1875 to 1600 in 1950. At that date it had become the largest fishing village in Northern Norway. Photo: Fjellanger Widerøe AS

J. Askviks Sønner AS i Hagavik in central Hordaland with brand name “Askeladden” – started as a builder of oselver – yet another example of historical continuity.

A special building style?

The adaptations to industry along the coast have also created a very distinctive architectural expression. Architectural historians have noted that from Lindesnes to Finnmark there is “a long coastal built environment that defines a very special cultural geographic region in Europe”. They found more similarities along the coast than across it: “greater affinity between the coasts of Hordaland and Helgeland than between Solund and Sogndal”.

In an historical perspective this concerns a built environment more strongly influenced by traditional building practice, adaptation to landscape and climate, and the functional needs of industry in the rural districts of the inner fjords than in the open agricultural landscapes of Eastern Norway and Trøndelag. The houses on the

fisher-farmers' land by the edge of the sea were usually small and low (only one storey). Around 1900 there were still elements of joined houses, a type of house with roots in the prehistoric longhouses. Until being replaced in the latter half of the 19th century, clustered farmyards were especially typical for Western Norway and Northern Norway. Not least, farms had dedicated buildings for sea-related tasks. Every farm that was not too far from the sea had a boathouse. These could be gathered in rows at suitable places, a boathouse commons where also the hillside farms or the ones further up the valleys had lots. Those who were successful fishermen would usually also have a little wharfside shed, called a sjå from Nordmøre and beyond. In the herring districts the net frames or net dryers stood closely spaced; they were not buildings as such but roofed wooden constructions connected with twentieth-century seine fishing. In the skrei-cod districts the drying racks set their stamp on the cultural landscape, both the older type of horizontal rack and the higher vertical ones.

Industrial buildings

The Norwegian coast exhibits different types of concentrated non-agricultural settlement: Agder county along the southern coast has its outports and small sailing-ship towns. In the wider skerries of Western Norway lots of inns and trade landings gave way to small shore settlements with a steam-ship agency, shops, a post and telegraph office, and fish-landing facilities if far enough out on the coast. As well, there were some typical fishing villages, such as Røvær, Espevær, Fedje, Kalvåg, and Måløy. The core area for fishing villages was the stretch between Nordmøre and Trondheimsfjord, and then especially the coastline from Lofoten northwards. Fishing villages are usually divided between those with permanent occupation and those with seasonal fishing shacks. In a seasonal village such as Skrova in Lofoten, there were in 1880 as many as 214 shacks and 16 lodging houses, with space for 2400 men. In addition came all the buildings and quays for landing and processing the catch, as well as the houses of the landowner and the few other permanent residents.

For a long time most of the products from the northern Norwegian cod fisheries were exported via towns such as Trondheim, Kristiansund, Ålesund, and Bergen. Up till at least 1900 rows of large wooden packing sheds were the dominant feature of the oceanfront of these towns. Wharfside warehouses also characterized the sea frontage in towns like Stavanger, Bodø, and Tromsø, as well as several smaller towns with staple rights. There were also groups of large warehouses in fishing villages in Western Norway and in the good herring fjords in Nordland county. Even though the design may vary from district to district, most of the warehouses were made of logs with cogged joints and had a hallway or gallery. The exception was Stavanger, where most of the warehouses were constructed during the herring boom in 1808–60. Here a timber framework was used, which was a cheaper and more flexible method of construction. When merchants in both Stavanger and Bergen erected new warehouses out in rural districts, following the herring as it moved north, they used the same technique. A number of these buildings were even moved from place to place: “the coast’s construction barracks”. In Agder there were far fewer large warehouses than in the west and north. In the large timber-exporting towns there and along Oslofjord one found instead the level lots used for outdoor storage of timber ready for shipping. (See picture on p. 17)

