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NATIONAL INTELLIGENCE SURVEY

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Armed Forces

NATIONAL INTELLIGENCE SURVEY PUBLICATIONS

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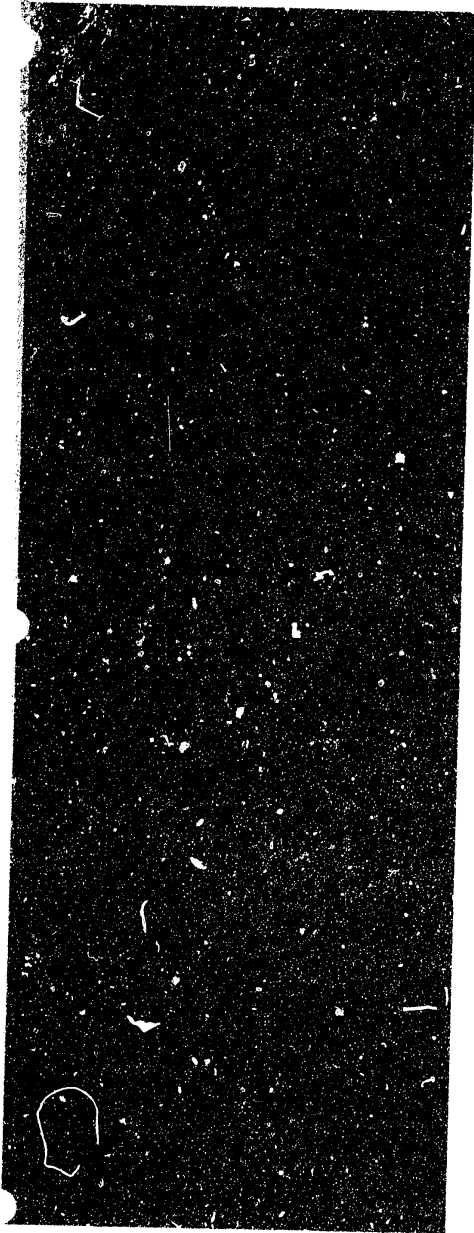
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stantially completed by November 1972.*



SWEDEN

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Armed Forces

A. Defense establishment

Untested in combat since the Napoleonic Wars, Sweden has long followed a policy of nonalliance with major powers in time of peace and of neutrality during war. To support this policy, the Swedes have maintained a relatively large military establishment consisting of a regular army of about 11,000 officers and noncommissioned officers plus an annual conscript input of 39,000 men; a 9,800-man navy (including the coast artillery and the naval helicopter service) with 35 principal combatant ships, 33 patrol ships, 37 mine warfare ships, and 83 other vessels; and a 12,600-man air force with 958 aircraft, of which 765 are jets. In peacetime the active component of the army and, to a lesser degree, that of the navy are training organizations; the air force, however, has tactical units organized and trained to perform their primary mission. The armed forces form a part of an overall defense system that includes other agencies, such as those concerned with civil defense, economic defense, and psychological defense. This total defense system is directed by the cabinet as a whole. (S)

In keeping with the armed forces' sole mission of national defense, a defensive strategy has evolved based upon the exploitation of Sweden's natural barriers—the sparsely populated rugged terrain of the border areas and the hazardous shallow waters of an extensive coastline. Armed forces training emphasizes fast mobilization and deployment to strategic areas of the country. (S)

Sweden has no nuclear weapons, and its military leaders no longer call for the development of nuclear weapons as a deterrent to a major attack because

Sweden ratified the nuclear nonproliferation treaty in 1970. Emphasis is placed on civil defense, including the construction of numerous underground shelters. Faced with attack by a major force employing modern methods of warfare, a delaying action is the best that could be expected from the Swedish armed forces. Guerrilla activities could be carried on for some time against a major power. (S)

1. Military history (C)

Although Sweden remained neutral throughout World War II, upon the outbreak of the war the country began to alert and strengthen its armed forces. Swedish volunteers participated in the Finnish Winter War and fought against the Soviet Union in 1939-40. After the German invasion of Denmark and Norway in 1940, Sweden ordered full mobilization of its armed forces and initiated a 5-year plan for improving national defense. German pressure, coupled with pro-German sentiments of influential Swedes, induced the government to permit transit across Sweden of German troops to and from Norway. One division of German troops was also allowed transit from Norway to Finland.

