

CONFIDENTIAL
08/03/11

Iceland

June 1973

NATIONAL INTELLIGENCE SURVEY

CONFIDENTIAL

Integration and
Development

NATIONAL INTELLIGENCE SURVEY PUBLICATIONS

The basic unit of the NIS is the *General Survey*, which is now published in a bound-by-chapter format so that topics of greater perishability can be updated on an individual basis. These chapters—Country Profile, The Society, Government and Politics, The Economy, Military Geography, Transportation and Telecommunications, Armed Forces, Science, and Intelligence and Security, provide the primary NIS coverage. Some chapters, particularly Science and Intelligence and Security, that are not pertinent to all countries, are produced selectively. For small countries requiring only minimal NIS treatment, the *General Survey* coverage may be bound into one volume.

Supplementing the *General Survey* is the *NIS Basic Intelligence Factbook*, a ready reference publication that semiannually updates key statistical data found in the Survey. An unclassified edition of the factbook omits some details on the economy, the defense forces, and the intelligence and security organizations.

Although detailed sections on many topics were part of the NIS Program, production of these sections has been phased out. Those previously produced will continue to be available as long as the major portion of the study is considered valid.

A quarterly listing of all active NIS units is published in the *Inventory of Available NIS Publications*, which is also bound into the concurrent classified Factbook. The Inventory lists all NIS units by area name and number and includes classification and date of issue; it thus facilitates the ordering of NIS units as well as their filing, cataloging, and utilization.

Initial dissemination, additional copies of NIS units, or separate chapters of the *General Surveys* can be obtained directly or through liaison channels from the Central Intelligence Agency.

The *General Survey* is prepared for the NIS by the Central Intelligence Agency and the Defense Intelligence Agency under the general direction of the NIS Committee. It is coordinated, edited, published, and disseminated by the Central Intelligence Agency.

WARNING

This document contains information affecting the national defense of the United States, within the meaning of title 18, sections 793 and 794 of the US code, as amended. Its transmission or revelation of its contents to or receipt by an unauthorized person is prohibited by law.

CLASSIFIED BY 019641. EXEMPT FROM GENERAL DECLASSIFICATION SCHEDULE OF E. O. 11652. EXEMPTION CATEGORIES 5B (1), (2), (3). DECLASSIFIED ONLY ON APPROVAL OF THE DIRECTOR OF CENTRAL INTELLIGENCE.

WARNING

The NIS is National Intelligence and may not be released or shown to representatives of any foreign government or international body except by specific authorization of the Director of Central Intelligence in accordance with the provisions of National Security Council Intelligence Directive No. 1.

For NIS containing unclassified material, however, the portions so marked may be made available for official purposes to foreign nationals and nongovernment personnel provided no attribution is made to National Intelligence or the National Intelligence Survey.

Subsections and graphics are individually classified according to content. Classification/control designations are:

- (U/OU) . . . Unclassified/For Official Use Only
- (C) Confidential
- (S) Secret

This chapter was prepared for the NIS by the Defense Intelligence Agency. It includes a contribution on airfields from the Defense Mapping Agency, Aerospace Center, and a contribution on the merchant marine from the Department of the Navy. Research was substantially completed by January 1973.



iceland

CONTENTS

This chapter supersedes the transportation and telecommunication coverage in the General Survey dated December 1966.

| | |
|-----------------------------|----|
| A. Appraisal | 1 |
| B. Strategic mobility | 1 |
| C. Highways | 2 |
| D. Ports | 4 |
| E. Merchant marine | 8 |
| F. Civil air | 8 |
| G. Airfields | 9 |
| H. Telecommunications | 10 |

CONFIDENTIAL

FIGURES

| | <i>Page</i> | | <i>Page</i> |
|--|-------------|--|-------------------|
| Fig. 1 Earth-gravel road (<i>photo</i>) | 3 | Fig. 6 Selected airfields (<i>table</i>) | 8 |
| Fig. 2 Concrete deck bridge (<i>photo</i>) | 3 | Fig. 7 General telecommunication pattern | |
| Fig. 3 Through truss bridge (<i>photo</i>) | 3 | (<i>map</i>) | 11 |
| Fig. 4 Port of Reykjavik (<i>photo</i>) | 5 | Fig. 8 Terrain and transportation | |
| Fig. 5 Major ports (<i>table</i>) | 6 | (<i>map</i>) | <i>follows</i> 12 |

Transportation and Telecommunications

A. Appraisal (C)

Most of the transportation facilities of Iceland are sparse and elemental, but they meet the needs of the small, widely scattered population. Facilities are concentrated in the Reykjavik¹ area and are confined almost exclusively to the perimeter of the island (Figure 8). Settlement of the island was partially determined by transportation considerations, and almost the entire population still lives on the coastal fringes with easy access to sea transportation. The rugged, rocky nature of much of the largely barren terrain and the effects of the weather have made the development of modern systems very difficult. Since these same handicaps have also retarded the development of the entire economy, there is no urgent need for extensive transportation and telecommunication systems.

The country's location has brought it fortunate windfalls in the last 30 years. Because of its strategic relationship to the North Atlantic convoy routes in World War II, it was used as a naval and air base by U.S. and British forces. These occupying forces made significant improvements, especially in air facilities and communications. After the war, the ranges of transport aircraft were such that again the island's location proved fortuitous, and further significant foreign assistance was given to improve air facilities. In consequence, Iceland's profitable civil air system has developed far out of proportion to the domestic economic base and is one of the chief all-season transportation modes.

The country has no railroads, inland waterways, or significant pipelines. The highway network is largely a peripheral system with a few branch roads, especially in the southwestern and northern regions. A significant transinsular through route, most of it unsurfaced, crosses the rugged central upland west of the center of the island on a southwest-northeast axis. In many

¹For diacritics on place names see the list of names on the apron of the Terrain and Transportation map, the map itself, and the map in the text.

areas, roads can be used only in summer; terrain, snow, and the effects of weather seriously complicate roadbuilding and maintenance.

Coastal shipping and the large number of ports that fringe the island's perimeter are extremely important, as almost all of the population, the arable land, and the large fishing industry are located along the coasts. Most harbors, except those on the northern coast, usually do not freeze in winter, and ships can reach the ports in all seasons. The modest merchant marine carries much of the foreign trade, which is vital to an island economy that must import machinery, manufactured goods, foodstuffs, and raw materials. Airfields and seaplane stations, evenly distributed along the coastline of the island, serve both domestic and international civil aviation.