Brick in the east, wood in the west and north

A comparison of the buildings in the larger coastal towns around 1900 shows that the prominence of the more expensive and pretentious brick buildings was much greater in towns such as Fredrikstad, Halden, Drammen, and Skien than in fishery-related towns such as Stavanger, Haugesund, Ålesund, and Kristiansund, and certainly all the towns of northern Norway. Timber buildings dominated the west and north. The difference in monumental architecture becomes even greater if we compare with Swedish and Danish towns of the same size. We have seen that the vast majority of Norwegian coastal towns based much of their business economy on export and/or shipping. But the eastern Norwegian towns mentioned, along with Oslo, Trondheim, and Kristiansand, additionally functioned as central places for spacious agricultural and forestry districts, for they were usually at the estuaries of large waterways systems. Industry in towns that expanded in the eighteenth and nineteenth centuries in connection with such “deep” hinterlands likely had a more large-scale structure than that found in towns depending on fishing, export of fish, and/or shipping with sailing ships. Other things being equal, the sea, being a public area, promoted a more open and fragmented business structure and thus a greater distribution of economic power. This relationship is reflected in the design of buildings. It also fits in with the clear difference in the size of farms in Western Norway/Northern Norway and in Eastern Norway/Trøndelag. There was a big gap between the enclosed square farmsteads with a clock tower and a manor-like main house around Lake Mjøsa and Oslofjord – or the considerable Trøndelag farmhouses – and the farm dwellings in Western Norway, not to mention those of the fisherman-farmer in Northern Norway.

Meeting and spreading of cultures along the coast

The people of the coast have always had great geographic mobility, and their meeting places have been both numerous and important. The arenas for cultural exchange have been many. The fishermen-farmers in the west and north had to be on the move for up to several months a year. They sailed or rowed to the Lofoten fisheries from all over Northern Norway, and often from further afield. Likewise herring fishermen travelled from Lista to Nordfjord, while still others made the long journey from the innermost fjord waters to the best fishing grounds in the fjord outlets and around the islands. The seasonal



Segment of the row of warehouses in Sandviken in Bergen, ca. 1932: here were storehouses for stockfish, klipfish, cod-liver oil, cod roe, salt, flour, feed concentrate, and so on. The steamships are in lay-up. Most of Bergen's receiving operations for herring and sprats lay especially on Askøy: herring packing and curing plants, sardine factories, herring-oil refineries etc.
Photo: Norwegian Fisheries Museum



Drammen ca. 1900, with Bragernes square in the centre of the picture. Whereas the sections of the city centre that burned down in 1861 in Stavanger, a herring and seafaring town, were rebuilt in wood with narrow streets, two conflagrations in one decade in the similarly sized timber and seafaring town of Drammen resulted in reconstruction in brick with wide streets and the laying out of one of the country's biggest and most monumental squares.
Photo: Drammens Museum.

The fishing village of Svolvær ca. 1890. An important meeting place for fishermen. Besides the fishermen's boats we see small cargo boats, sloops, and ketches, the latter with fish buyers from the south. Svolvær was the seat of the Lofot fisheries inspectorate and was, together with Kabelvåg and Henningsvær, an important harbour for the winter cod fisheries. The village developed into an economic centre for whole of Lofoten and was granted staple rights in 1918, at which time it had 2,400 residents compared with only 345 in 1875. Photo: The Lofoten Museum



fishing for a short time transformed small fishing villages into noisy small towns with up to several thousand “inhabitants”. Here were lots of men and boys rowing the fishing as well as women and girls working as cooks or processing the catch. The situation led to the exchange of useful information about new types of equipment or boats, but also had the effect of spreading new ideas in culture, politics, and religion. The more than a thousand square-rigged cargo vessels and sloops – later replaced by motor boats – that were involved in carrying trade over various distances bound the entire coast together.

The coastal towns were the constant meeting places for fishermen and farmers who sought them out with their fresh and processed catches. It was in addition an important place to come in contact with the rest of the world. Foreign merchants and sailors left their mark on the urban landscape in both large and small towns along the coast, from German ships laid up for the winter at Kleven in the south to Russian White Sea traders in Hammerfest in the north.