In 1943, after the armed forces had been fully mobilized, Sweden canceled all German transit rights. At the end of the war, the armed forces were reduced to peacetime status but at a level above the prewar period. In 1948 and early 1949 Sweden sought to achieve a greater degree of security through a Scandinavian alliance, but Norway and Denmark preferred to enter the North Atlantic Treaty Organization (NATO). Sweden thereupon reaffirmed

its policy of freedom from military alliances. The intensification of the cold war, beginning with the Korean war, induced Sweden to initiate programs for strengthening its armed forces. Sweden's nonalignment policies are based on the concept of strong armed forces, but financial support for defense is not adequate to maintain forces which could repel a major invader.

Sweden does not regard a contribution of troops to the U.N. Emergency Forces as inconsistent with its policy of neutrality and nonalliance and has two infantry battalions (authorized strengths of 690), a 40-man military police platoon, and a 144-man technical contingent that could be made available to U.N. peacekeeping forces. One of the battalions (with a strength of only 280 men) is now serving with the U.N. Forces on Cyprus. Before World War II, Swedish military traditions and concepts were patterned after those of Germany. In the postwar period, the Swedes have shown an increasing inclination to emulate U.S. and British doctrines and training methods.

2. Command structure (C)

The legal basis for the control of the armed forces is the Constitution of 1809, under which all executive authority is vested in the King, whose decisions must be taken in the Council of State (cabinet). Since 1917, however, the parliament and the cabinet have ultimately determined defense policy. Control over the armed forces (Figure 1) is delegated to the Minister of Defense, who in turn delegates operational control to the Supreme Commander of the Armed Forces. In peacetime the Supreme Commander of the Armed Forces is responsible for operational and long-range planning and the maintenance of a proper balance in the armed forces. In time of war he would be responsible for overall military operations. His principal assistant is the Chief of the Defense Staff who handles operational staff matters. A Joint Chiefs Committee, composed of the Supreme Commander, the Chief of the Defense Staff, and the three service commanders in chief, functions as an advisory and coordinating body for mutual information and policy matters, but final decision is reserved to the Supreme Commander. The three service commanders in chief have the status of chiefs of staff, with the peacetime responsibility for training conscripts; in wartime, they would join the staff of the Supreme Commander.

FIGURE 1. Structure and control of the armed forces (U/OU)

The Defense Staff is organized into an operations directorate under the Assistant Chief of the Defense Staff, four sections, and a personnel welfare bureau (Figure 2). Section I (Logistics) has staff supervision over procurement, storage, transportation, maintenance, distribution of supplies and equipment, and telecommunications. Section II (Intelligence) has responsibility for security, espionage, and foreign intelligence. Section III (Personnel) deals with assignments of personnel, promotion policies, and public information. Section IV (Plans and Budget) has responsibility for long-term planning and for budgetary matters. The Personnel Welfare Bureau is concerned with social problems and contract negotiations.

The country is divided into six military regions—Southern, Western, Bergslagen (army only), Eastern, Lower Norrland, and Upper Norrland (Figure 30). Each, except Bergslagen, has a commander, who may be from any service, and a joint or triservice staff. The regional commanders have operational command responsibilities within their areas and for prescribed areas beyond adjacent territorial waters; they report directly to the Supreme Commander of the Armed Forces. Directly subordinate to the regional commanders are local area defense commanders.