Telecommunication is provided chiefly by a wire telephone and telegraph system that circles the island, interconnecting the main towns; maintenance is especially difficult because of the weather and terrain. This system has been augmented by the addition of radio-relay links. Radio, TV, and radio-relay systems can be complicated by ionospheric disturbances. Good international communications are provided by submarine cables.

The telecommunication systems, the ports, and the airfields are government owned and operated. All are administered by the Ministry of Communications, except for the broadcast facilities (Ministry of Education). The government owns one of the seven merchant marine companies and has a minority share in another; the merchant marine is administered by the Ministry of Commerce. The government also has a minority share in one of the two scheduled air carriers.

B. Strategic mobility (C)

The supply and movement of military forces would be impeded by the lack of adequate land transportation systems. Low highway density, the absence of good surfaced through routes, numerous bottlenecks, and adverse climatic conditions would severely limit the use of the highway network in

support of sustained operations. Ports affiliated with the North Atlantic Treaty Organization (NATO) would be capable of supporting limited naval operations. The merchant marine has some potential for short-haul (up to 48 hours' steaming) troop-lift and sustained logistics support. The 16 dry cargo ships of 1,000 or more gross register tons (g.r.t.), totaling 13,209 deadweight tons (d.w.t.), have a military lift and supply transport capability of 36,295 cargo d.w.t. None have heavy-lift booms (40 tons or more capacity). With expansion of the normal 210-passenger capacity of the only passenger ship, a moderate military support potential could be provided for longer-haul troop transport (over 48 hours' steaming). The only tanker has an estimated capacity of 94,970 barrels (U.S.) of petroleum and related products and could provide military support for a limited period of time. Although the country has no provision for the mobilization of civil aviation aircraft during a national emergency, the personnel and aircraft of the scheduled and charter airlines could be used by the government. Of the five major airfields designated as international airfields, four have permanent-surfaced runways; however, only Reykjavik and Keflavik have fuel, maintenance, and passenger service normally associated with international designation. Reykjavik is capable of handling C-130-type aircraft, while Keflavik has a capacity for C-141 types. Telecommunication facilities are provided by both wire and radiocommunications, of which the open-wire telephone and telegraph network is the most important. International communications are available through two coaxial submarine cables. The telecom system currently satisfies both civil and potential military requirements. Important NATO-affiliated facilities, including tropospheric-scatter and low-frequency (LF) naval radiocommunications, are located near Keflavik, Grindavik, and Hofn. Radiocommunications are subject to frequent ionospheric disturbances, and heavy snow and poor roads contribute to the inaccessibility of the open-wire system for maintenance during the winter.

C. Highways (C)

Highways, the country's sole mode of land transportation, are important to the economy. Highway transport is confined mainly to short-haul movement along the seacoast, and coastal shipping and civil air are used for long distances. Because of the nature of the terrain, the highway network is sparse,

unevenly distributed, and virtually devoid of through routes. The density of roads is greatest in the southwestern part of the country and focuses on Reykjavik. The best engineered road in the country is the 31-mile concrete (some bituminous stretches) road linking Reykjavik and Keflavik. A peripheral highway connects towns and villages along the coast. The alignment, however, is circuitous, and some segments, particularly along the southern coast, are rendered impassable at times by glacial out-flow and swollen streams. There are some alternative roads to the coastal route in the northern and western parts of the country. Only a few roads and motorable tracks penetrate the inhospitable and sparsely populated interior. Most communities are served by a road or at least a track, but some fishing villages are accessible only by water.

The 7,400 miles of roads and tracks in the country are classified as national, district, county, and mountain roads; over half of the network falls in the national category. About 4,760 miles of roads are surfaced with crushed stone (including lava) and gravel (Figure 1); 2,593 miles are unsurfaced roads and motorable tracks; and the remaining 47 miles are concrete with some short bituminous stretches.

Roads range from 10 to 16 feet in width; shoulders are generally narrow or altogether lacking. The best roads are in the southwestern part of the country. The condition of the system ranges from poor to good.

The network has about 900 bridges and culverts which are 13 feet or more in length. About 300 of these structures are less than 35 feet in length; the remaining 600 range from 35 to 960 feet. Most structures are of concrete arch or concrete beam construction. There are some steel truss and also some suspension bridges; timber bridges are rare. The concrete and steel bridges (Figures 2 and 3) are generally in good condition. Most structures have roadway widths of 7 to 9 feet. Vertical clearance is generally unlimited except on suspension and through truss bridges. There is only one tunnel, which is located in the remote northwestern part of the country. Fords are common on the lesser used roads, particularly in the interior. There are no ferries known to be in operation.

The Ministry of Communications through the Public Roads Administration has overall responsibility for the highway network. Roadbuilding in the interior of the country is a formidable task; over half of the total area is rugged upland averaging 2,000 to 3,000 feet above sea level characterized by extensive regions of lava rock, glaciers, lakes, and marshes. In

FIGURE 1. Earth-gravel road (U OU)



FIGURE 2. Concrete deck bridge (U OU)

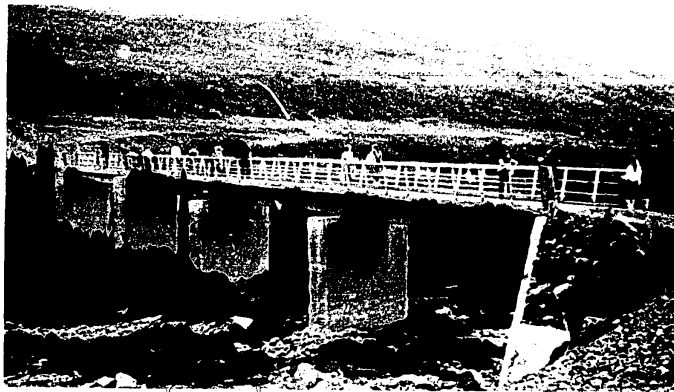
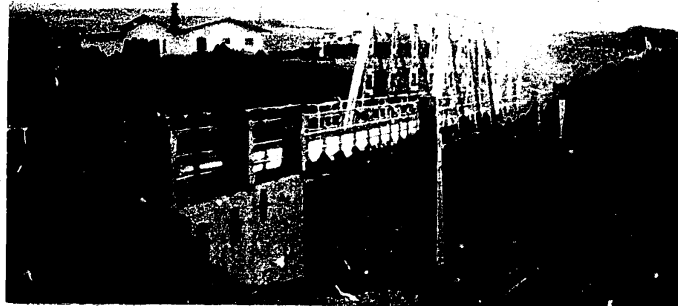


FIGURE 3. Through truss bridge (U OU)



the coastal lowlands a large number of bridges are needed because of the many rivers and glacial streams. Alignments are restricted in most parts of the country because of the terrain, and construction is hampered by seasonal restrictions. Winters are long and snowfall is heavy, especially in the northern and eastern parts. Spring thawing causes extensive flooding and damage to roads. Construction materials, including timber, bitumen, and steel, are imported. Ample quantities of cement are produced in the country.