At the same time Norwegian seamen were also making a mark in the harbours of distant seas. In the towns of Southern Norway (Sørlandet) as well as in Stavanger, Skudeneshavn, Haugesund, and Bergen during a large part of the 19th century and the first half of the 20th century, seamen on overseas voyages made up the largest employee category, as did whalers after 1920 in the larger towns of Vestfold county in south-eastern Norway. At its height as many as 60,000 Norwegians, from towns and rural districts, spent years of their lives in cargo shipping between the ports of far-away lands in America, the Far East, and Africa. They caught a glimpse of the wider world, experienced other cultures, and brought home foreign cultural artefacts and ideas.

Norway has never had a colonial empire. Yet how many other countries have had such a widespread network of seamen's churches in important ports in three-four continents? It is equally remarkable that humble people in town and country, after a modest beginning in the 1840s, came to contribute so many resources, both money and volunteer service, to supporting the work of missionaries in such far-flung places as South Africa, Madagascar, China, Korea, Tibet, India, and Israel – to name but a few of the most important.

The regions that recruited fishermen and seamen in Southern and Western Norway were at the same time the districts where layman's Christianity, missionary activity, and teetotalism – “countercultures”



The Christian missions involved particularly many women from coastal Norway. This picture from 1929 shows Sofie Josefine Rønnevik (1894–1963) from Tysvær, who was a missionary on Madagaskar 1926–46. Photo: Karen Dorothea. Mission Archives/School of Mission and Theology.

– had the most support. This can possibly be explained by the wider international contacts resulting from seafaring and foreign trade. But probably of greater significance was that the risk to life and health in open boats and sailing ships was much greater than in onshore workplaces. The possibility of shipwreck, and the long time that letters took, created uncertainty and fear among the families at home. This could have been conducive to greater receptiveness for religious revivalism. At the same time the strongly egalitarian coastal society could have made it natural to join movements that protested against the established church, such as the low-church layman's movement. There is a clear line of development from this movement to the great

Liberal coalition, which through the constitutional reform of 1884 captured the most important bulwark of the crown-appointed civil service – the Cabinet.

Some researchers have tried to draw a line between the layman's movement and the entrepreneurial spirit in the coastal economies, especially in the southwest during the years of the spring herring fisheries and the sailing ships. The active role played by Haugeans (a pietistic church reform movement) in the new industry during the decades after 1814 is well known. However, it is an open question whether it was the herring fisheries as a new and growing arena for daring entrepreneurs with roots in agricultural society that encouraged the new religious attitudes, or whether the cause and effect went in the opposite direction: namely, that layman's Christianity, which emphasized self-discipline, humility, thrift, and hard work, stimulated



A small fishing boat ("sjark") in Lofoten waters, 1947. From the time when fishing fields were a public commons open to all who would fish there. Photo: Lindqvist. The Lofoten Museum.

the initiatives. It has been claimed that the more stable and passive cod fisheries do not fit this pattern so well, although these areas of the coast have also had strong religious movements. Laestadianism became well established in some parts of Northern Norway, and it had much in common with the Haugeans and the layman's movements in Western Norway. Alcohol, sloth, pride, and ungodliness were equally condemned by both. But while the Haugeans have in part taken the credit for the economic upswing and capitalistic mindset, the Laestadians are usually blamed for making a virtue of not only thrift but also poverty. One must be careful not to push these contrasts

too far, but it is at any rate a puzzle that the urbanizing effects of the spring herring fisheries in the years 1814–70 were so much stronger in Western Norway than the corresponding effect of the cod fisheries in Northern Norway. Similarly puzzling is that a considerable part of the cod-based products of Northern Norway were exported via Bergen, Kristiansund, and Ålesund right up to the 1950s.

Norwegian politics: a "special country"?

It is tempting to ask whether a line can be drawn from economic conditions to politics, with social conditions as the intermediate variable. A well-known fact in the country's political history is that socialist parties in the first half of the 20th century had a stronger following in the industrial towns of Eastern Norway and Trøndelag than in the coastal towns of Southern and Western Norway. Centre political parties such as Liberals (Venstre) and later the Christian Democratic Party (Kristelig Folkeparti) have corresponding more support here, where the political polarization was weaker.