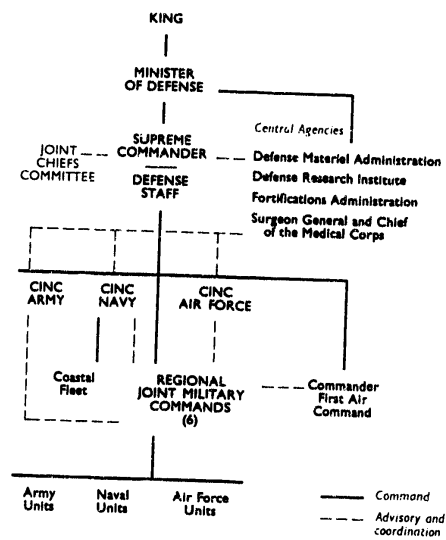
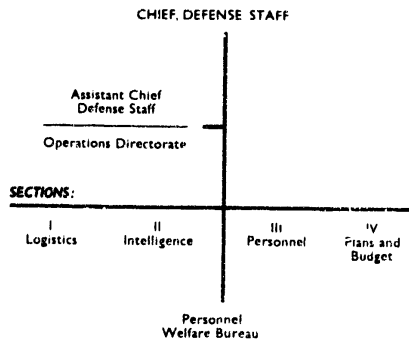


FIGURE 2. Defense staff (U/OU)



chiefs of certain army elements, chiefs of naval bases, air sector chiefs, and chiefs of certain air units not connected with sectors (reconnaissance and air attack units). The Commander of the First Air Command also reports directly to the Supreme Commander, but the Commander of the Coastal Fleet reports to the Commander in Chief of the Navy.

Subordinate to the Minister of Defense but following the directives issued by the Supreme Commander and the three service commanders are four central agencies—the Defense Materiel Administration, the Fortifications Administration, the Defense Research Institute, and the Surgeon General and Chief of the Medical Corps—responsible for the procurement of materiel for the armed forces, the planning and construction of fortifications and military installations, research and development, and medical services. The Defense Materiel Administration consists of five departments: Army Materiel, Naval Materiel, Air Materiel, Quartermaster Materiel, and the Administrative Department.

B. Joint activities

1. Military manpower (C)

Universal military service in Sweden has been in effect since 1812; all male citizens are liable for service in the armed forces or in other service of national interest in time of emergency. In wartime, the Women's Auxiliary Corps (*Lotta*) and a well-planned

civil defense organization would augment the defense effort. The active armed forces consist largely of conscripts undergoing training for their role in the mobilizable armed forces. Conscripts are allotted to the various services in accordance with budgetary allocations and service requirements. An estimated average contingent of 52,900 is accepted for military service annually. Of this number, the army receives the largest allocation, approximately 39,400. Air force and navy (including the coast artillery) conscript classes have averaged 7,000 and 6,500, respectively.

In spite of programs initiated to obtain and retain technically qualified personnel, the services continue to experience difficulty in competing with the civilian economy for the type of personnel they require.

The projected military manpower potential (15-49 years of age) as of 1 January 1973 is estimated to total 1,894,000 males, 89% being physically fit for military service. Their distribution by 5-year age groups is as follows:

AGE	TOTAL NUMBER OF MALES	MAXIMUM NUMBER FIT FOR MILITARY SERVICE
15-19	283,000	280,000
20-24	297,000	295,000
25-29	312,000	305,000
30-34	269,000	245,000
35-39	235,000	200,000
40-44	238,000	180,000
45-49	260,000	175,000
Total, 15-49	1,894,000	1,680,000

An estimated average 56,000 will reach military age (19) annually, 1973-77.

The armed forces draw their manpower from a highly literate, physically vigorous, and technically skilled population. The Swedish male is responsive to discipline and training; however, too much emphasis on social equality in officer-enlisted man relationships has resulted in loose discipline, and the lack of a sense of urgency or sacrifice has led to an indifferent *esprit de corps*. There is a growing trend away from the national acceptance of military service as a natural patriotic duty. However, to date it has had little effect on the national service system. The conscription law was amended in 1966 to permit conscientious objectors to serve 18 months in nonmilitary federal service.