Highway development is directed to improvement of roads in the vicinity of Reykjavik. A current plan calls for the construction of 35 miles of two-lane bituminous or concrete surfaced road linking Reykjavik to Selfoss (27 miles) and Reykjavik to Kollafjordhur (8 miles). The project is scheduled for completion by late 1973 or early 1974. Financing is through a 20-year US\$4.1 million World Bank loan.

Highway traffic is restricted by narrow surface widths, sharp curves, steep grades, and narrow, low-capacity bridges. Snow blocks the roads in winter, and melting snow and ice cause flooding in the spring. Avalanches, frost damage, and washouts interrupt or stop traffic. Fog frequently impairs visibility along the northern and southeastern coasts.

Freight and passenger transport operations are concentrated mainly in the southwest. Trucks haul agricultural and dairy products from farms to the Reykjavik area; imports at the port of Reykjavik are distributed to villages and towns by truck as well as by other means. Most trucking is performed by owner-operators, who haul for themselves, and by trucking cooperatives, which haul for hire. A number of bus firms operate in and around Reykjavik. Service to other parts of the country is available mainly in the summer months; however, a few routes, particularly the road from Reykjavik to Akureyri via Blonduos, are open all year. These services supplement air transport and coastal shipping.

Towns have excellent modern taxi service. In addition, with automobiles in general use, a number of rental car companies have started operation in the last few years. Most of these companies rent Volkswagens.

The country has no motor vehicle production, but buses are fitted with locally fabricated bodies. Although automobile repair shops are numerous, assembly of automobiles is not performed locally.

In January 1972, registered vehicles totaled 52,489, of which 46,081 were passenger cars and 6,408 were trucks and buses. The U.S.S.R., the United States,

West Germany, and the United Kingdom are the principal suppliers.

D. Ports (C)

Iceland has four major and about 50 minor ports, all of which are government owned and operated by either a harbor board or by a port committee, under the Ministry of Communications. The port system and coastal shipping are especially important to the island, because most of the population, arable land, and all of the fishing industry are concentrated along the littoral; many towns are accessible only by sea.

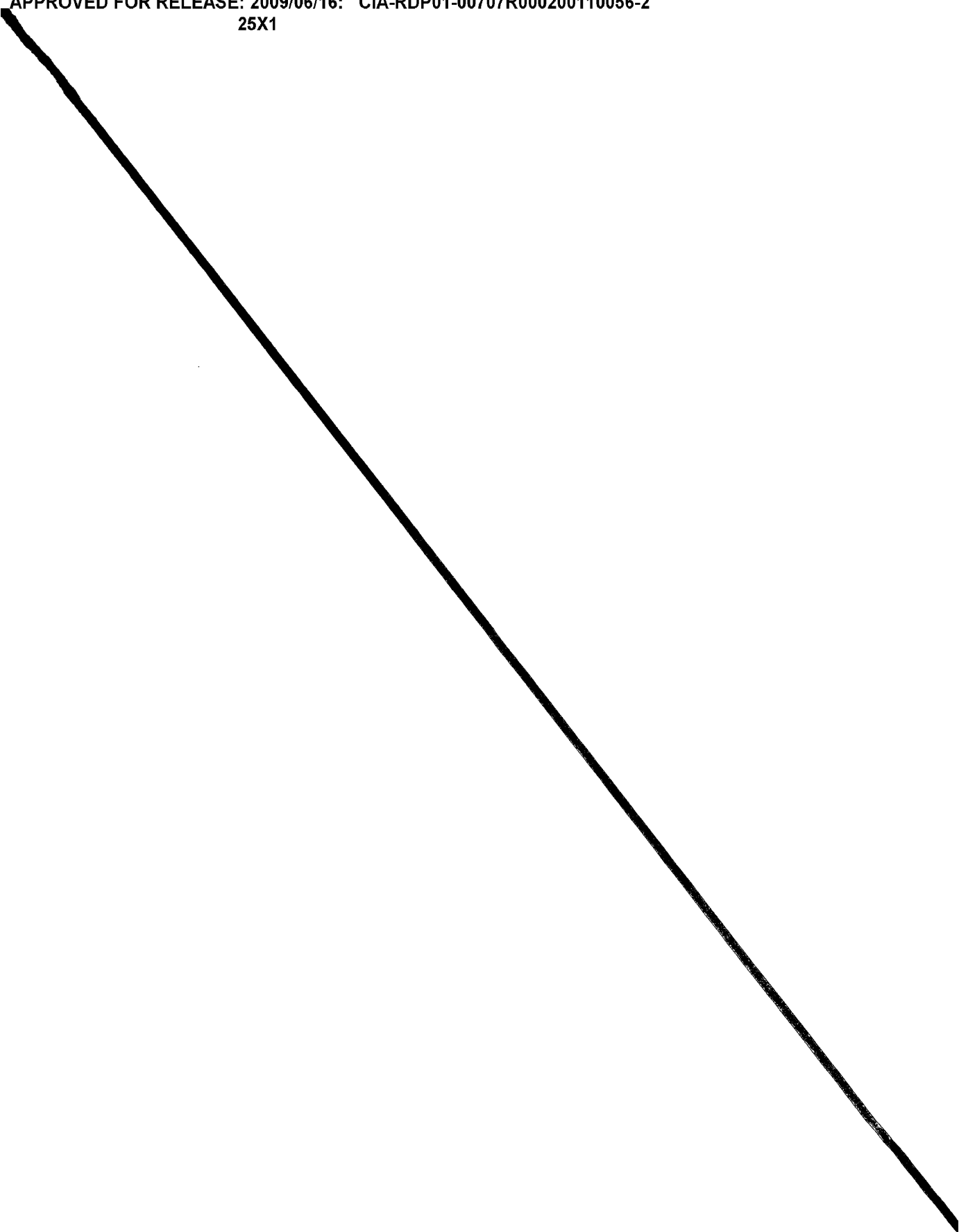
The more significant ports have good natural harbors and are located on the irregular, fiord-type coasts on the western, northern, and eastern sides of the island. The sandy, more regular southern coast has no ports of consequence. Despite the very northerly latitude, the ports, except those on the northern coast, freeze only in severe winters; however, icebreakers are kept available at the main ports. Drift ice may hinder navigation along the northern and eastern coasts through April and May, but it rarely causes problems along the other coasts. Fog is a considerable hindrance to navigation, especially in summer and along the eastern coast. Winds and frequent squalls, particularly along the northern and eastern coasts, sometimes interrupt port operations.