Many consider that one of the most notable features of today's political situation in Norway is that the country is now one of only three western European countries not belonging to the EU; after two referenda (1972 and 1994), and despite massive pressure from state authorities, political parties, and the media to join: in short, a "special country". By all appearances Norway should have had a majority in support of EU membership in 1994, given the narrow defeat in 1972. The decline of primary industries, a general tendency towards a strengthening of a liberal market ideology, and increased industrial and market concentration throughout the West, in combination with the development of the post-industrial and steadily more globalized information society, should have swung voters especially in the larger cities over to support of membership (as in Oslo). But that did not happen: in Stavanger, Bergen, and a number of other coastal towns the support for EU membership actually declined somewhat between 1972 and 1994. A possible explanation is that the Norwegian economy had been fundamentally changed since 1972. The offshore economic zones established by international agreement in 1977 gave Norway (as other

The oil industry has been an important source of Norwegian economic growth in the last decades, but it has simultaneously been a challenge for fishery and environment. This painting portrays the oil industry as a threat to the traditional coastal culture.
Rolf Groven, **Olje og fisk**, 1996. ©Rolf Groven/BONO 2008



coastal nations) responsibility for the management of an enormous new area of the sea, and the petroleum industry had clearly become the main industry and engine for economic development.

As with most fisheries resources, the petroleum resources were also a long way out to sea, in areas that would not necessarily be respected by Europe's great powers in the long term. The question of future control of fisheries resources, and fisheries policy in general, were key questions in the EU debate in 1994 in the west and north of Norway, and there was also some concern as to whether the strong national petroleum policy could be sustained in the long run. As mentioned, natural resources in Norway have acquired an increased significance for the national economy, as have the resources that are under pressure both physically and biologically or politically – for example, the continuing question about the limits of Norwegian jurisdiction over Svalbard and the surrounding waters, and the tug-of-war over the maritime boundaries with Russia.

A fragile coast

The world today is faced by serious challenges regarding limited natural resources, environmental pressure, and climate change. These are all problem areas that markedly affect Norway as a coastal nation, and it is a heavy and important responsibility to manage the coastal environment and the vast marine resources that Norway controls in such a way that they will be a source of economic wealth and peaceful leisure activity also for the coming generations. Mismanagement can have extensive consequences, not only in Norway but also much further afield.

Sustainable use of resources

Right from the first tiny settlement about 10,000 years ago, adaptation to marine resources, especially fishing, has been a deciding factor for settlement patterns and economic development along the coast. It was necessary to adapt to sometimes powerful natural fluctuations. However, with the huge technological developments in the fisheries fleet, both nationally and internationally, in the course of the 20th century, the main challenge very quickly became to adapt to and regulate the catch in relation to the natural supply. This has been, and continues to be, a very demanding and complicated process, affected by the fact that the accelerating growth of the fishing fleet and the development of new technology have advanced a lot faster than the

development of economic and biological understanding, and often with necessary international agreements lagging considerably behind.

Important lessons have however been learnt after the collapse of the North Atlantic herring fishery in c.1970 and the catastrophic overfishing of the cod population off Newfoundland. As a result, over the last 30–40 years there has been significant progress in the scientific understanding and surveying of resources, the establishment of a new maritime law regime, and a steadily increasing number of international agreements. There are still enormous challenges relating to, for example, the coastal cod and the North Sea cod, while the herring population has been able to build up again to pre-collapse levels.

The extensive sea area that Norway governs is among the world's most productive. Production of Norwegian seafood is around three million tons per year, of which about a quarter is farmed fish. Most of this output ends up on the world market. Sustainable management thus has great economic significance not only for coastal Norway, but also for the world, at a time when global food sources are under pressure.

Global challenges are the coast's challenges

Growing international trade in commodities has been fundamental for Norway's prosperity. While fish is one of Norway's oldest export items, the export of oil and gas is today the key for the continuing growth in affluence and private consumption. The reverse side is that Norway thereby contributes to one of today's greatest challenges: climate change. If not taken seriously, this is a threat that can hit back as a powerful breaker wave in the form of higher sea levels and extreme weather conditions.