Conscription is universal; personnel are eligible for military service upon reaching the age of 18, but they are not inducted until they reach 19 or 20. A small proportion of those entering military service are volunteers who may enlist at age 17. An average of 10

months' active duty service is required. In order to become an officer, noncommissioned officer (NCO), or technician, the conscript or volunteer must serve beyond the initial 10-month commitment. Upon completion of the conscription term, personnel have a reserve obligation until 47 years of age. Flying personnel of the air force and a large part of the navy personnel are regulars; these two services, particularly the air force, have a high peacetime readiness for action. However, conscripts are necessary for full air and naval defense as well as for base services in wartime.

The armed forces reserves total approximately 867,000. About 360,000 of these would be formed into Field Army units and 240,000 are in an organized reserve element. Plans not yet approved will reduce Field Army units by more than half by the late 1970's. The navy and air force reserves total 70,000 and 47,000 respectively.

Once the decision for mobilization has been made by the cabinet operating in the King's name (King-in-Council), the regional commanders, through the central military and civil authorities, will be responsible for the issuance of directives regarding the recall of army personnel to their units. Responsibility for the recall of navy and air force personnel rests with the naval and airbase commanders.

2. Strength trends (S)

The armed forces were fully mobilized during World War II, reaching an estimated strength of 500,000. Demobilized after the war, they have maintained a relatively stable peacetime active strength. The strengths of the armed forces for the years 1961-72 are shown in Figure 3. The annual conscript classes are increasing in size because of the higher birth rate following World War II, but

FIGURE 3. Strength trends (S)

	ARMY	NAVY	AIR FORCE	TOTAL
1961.....	43,000	8,600	10,600	62,200
1962.....	49,000	10,500	9,800	69,300
1963.....	49,000	10,500	9,800	69,300
1964.....	47,000	10,500	12,700	70,200
1965.....	46,500	11,500	12,700	70,700
1966.....	47,500	10,000	12,700	70,200
1967.....	46,500	10,000	12,700	69,200
1968.....	51,700	10,200	12,900	74,800
1969.....	51,700	9,800	13,100	74,600
1970.....	51,700	9,800	13,100	74,600
1971.....	51,700	9,800	12,600	74,100
1972.....	51,700	9,800	12,600	74,100

statutory and budgetary restrictions will continue to limit the size of the armed forces. Because of the excess of manpower, the personnel selection system can afford to be highly selective and reject and exempt a higher proportion of men than could otherwise be expected.

3. Training (C)

Training is concentrated on defense of the homeland. Training methods generally follow those used by the British and the United States. Officers are eager to have the chance to receive U.S. training in modern methods of warfare. Although Swedish forces are not equipped with nuclear weapons, current training stresses defense against nuclear as well as chemical and biological weapons.

There are three basic types of military training; pre-military for volunteers between the ages of 16 and 18; conscript for the army, navy, and air force; and refresher for reserves.

The high quality of Swedish personnel facilitates basic training as well as training in winter warfare and in exercises requiring technical skill and physical vigor. The main deficiencies in training for all services may be traced to lack of combat experience. Other limiting factors are the short conscript period and infrequent refresher training for reservists.

Advanced training for selected officers of all three services is conducted in two joint schools—the Royal National Defense College and the Royal Armed Forces Staff College—both in Stockholm. The defense college offers an annual course, also attended by selected civilians, that considers the problems of total war and the coordination of all governmental agencies in the defense of the country. The staff college offers courses in general and special staff functions.

Annual fall mobilization exercises are the responsibility of the joint regional commanders. Improved direction and coordination of the operating units of the three services and refresher training for mobilized units are the main objectives of the exercises.