Reykjavik (Figure 4) on the southwest coast is by far the largest port. It handles almost all of the imports and over half of the exports; in addition, it engages in a considerable amount of transshipment activity. The other three major ports—Akureyri on the north coast, Seydhisjordhur on the east, and Hafnarjordhur on the west—are small by comparison but have been treated as major ports because of their strategic position and commercial importance. The minor ports are little more than fishing stations with meager facilities and no commercial significance. Two have NATO facilities: Keflavik, about 25 miles south of Reykjavik, is the site of a U.S. naval station; and Hvalfjordhur, about 40 miles north of Reykjavik, has NATO and U.S. Navy petroleum storage depots.

The country has no naval facilities of its own. Under terms of an Iceland-U.S. agreement, a minuscule U.S. naval contingent is stationed at Reykjavik and will assume control of the movement of merchant ships in the area in the event of war involving the United States.

The major ports are adequate for normal requirements. Significant details are given in Figure 5.

APPROVED FOR RELEASE: 2009/06/16: CIA-RDP01-00707R000200110056-2
25X1



APPROVED FOR RELEASE: 2009/06/16: CIA-RDP01-00707R000200110056-2
25X1

FIGURE 5. Major ports (C)

| NAME; LOCATION; ESTIMATED MILITARY PORT CAPACITY* | ACTIVITIES | HARBOR | BERTHS |
|---|--|--|---|
| Akureyri, 65°40'N., 18°06'W. On the N. coast near the head of Eyjafjörður (fiord). 2,845 long tons | Chief port on the N. coast and important center for shipping and marketing center for agricultural and fish products. Principal receipts are general cargo. Principal shipyard products, fish, fish products, and agricultural products. Two large and several small shipyards perform ship repairs and new ship construction for the fishing industry. One shipyard has an indoor facility (2 marine railways) capable of producing 2 ships of 300-400 tons each year. Largest drydocking facility is a marine railway with a hauling capacity of 2,000 tons. | Small, fairly well-protected coastal natural harbor about 1 mile long and 1 mile wide, with general depths of 37 to 196 ft. Approach deep clear Berths, rather than fairways leading to the harbor. The port is not sheltered from polar drift ice although most dangerous pieces are stopped at Oddeyri (spit) N. of the port. Waters of the fiord freeze in winter. | Alongside—For 1 small ocean-type cargo vessel; 3 standard and 4 small coaster-type cargo vessels; 8 lighters. Anchorage—For several medium ocean-type cargo vessels in the fiord in depths of 84 to 120 ft. Approach over soft mud; fairly well protected. |
| Hafnarfjörður, 64°04'N., 21°37'W. Located at the head of a small fiord of the same name on the W. coast, 5 miles S. of Reykjavik. 1,548 long tons | Relief port for Reykjavik and an important fish processing center. Principal receipts are general merchandise and POL. Principal shipments are fish and fish products. Limited repairs to small craft; planned construction of marine railway with a hauling capacity of 500 tons (1966). | Small, breakwater-enclosed coastal harbor having water area of about 90 acres and general depths of 9 to 25 ft., except for a 32 ft. depth alongside the POL pier. Approach through the fiord has a width of 600 ft. between 5 fathom curves; numerous shoal patches in the fiord. Berths, rather than fairways, leading to the harbor. Largest vessel that can be accommodated. | Alongside—For 1 small ocean-type cargo vessel; 4 small coaster-type cargo vessels; 4 lighters; 2 small ocean-type tankers. Anchorage—A few large ocean-type cargo vessels off port in depth of 39 ft. over good holding ground; open to W. |
| Reykjavik, 64°09'N., 21°57'W. Located on Faxaflói bay on the SW. coast. 13,200 long tons | Capital of Iceland, the largest city and largest port. A small U.S. naval contingent is stationed at this facility. Principal receipts are foods, machinery, manufactured goods, and raw material. Principal shipments are fish, mutton, wool, and sheepskins. One shipyard maintains Iceland's small Coast Guard and performs routine repairs to small merchant and fishing vessels; one marine railway with a hauling capacity of 2,000 tons. | Improved natural harbor consisting of a roadstead, an island-protected outer harbor, and a breakwater-protected inner harbor; outer harbor has a water area of about 4 square miles and general depths of 24 to 84 ft.; open to N.; inner harbor has a water area of about 18 acres and general depths of 9 to 18 ft. There is a POL pier and submarine pipeline in Skerjafjörður about 1 1/2 miles S. of the town across the Solheimar peninsula. Approach deep and clear to outer harbor; there is a controlling depth of 13 ft. (22 ft. MIWN) to the berths at Grandgardur on the W. side of inner island. The peninsula and the many small islands have fringing shoals which must be avoided. | Alongside—For 4 standard and 7 small ocean-type cargo vessels; 4 standard and 10 small coaster-type cargo vessels; 34 lighters; 1 large and 1 small ocean-type tanker; 1 standard coaster-type tanker. Mooring—1 fixed mooring berth can accommodate 1 small coaster-type cargo vessel 1,800 ft. S. of POL pier in Skerjafjörður; open to the W. Anchorage—For large numbers of vessels of all classes in the Reykjavik roadstead in depths of 36 ft., over poor holding ground of sand and shingle over hard mud; exposed N. and W. During gales more sheltered anchorage can be obtained W. of Eneyri island in depths of 30 to 48 ft., exposed to W. Anchorage is available in Faxaflói bay about 2 miles NW. of the port in depths of 108 to 132 ft., unobstructed. |
| Seyðisfjörður, 65°16'N., 14°00'W. Located about midpoint on the E. coast. 800 long tons | Most important port on the E. coast and an important fishing center. It is a landing place for a telegraph cable from England via the Faeroe Islands. Principal receipt is general merchandise. Principal shipments are fish, fish products, and agricultural products. Limited floating repairs on small craft. | Small, fairly well-protected improved natural harbor about 8 miles long, width ranging from 1/2 to 1 1/2 miles; general depths of 120 to 300 ft. Approach deep and clear; berths, rather than fairways leading to them, limit size of vessel that can be accommodated. | Alongside—For 2 standard coaster-type cargo vessels; 3 lighters. Anchorage—A few vessels of all sizes at the head of the fiord in depths under 132 ft., open to E. A wreck with a depth of 72 ft. over it lies in the middle of the anchorage area. |

*The estimated military port capacity is the maximum amount of general cargo—expressed in long tons—that can be unloaded onto the wharves and cleared from the wharf aprons during a 24-hour day (20 effective engine-working hours). The estimate is based on the static cargo-transfer facilities of the port existing at the time the estimate is prepared and is designed for comparison rather than for operational purposes; it cannot be projected beyond a single day by straight multiplication.