Increasing global warming as a result of uncontrolled release of carbon dioxide (CO₂) will have unexpected consequences for ecosystems generally and perhaps especially for maritime life. After all, here we are dealing with a complex ecosystem where science still does not completely understand the interrelated mechanisms governing it. A warmer climate will not only result in higher water temperatures, but will also affect sea currents, and thereby salinity as well, all of which are factors that influence spawning. Changes in the weather, for example more cloud cover, can moreover have significant consequences for photosynthesis in phytoplankton, the very cornerstone of the marine ecosystem.



*A lucky puffin has secured a solid mouthful. Puffins are one of several seabird species that are very vulnerable to oil spills and non-sustainable harvesting of fish resources.
Photo: Scanpix*

The ecological balance is also threatened in other ways, independent of any possible climate change. The discharge of raw crude and chemicals from oil installations has been a major challenge right from the start of the oil boom, and has created a long history of conflicts of interest between the fisheries industry and the petroleum sector. With increasing shipments of oil and gas from the Barents Sea and the remainder of northwest Russia, there is an increased danger of running aground or being wrecked off the Norwegian coast, with the attendant risk of huge oil spillages. When the cargo ship *Server* sank off the island of Fedje in Hordaland in 2007, 370 tons of fuel oil spread from Fedje to Flora in Sogn og Fjordane county (c. 130 km). But this was nothing compared with what could happen if one of the medium-sized or large oil tankers should go aground. Here it is particularly the coastal and maritime environment in the north that is vulnerable. Controlling the more than 200 oil tankers passing through Norwegian and Russian waters every year and protecting against oil pollution are considerable challenges. The economic and environmental fallout of a tanker wreck can be very extensive. When the tanker *Prestige* was wrecked off Spanish Galicia in 2002 with a cargo of 77,000 tons of oil, the result was that possibly as many as 200,000 seabirds perished, and a clean-up operation costing more than a billion euros.

The growing ship traffic generated by a greater exchange of goods also brings new species into the ecosystem via ballast water. New species have also arrived as a result of deliberate introduction, or by natural diffusion because of a warmer climate. Just in the last two decades species have arrived whose names reveal that they originated far from the Norwegian coast, such as Japanese seaweed (*Sargassum muticum*), American lobster (*Homarus americanus*), and not least the red king crab (*Paralithodes camchaticus*). All of these are species that can upset the delicate balance of the ecosystem and harm biological diversity.

As time goes by the coast has assumed a central position in Norwegians' vacation and leisure time; coastal adventures represent a growing business. Such activity often comes into conflict with other coastal economic activities, especially perhaps with windmills, quarries, and fish farms. At the same time recreational use claims more and more of Norway's varied coastline. In order that the coast and the sea continue to be associated with positive experiences, mankind is dependent on functioning international

cooperation on resources, climate emissions, security of sea lanes, a balanced development of industrial activity, recreational uses, and conservation.

A coastal nation into the 21st century

With this survey we have attempted to provide insight into what characterizes Norway as a coastal nation, both historically and today. Emphasis has been placed on economic development. At the same time the point has been to show how coastal and marine-based resources, and their use, have been and continue to be crucial for Norway's prosperity, and how they have moulded Norwegian society also in other ways. Another point has been to show how the close connection to the coast has left Norway a significant inheritance in the form of a diverse cultural heritage. This can be seen in the physical evidence of building structures and boat types, but also in lasting features of spiritual and social life.

The Norwegian relationship to the sea has however changed markedly over the last 200 years. Changes in the market and technological advances have required a great ability to adjust and adapt, changes that up to now have contributed to growth and prosperity. Even though marine and maritime industries still have much to say for Norwegian economic development, it is nevertheless the case that the coastal industries do not employ anything like the numbers they did in earlier times. All the same, very many Norwegians do have an active relationship to the coast, but in connection with recreation and holidays, and often enriched by the active use of the abundant cultural heritage that the recent or more distant past has left. At the same time it is perhaps here that we perceive clearest today's foremost global environmental challenges regarding climate, pollution, and biological individuality and diversity.