4. Military budget (U/OU)

The annual military budget prior to 1 July 1972 was based on a 4-year defense plan proposed by the Supreme Commander of the Armed Forces and reviewed and approved by the parliament. Beginning 1 July 1972 the annual military budget is based on a 5-year defense plan. For fiscal years 1 July 1968 through 30 June 1973 defense appropriations increased in absolute terms at an average annual rate of 6.6%;

personnel costs averaged nearly 45% of defense outlays, operational costs were about 30%, and procurement of major weapons and equipment about 25%. In recent years the armed services have been receiving a declining share of the central government budget. During the fiscal years 1 July 1968 through 30 June 1973, the military budget averaged slightly under 13% of the central government budget; during fiscal years 1964 through 1967, it averaged 16.2%. In real terms—that is, discounting inflation—the 1972-73 military budget of US\$1,474.6 million is equivalent to the 1971-72 military appropriation. This austerity budget, and the 5-year defense plan which sets defense spending at a total of \$6 billion for 5 years, portends a further decline in future military budgets. Annual defense budgets are shown in Figure 4.

5. Logistics (S)

The highly industrialized Swedish economy is capable of meeting virtually all of the materiel requirements of the armed forces. Domestic production includes infantry and artillery weapons, armored (Figures 4, 5, and 6 in Science chapter) and general-purpose vehicles, ammunition, signal and engineer equipment, and most types of naval vessels up to and including light cruisers. The production effort, however, is dependent on imports of some raw and semifinished materials and components. Sweden's aircraft industry produces jet fighters and trainers; it has developed the Viggen jet fighter, of which an attack version is now in production, and reconnais-

sance and interceptor models are planned. The Viggen will be the air force's principal fighter aircraft during the 1970's. The output of the missile industry is limited to surface-to-surface, surface-to-air, air-to-air, air-to-surface, and antitank missiles. Although Sweden is an exporter of military materiel, limited amounts of certain items have been imported from Western European countries.

The provision of ordnance and quartermaster materiel for the Swedish armed forces is the responsibility of the Defense Materiel Administration (FMV), which is subordinate to the Minister of Defense. Requirements estimates are forwarded to the FMV by the Supreme Commander and the commanders in chief of the three services. The Defense Materiel Administration has overall responsibility for procuring all materiel and supplies, maintenance and repair, and technical development of procurement items. Approximately 90% of all materiel ordered by the FMV is supplied by Sweden's defense factories.

Central depots are maintained by the support services. In addition, there are depots under the control of the regional commands and training units. To reduce the vulnerability of these depots, great emphasis has been placed on decentralization. Extensive underground facilities exist for storage of petroleum reserves, ammunition, and explosives.

The armed forces do not possess nuclear weapons, and research directed at creating a technical and economic basis for production and testing of nuclear weapons has been prohibited. However, the Swedish

FIGURE 4. Annual defense budgets (U/OU)
(Millions of U.S. dollars*)

	FISCAL YEAR				
	1968/69	1969/70	1970/71	1971/72	1972/73
Army	286.7	303.2	316.3	357.4	466.0
Navy	121.4	116.6	127.4	147.3	189.8
Air Force	328.0	312.3	314.5	363.7	414.5
Other**	311.1	357.5	370.6	444.9	404.3
Total	1,047.2	1,089.6	1,128.8	1,313.3	1,474.6
Defense as a percent of central government budget	13.9	12.7	12.8	12.6	11.9
Defense as a percent of gross national product (GNP)	4.0	3.8	3.6	***3.6	na

NOTE—Fiscal year begins 1 July and ends 30 June for years indicated.
 na Data not available.
 *Converted at exchange rates as follows: 1 July 1968 through 31 December 1971 at SKr5.17 = US\$1.00 and 1 January 1972 through 30 June 1973 at SKr4.81 = US\$1.00.
 **Includes Ministry of Defense and joint agencies.
 ***Estimated.

Defense Research Institute (subordinate to the Minister of Defense) has been authorized to expand research on protection against nuclear weapons, a program which could aid weapons development.