E. Merchant marine (C)

Because of geographic isolation and productive limitations imposed by climate and terrain, Iceland depends heavily upon ocean shipping for foodstuffs and other supplies. In 1969, the merchant fleet carried about 33% of the country's total volume of seaborne imports and about 60% of its exports.

The merchant fleet consists of 25 ships of 1,000 or more g.r.t., totaling 58,219 g.r.t. and 80,601 d.w.t. as follows:

| TYPE | NUMBER OF SHIPS | G.R.T. | D.W.T. |
|----------------------|-----------------|--------|--------|
| Dry cargo | 16 | 27,560 | 43,209 |
| Refrigerator | 6 | 16,333 | 19,992 |
| Tanker | 1 | 9,427 | 14,200 |
| Passenger | 1 | 3,858 | 1,800 |
| Cement carrier | 1 | 1,041 | 1,400 |

About 47% of the total fleet deadweight tonnage is between 1,700 and 2,900 d.w.t. (17 ships), and about 35% is between 3,000 and 5,000 d.w.t. (seven ships). The 14,200-d.w.t. tanker is the largest unit in the fleet. Of the total fleet deadweight tonnage, about 16% is less than 5 years old, 47% is from 5 to 9 years old, 19% is from 10 to 15 years old, and 18% is between 16 and 23 years old. Twelve ships have service speeds between 14 and 17 knots, and 13 have speeds of less than 14 knots. All ships in the fleet are operated by diesel power.

Fleet tonnage is controlled by one government and five domestic private beneficial owners (entities which take the profit or loss from operations). The largest owners are Iceland Steamship Company, Ltd., with 15 ships (nine dry cargo, five refrigerator, one passenger), totaling 46,073 d.w.t.; *Sildarverksmidjur Ríkisins* with one 14,200-d.w.t. tanker; and *Samband Islenskra Samvinnufelaga* with five dry cargo ships, totaling 12,582 d.w.t. The government owns and operates the 1,400-d.w.t. cement carrier through *Sementsverksmidja Ríkisins*.

The fleet is primarily employed in the carriage of trade between Icelandic ports and some of the principal ports in Western Europe, the Mediterranean and Baltic Seas, Canada, the United States, and the west coast of Africa.

Despite the government's desire for a merchant fleet with sufficient capacity to carry all of Iceland's international seaborne trade, there has been no net increase in the total number of ships and a net increase of only about 1,300 d.w.t. since January 1966. As of January 1972, no new ships of 1,000 g.r.t. or over were on order for Icelandic registry.

In addition to ships of 1,000 g.r.t. and over, the country has a fleet of many smaller merchant ships which operate almost exclusively in coastal trade. Iceland's fishing fleet of 700 to 800 fishing vessels includes at least 230 oceangoing ships of between 100 and 999 g.r.t., totaling about 60,800 g.r.t.

Maritime laws and regulations are administered by the Ministry of Commerce through the Directorate of Shipping. Iceland is a member of the Inter-Governmental Maritime Consultative Organization (IMCO) and a party to the following IMCO conventions: Safety of Life at Sea, 1960; Prevention of Collisions at Sea, 1960; Oil Pollution, 1954 and 1962; and Facilitation of International Maritime Traffic, 1965.

The government provides no direct subsidization to shipowners for shipping operations or construction of new ships; however, under certain conditions some indirect assistance is provided through easy-term loan arrangements for construction of new ships intended for Icelandic registry.

There are no government regulations restricting foreign-flag participation in the country's coastal trade, but foreign shipping interests find it almost impossible to compete with domestic shipowners in this trade.

In 1971, Icelandic merchant ships of 100 g.r.t. and over employed 855 seafaring personnel, all of them nationals. Of this total, there were 185 master and deck officers (including radio officers, apprentices, and cadets); 179 engineering officers, apprentices, and cadets; 323 deck and engineering department ratings, and 168 steward department personnel. Membership of Icelandic seafaring personnel in the influential Seamen's Union is compulsory.

Icelandic youths are provided a 3-year training course in navigation, engineering, and stewardship at the seamen's school in Reykjavik.

F. Civil air (C)

Civil aviation is essential for Iceland's transportation requirements and is particularly important to the economy, providing an efficient all-season service. In addition, civil aviation contributes significantly to the economy through payment of taxes, employment of labor, and the development of tourism.

Two carriers engage in scheduled international flights. One of these carriers, Icelandair (*Flugfélag Islands, h.f.*), also provides scheduled domestic service. Its flights serve 11 domestic points and seven cities in six foreign countries. In addition to its scheduled flights, Icelandair provides charter service. Although

APPROVED FOR RELEASE: 2009/06/16: CIA-RDP01-00707R000200110056-2

the company is essentially a private enterprise, the government is a minority stockholder.

Icelandic Airlines (*Lofleidir*) is the country's second major carrier, providing scheduled international service to seven cities in seven foreign countries. Since it is not a member of the International Air Transport Association (IATA), it is not obliged to observe IATA fare schedules. Thus, *Lofleidir* has concentrated on low-fare transatlantic services. The basic New York-Reykjavik-Europe operation is the backbone of the company. In addition to passenger service, *Lofleidir* provides mail and freight services. *Lofleidir*, which is privately owned, is Iceland's biggest taxpayer and largest employer of labor, currently employing more than 1,200 persons.

Several small companies fly scheduled and nonscheduled flights and perform charter, air taxi, and air ambulance services. These companies mainly utilize light aircraft, but also operate a few major transport aircraft such as the Douglas DC-6B and the Vickers Vanguard.