Photo: Wilse/
Norwegian Fisheries
Museum



Photo back cover: Per Eide Studio/Norwegian Seafood Export Council

The Norwegian Coastal Administration - NCA
Serviceboks 2 6025 Ålesund
www.kystverket.no
post@kystverket.no

Arts Council Norway
Postboks 8145 Dep 0033 Oslo
www@abm-utvikling.no
post@abm-utvikling.no

Directorate of Fisheries
Postboks 185 Sentrum 5804 Bergen
www.fiskeridir.no
postmottak@fiskeridir.no

The Directorate for Cultural Heritage
Postboks 8196 Dep. 0034 Oslo
www.riksantikvaren.no
postmottak@ra.no

THE MUSEUM NETWORK FOR MARITIME MUSEUMS
Norsk Maritimt Museum (nav-museum for nettverket)
www.norsk-sjofartsmuseum.no

Stavanger Museum / Stavanger Sjøfartsmuseum
www.stavanger.museum.no

Bergens Sjøfartsmuseum
www.bsj.uib.no

Vitenskapsmuseet NTNU
www.ntnu.no/vitenskapsmuseet

Vest-Agdermuseet
www.vestagdermuseet.no

Sandefjordmuseene
www.whalingmuseum.com

Telemark Museum
www.telemark.museum.no

Sverresborg Trøndelag Folkemuseum / Trondhjems
Sjøfartsmuseum
www.sverresborg.no

Bredalsholmen dokk og fartøyvernssenter
www.bredalsholmen.no

Tromsø Museum
www.uit.no/tmu/152/

Aust-Agder kulturhistorisk senter
www.aaks.no

NETWORK OF MARITIME INFRASTRUCTURE
Lindesnes fyrmuseum (nav-museum for nettverket)
www.lindesnesfyr.no

Jærmuseet
www.jaermuseet.no

Sunnmøre Museum
www.sunnmore.museum.no

Museum Nord
www.museumnord.no

THE MUSEUM NETWORK FOR FISHERIES
AND COASTAL CULTURE
Museum Vest (nav-museum for nettverket)
www.museumvest.no

Østfoldmuseet
www.ostfoldmuseet.no

Follo Museum
www.follomuseum.no

Norsk Maritimt Museum
www.norsk-sjofartsmuseum.no

Sandefjordmuseene

Telemark Museum
www.telemark.museum.n

Vest-Agder-museet
www.vaf.museum.no

Haugalandsmuseene
www.haugalandmuseene.no

Stavanger Museum
www.stavanger.museum.no

Kystmuseet i Sogn og Fjordane
www.kyst.museum.no

Sunnmøre Museum
www.sunnmore.museum.no

Nordmøre Museum
www.nordmore.museum.no

Kystmuseet i Sør-Trøndelag
www.kystmuseet.no

Namdal Fylkesmuseum
www.norveg.org

Norsk Fiskeværsmuseum
www.lofoten-info.no/nfmuseum

Museum Nord
www.museumnord.no

Nordnorsk fartøyvernssenter og båtmuseum
www.nnfa.no

Museene for Kystkultur og gjenreisning i Finnmark
www.kystmuseene.no



STORIES OF COASTAL NORWAY

THE AIM OF THE JOINT PROJECT STORIES OF COASTAL NORWAY IS TO PRESENT THE CULTURAL-HISTORICAL setting for the fisheries and fish-farming industries, seafaring, coastal management, and maritime infrastructure, as well as other industries in the coastal zone, and thereby at the same time for the growth of coastal communities and the nation of Norway. The project's intention is to contribute to increased knowledge about, and interest and involvement in, the cultural history of the coast and its cultural heritage.

The project is a follow-up of a joint action plan for coastal culture initiated by the Ministry of Fisheries and Coastal Affairs, the Ministry of the Environment, and the (then) Ministry of Culture and Church Affairs. The Ministry of Fisheries, the main office of the Coastal Administration, the Directorate for Cultural Heritage, and the Norwegian Archive, Library and Museum Authority have the main responsibility for carrying out the project. It has resulted in cooperation between the following three museums' networks along the coast: that for Maritime Infrastructure, coordinated by the Lindesnes Lighthouse Museum; the network for Fisheries and Coastal Culture coordinated by Museum Vest (Bergen), and the network for Maritime Museums coordinated by the Norwegian Maritime Museum (Oslo). Additional contributors will gradually be added.

kr 30,-