6. Uniforms and insignia (U/OU)

Military attire of the Swedish armed forces conforms in style and tailoring to the conventional U.S. military uniform types. Synthetic fabrics of the polyester type are replacing woolen materials because of their durability, lightness, quick drying, and retention of shape after exposure to snow and rain. Winter clothing of heavy gage material is worn most of the year and uniforms of lightweight material are worn only during the short summer season. Parade (dress), service, and field uniforms are authorized for wear by all services. Service caps, garrison caps, and winter caps (fur or pile) may be worn by all armed forces personnel with the service uniform. Paratroops, mountain troops, and armored troops wear berets with the service uniform. Short and long overcoats are authorized for winter wear. Service uniforms and insignia for officers, warrant officers, and enlisted men are shown in Figure 5 and 6, respectively.

Coast artillery personnel, although subordinate to the navy, wear the ground forces-type uniform and insignia.

Two types of service uniform are authorized for the ground forces. The gray uniform (M-60) consists of a single-breasted, open-collar coat with notched lapels, matching trousers, light gray shirt, dark gray tie, and a gray service cap. The green uniform (M-68) consists of a jacket (Eisenhower-type), matching trousers of stretch material, green shirt and tie, and green service cap. Black or brown shoes can be worn with both uniforms. Gray or green uniforms of lightweight material are worn by all personnel in summer.

Naval officers, warrant officers, and petty officers all wear a similarly styled navy-blue service uniform which consists of a double-breasted coat with eight gold buttons, matching trousers, white shirt, black tie, black shoes, and a service cap with either a black or white cover. On board ship a short sea jacket can be worn in lieu of the coat. Seamen wear the traditional navy-blue jumper and trousers and a flat cap, with either a navy-blue or white cover, and cap ribbon imprinted with the name of the ship or station to which assigned. Naval personnel also wear blue work uniforms and white mess uniforms. Other headgear that may be worn with the service uniform includes garrison and winter caps (fur or pile).

The air force service uniform worn by all ranks is dark blue and consists of a single-breasted open rolled

collar coat with notched lapels, matching trousers, white shirt, blue tie, and black shoes. An open rolled collar jacket, instead of the coat, can be worn with this uniform. The summer uniform is of lightweight material. Officers may wear a white cover service cap with the summer uniform; a white summer uniform of linen or cotton is also authorized.

Insignia of rank are displayed on shoulderloops, shoulderboards, jacket pockets, or lower sleeves depending on the type of uniform and rank. Service caps of all general officers, flag rank officers, colonels, and naval captains are embellished with visor ornamentation.

Branch insignia of the ground forces officer personnel are displayed on shoulderboards and lapels of the service uniform. Warrant officers and enlisted men display branch insignia on the lapels of the coat or jacket; those personnel assigned to a regiment wear on their shoulderboards a numeral designating that unit.

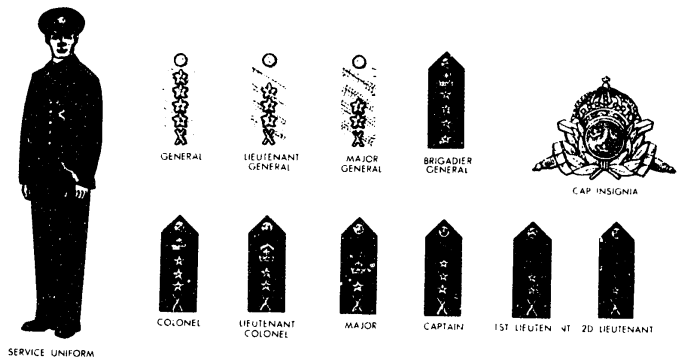
Naval officers of the engineering and medical corps wear their corps colors on the sleeves between the gold rank stripes or below a single stripe. Naval supply corps officers display white piping above the top stripe and loop of their rank insignia. Specialty and rank insignia are worn on both lower sleeves of the coat or jacket by warrant officers and petty officers. Seaman specialty and rank insignia are worn on a patch just above the sleeve buttons of the jumper. Coast artillery personnel wear different colored cloth backgrounds for their flaming bomb branch insignia to denote specialization in certain operations.