There are 18 major civil transport aircraft (at least 20,000 pounds gross weight) operated by Iceland's civil airlines; of these, five are leased from foreign airlines. Icelandair owns and operates two Boeing 727's, two Douglas DC-6B's, four Fokker F-27's, and two Douglas DC-3's. *Lofleidir* operates one Douglas DC-8-55 and three Douglas DC-8-63CF aircraft. The remaining major transport aircraft are operated by small charter companies and consist of one Douglas DC-3, one Douglas DC-6B, and two BAC Vanguards. In addition, *Lofleidir* owns two Canadair CL-44's, which are leased to Cargolux Airline of Luxembourg.

Over 1,700 persons are engaged in civil aviation activities in Iceland; most are employed by *Lofleidir*. Of the total number of personnel engaged in civil aviation, approximately 120 are pilots and more than 100 perform maintenance services.

Three small companies offer flight instructions in addition to other services. The two major airlines are capable of performing routine proficiency training, but flight training on new equipment is usually contracted for in the United States.

Minor repairs and engine changes are available at the Icelandair facility at Reykjavik airport and at the *Lofleidir* maintenance and repair shop at Keflavik airport. In addition, three charter companies provide minor maintenance service. Overhauls and major servicing for *Lofleidir* are performed in Norway by *Braathens SAFE* at their Stavanger base.

Civil aviation in Iceland is regulated by a civil aviation board under the Ministry of Communications. The Director General of Civil Aviation

supervises civil aviation activities, including air traffic control, inspection and supervision of airfields, and accident investigation, and maintains liaison with the International Civil Aviation Organization (ICAO). The Law on Aviation, promulgated in 1964, provides the legal basis for regulatory functions.

Iceland is a member of ICAO and is a signatory to most of the major multilateral conventions and agreements governing international air transportation. The government has entered into air transport agreements or informal arrangements with nine countries. Icelandair is a member of IATA.

G. Airfields² (C)

The air facilities system consists of 93 usable airfields and five seaplane stations. One of the airfields is joint civil/military, 14 are civil, and the remainder are municipal or private facilities. In addition, there are 15 airfield sites. The airfields are rather evenly distributed within an area along the coastline and extending about 30 miles inland. The northwestern peninsula is the area of greatest airfield concentration.

Keflavik, Reykjavik, Akureyri, Egilstadir, and Hornafjordur are designated as international airfields; only Keflavik and Reykjavik have fuel, aircraft maintenance, and passenger services to the extent normally associated with such a designation. Four airfields, including Keflavik and Reykjavik, have permanent-surfaced runways. Keflavik will support C-119-type aircraft, while Reykjavik is limited to aircraft no larger than C-130 type for any sustained operation. Several other airfields have runways capable of supporting C-130-type aircraft; however, taxiway systems and parking areas at these airfields are quite limited. The remainder of the airfields are limited to usage by light transport or utility aircraft. Only Keflavik and Reykjavik have potential for any appreciable sustained commercial operations without extensive construction. The seaplane station at Reykjavik has limited services available from the adjacent airfield, but the other four stations are presently only sheltered anchorages. Some of the sites could be made usable with minimum rehabilitation.

The major airfields are maintained in fair to good condition. Airfield maintenance at other airfields is sufficient to retain operational capability. There are no known plans for airfield construction or

²For detailed information on individual air facilities in Iceland, see Volume 1, *Airfields and Seaplane Stations of the World*, published by the Defense Mapping Agency, Aerospace Center, for the Defense Intelligence Agency.

FIGURE 6. Selected airfields (C)

| NAME AND LOCATION | LONGEST RUNWAY: SURFACE; DIMENSIONS; ELEVATION ABOVE SEA LEVEL | | ESWL* | LARGEST AIRCRAFT NORMALLY SUPPORTED | REMARKS |
|---|---|---------------|-------|--|--|
| | <i>Feet</i> | <i>Pounds</i> | | | |
| Keflavik 63°59'N., 22°36'W. | Concrete 10,315 x 200 169 | 65,000 | | C-141 | Joint. International Aerodrome of Entry. U.S. military forces and international airlines. Aviation and jet fuel available in underground and above ground tanks. |
| Reykjavik 64°08'N., 21°56'W. | Asphalt 5,793 x 148 45 | 35,500 | | DC-4 | Civil. International Aerodrome. Domestic airlines. Extensive aviation and jet fuel supply in above ground tanks at adjacent bulk terminal. |

*Equivalent Single-Wheel Loading: Capacity of an airfield runway to sustain the weight of any multiple-wheel landing-gear aircraft in terms of the single-wheel equivalent.

improvements, but the joint airfield at Keflavik has excellent potential for extensive expansion.

Data on Iceland's two most important airfields are given in Figure 6.

H. Telecommunications (C)

All of the population centers are provided with adequate telecommunication (telecom) services by an integrated network of wirelines and radiocommunication facilities (Figure 7). All telecom facilities, except for those at U.S.-manned bases, are administered by the Icelandic Government through the Ministry of Communications. The telephone, telegraph, and radiocommunication systems are operated by the Post and Telegraph Administration (PTA), and broadcast facilities are operated by the Iceland State Radio (*Ríkissutvaerpidh*), which is under the Ministry of Education. Some 1,300 persons are employed in various telecom services.

The basic component of the domestic telecom network, the wire telephone and telegraph system, connects nearly all urban and rural areas. This system is a mixture of buried cables and aerial lines, most of them carrier-equipped. Much of the equipment for this system was purchased from the L. M. Ericsson Company of Sweden. Construction of a number of radiocommunication links, including both direct high-frequency circuits and some low-capacity radio-relay links, have greatly improved intercity telephone service. Iceland has 74,900 telephones; over 90% are connected to automatic exchanges, and construction of a direct-distance-dial network to interconnect all exchanges is nearing completion. A domestic telex (teleprinter-subscriber) network operates in four cities with a total of 90 subscribers. A widespread mobile radiotelephone network has more than 3,000 radios in automobiles and on ships.

Good international telecommunications are furnished by submarine cables. A 24-channel coaxial submarine cable extends from Vestmannaeyjar to Frederiksdal, Greenland, and thence to Hampden, Canada. A second 24-channel coaxial cable leads from Vestmannaeyjar to Gairloch, Scotland, via Torshavn, Faeroe Islands. Each of these cables also has 66 to 72 telegraph circuits. No direct radiocommunication circuits are operated out of Iceland, and the radio facilities near Reykjavik now are used to provide some special functions and only emergency international service in case of cable failure.

Ten coastal radio stations provide long-distance, point-to-point radiocommunications between each other, in addition to their normal ship-to-shore service. Aeronautical and meteorological radiocommunications are provided by stations at Keflavik and Reykjavik. Important NATO-affiliated facilities, including tropospheric-scatter and low-frequency (LF) naval radiocommunications, are located near Keflavik, Grindavik, and Hofn.