All flying personnel of the air force wear metal specialist badges, designating their particular qualifications, above the right breast pocket. Warrant officers and enlisted men wear specialty insignia directly below the rank stripes on the sleeve or on the shoulderboards, depending upon the uniform worn.

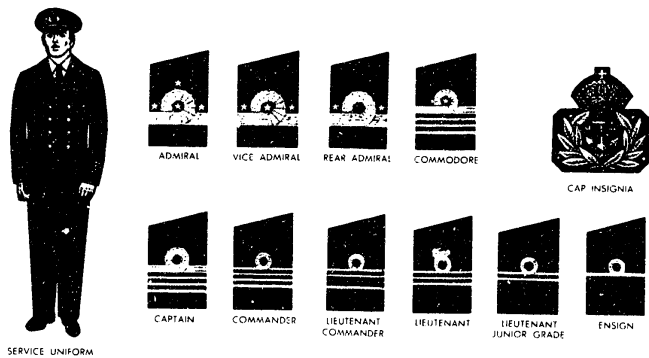
C. Army

The Royal Swedish Army is a nontactical organization which provides training for the annual class of conscripts. On completion of the 10-month training period, the men are assigned to units of the Field Army, a reserve force to be mobilized in case of national emergency. Support units of the Local Defense Forces (total strength 240,000), which comprise reservists in the 33- to 46-year age group, would be mobilized at the same time to assist the Field Army. The Home Guard, a reserve force comprised of the Voluntary Home Guard (volunteers aged 16-18 and ex-conscripts aged 47-60) and the Conscripted

GROUND FORCES



NAVAL FORCES



AIR FORCES

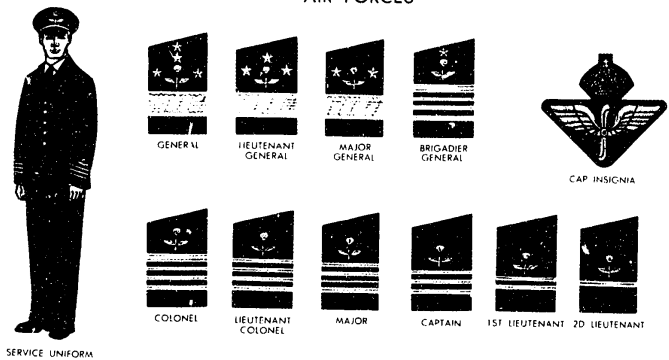
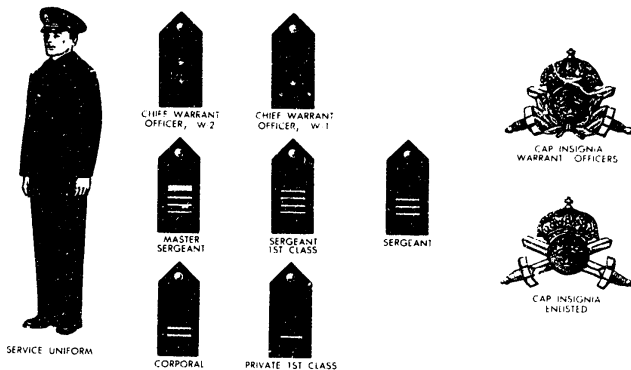
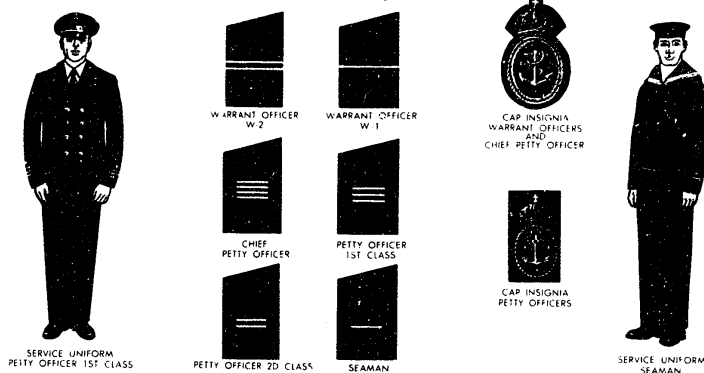