The principal AM broadcast station is in Reykjavik; it operates in the LF band using a 100-kw. transmitter. Three other stations—Eidhar, Hofn, and Akureyri—have transmitters with 5- to 20-kw. output, and there are ten 20-watt stations in more remote locations. The United States operates an AFRTS transmitter of 250 watts at its Keflavik base. The FM broadcast network has 12 stations, but all have transmitter powers rated at 1 kw. or less; the major stations are at Stykkisholmur, Reykjavik, Sandharkrokur, Vestmannaeyjar, Raufarhofn, and Vik. The number of radiobroadcast receivers at the beginning of 1972 was estimated to be 75,000 sets. Since its inception in 1966, Icelandic television has expanded rapidly to a total of 73 stations with programs reaching 90% of the population. Seven major stations have transmitter

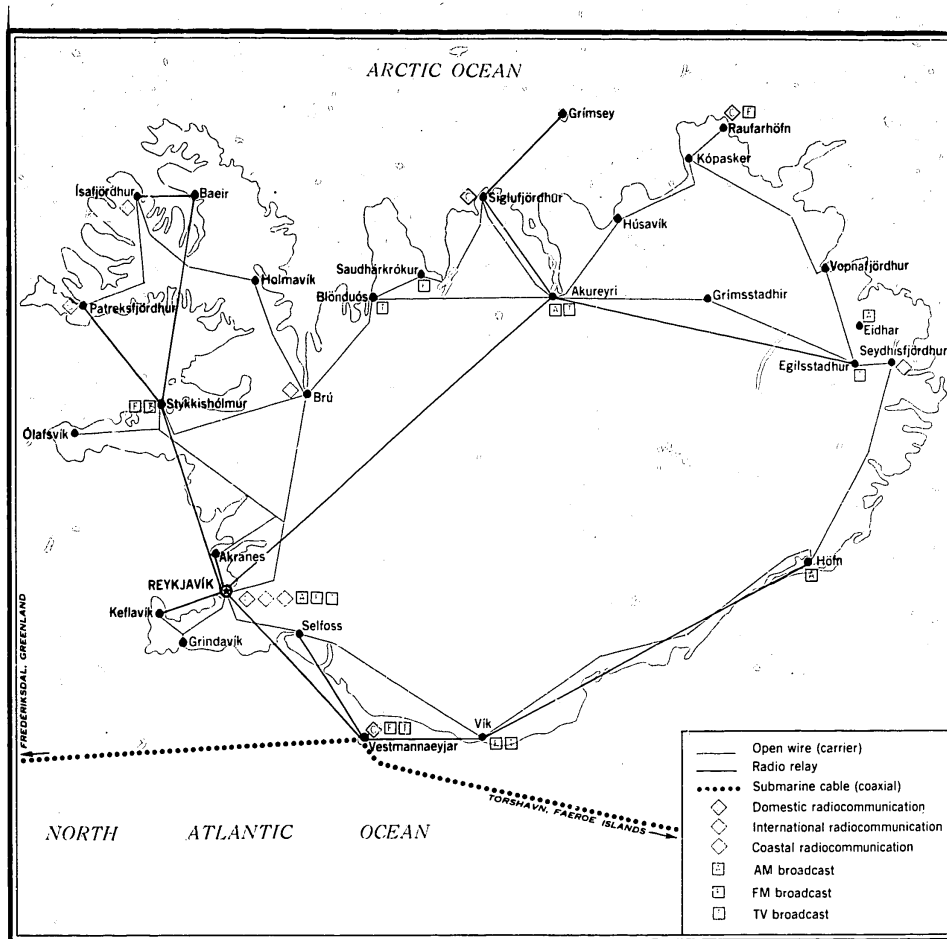


FIGURE 7. General telecommunication pattern (C)

powers between 10 kw. and 490 kw.; most stations are rated at less than 1 kw. There are about 40,000 TV receivers; many of these sets have been modified to receive the AFRTS TV transmissions originating from Keflavik.

The construction and maintenance of telecom facilities are extremely difficult because of climate and terrain. Open-wire lines must be guyed to withstand the stress of severe winds and icing. Installation of

poles and underground cables is arduous because of the very rocky terrain and, in some areas, marshes. Radiocommunications are subject to frequent ionospheric disturbances. Heavy snow and poor roads render many sections of the open-wire system inaccessible for maintenance through long periods of winter.

Iceland has no basic telecom equipment production industry and no research facilities. Eighty percent of

CONFIDENTIAL

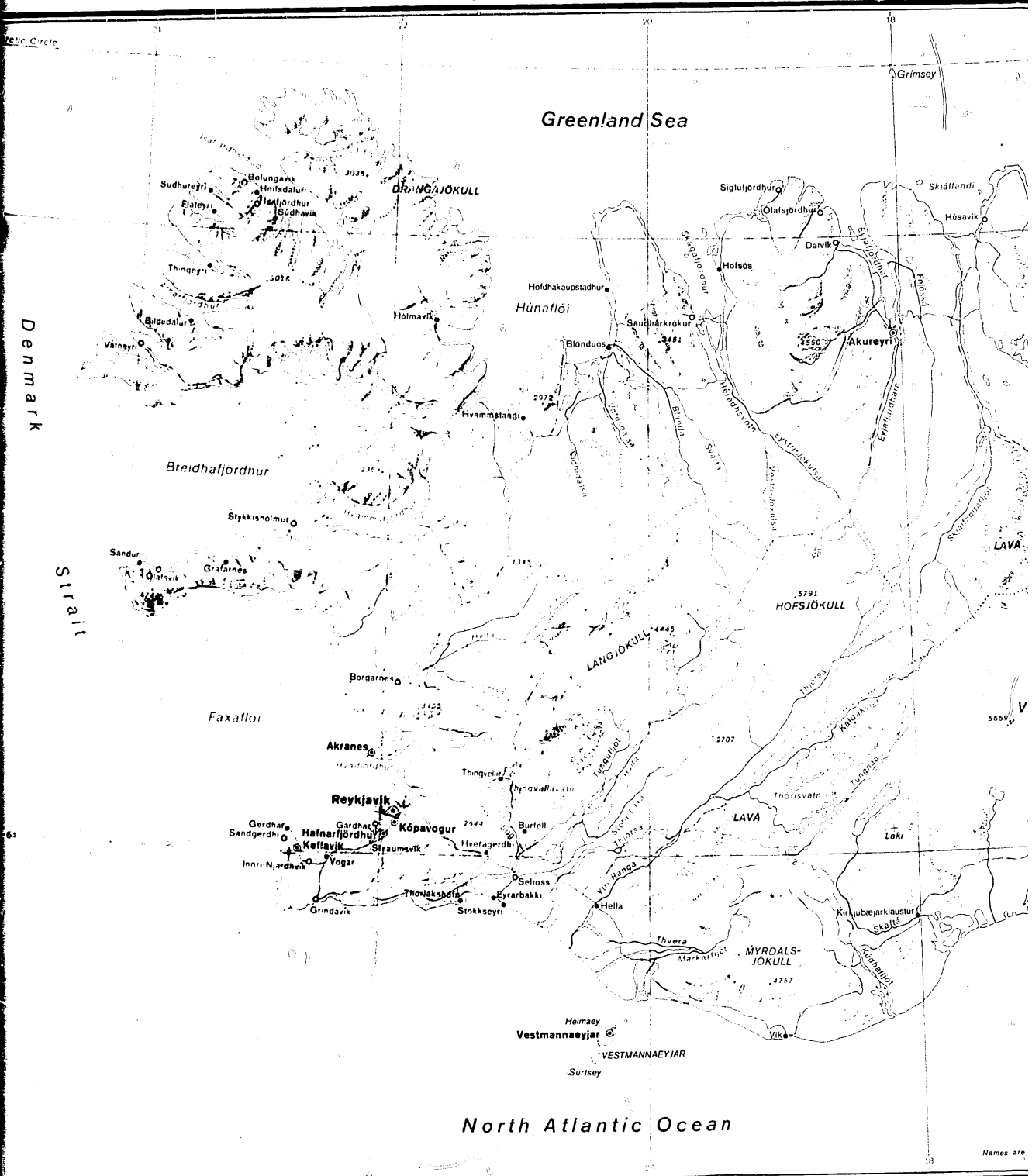
the radio equipment is imported from Europe, West Germany and Norway being the main suppliers. Telephone and telegraph equipment has been obtained from Sweden and the United Kingdom.

Technical and engineering training is furnished by the University of Iceland at Reykjavik. Telegraph operators take a 9-month course given by the PTA,

and radio technicians receive training at a 4-year vocational school in Reykjavik.

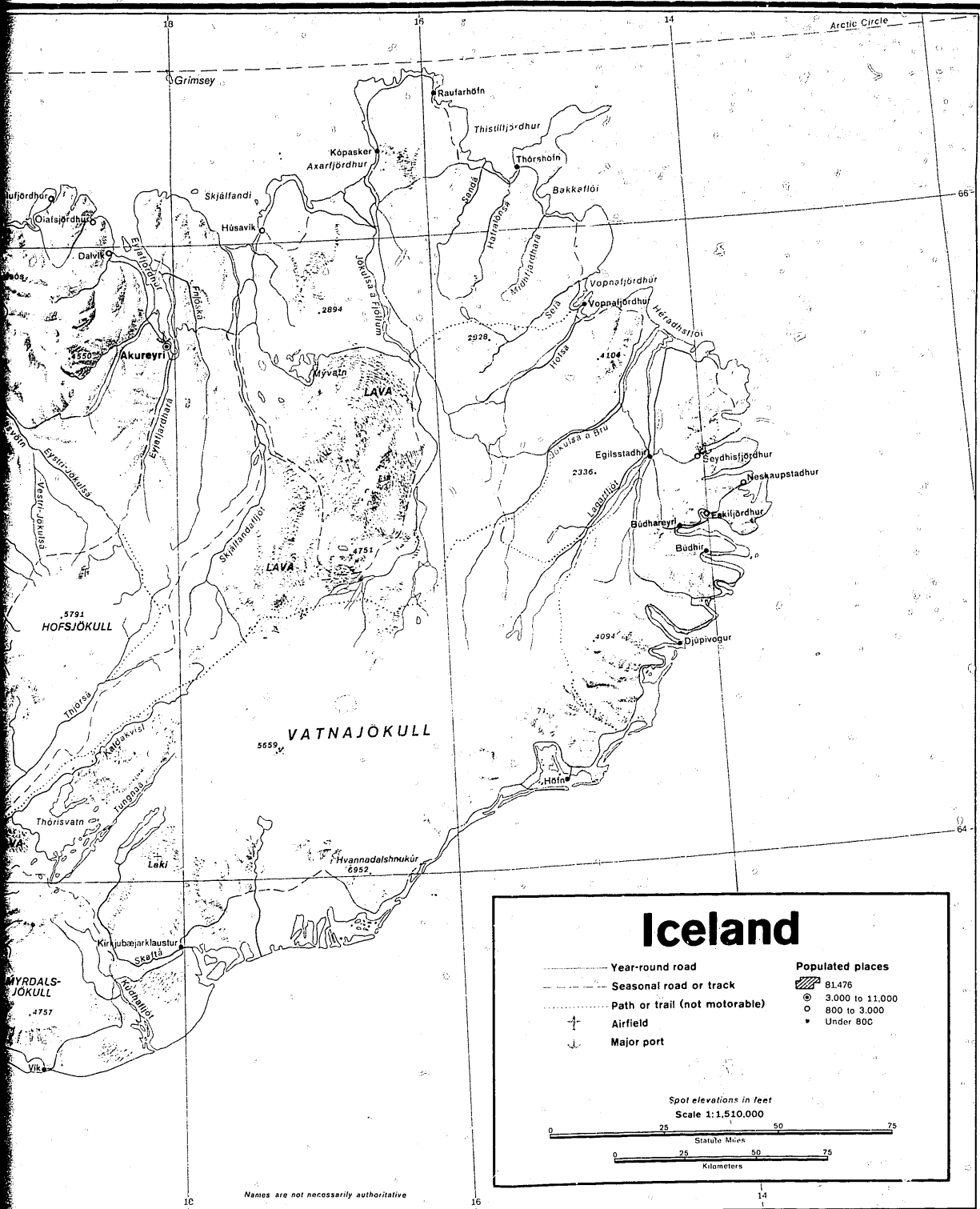
The PTA is in the process of completing the automatic direct-distance-dial network throughout Iceland, and, at the same time, is acquiring additional equipment to expand line capacities in local telephone exchanges.

CONFIDENTIAL



000475 4/73
 Central Intelligence Agency For Official Use Only

3



Terrain and Transportation Figure 8