FIGURE 5. Officers' uniforms and insignia (U/OU)

GROUND FORCES



NAVAL FORCES



AIR FORCES

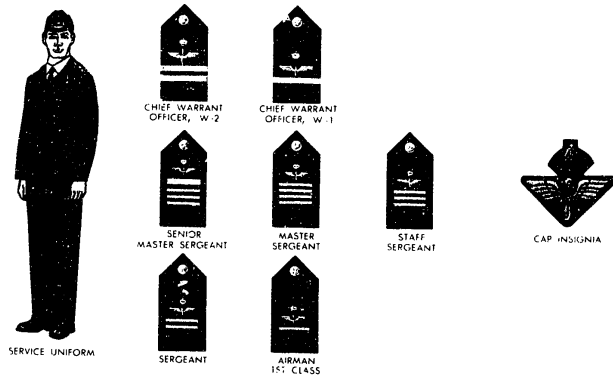


FIGURE 6. Warrant officers' and enlisted men's uniforms and insignia (U/OU)

Home Guard (mostly men still liable for service, 18-47 years old, but who are in exempted occupations), would be deployed to protect key installations and cover mobilization. The total strength of the Home Guard is estimated at 150,000. Most of the personnel keep their small arms in their homes, and only 20 hours of training a year are required. The effectiveness of the Home Guard would be minimal at best. It is doubtful that the mobilization plan could be accomplished during an emergency. In the event that it could, the force would be poorly organized, ill-trained, and inadequately equipped. A delaying action is the best that could be expected from it, although by guerrilla activities it could harass and pin down a considerable number of occupying troops. Operationally, the Swedish army could not be expected to perform effectively without 6 months to 1 year of intensive training with experienced, trained advisers. (S)

Strength factors contributing to the effectiveness of the army include the excellent quality of military manpower and the high standard of individual and small-unit training, particularly for winter warfare and fighting over heavily forested terrain. Weaknesses are a cumbersome mobilization plan; inadequate and infrequent refresher training; inadequate training for technicians; lack of unit training above battalion level; lack of high-level staff experience and of combat and logistic experience of officers and enlisted men at

all levels; too much emphasis on social equality, which has resulted in loose discipline; a general lack of a sense of urgency or sacrifice, which has resulted in an indifferent *esprit de corps*; and limited quantities of modern equipment. Small arms and much of the lighter equipment are of good quality and design, but a large percentage of the heavier equipment is obsolete. A first run production of 285 S-tanks (Figure 7) has been completed, and these will be used to replace some of the older British-built medium-gun Centurions. The IKV-91 infantry support gun (Figure 4 in Science chapter) is still in the prototype stage; however, production is expected to begin in late 1972 and carry through until 1977. Both the S-tank and IKV-91 are amphibious. Initial production of the Swedish armored personnel carrier (APC) PBV-392 (Figure 8) was completed in late 1971, when cumulative output reached 640 units. The PBV-392 can be used in an amphibious role (Figure 9). The disposable Miniman recoilless antitank weapon (Figure 10) has been produced at the rate of 6,000 monthly; 72 of the weapons are assigned to each rifle company. Available small arms, although not standardized, are believed to be in sufficient supply to equip a force of 600,000. The modernization program, however, is threatened by inflation, defense cuts, and equipment degradation as a result of making equipment conform to industry capability, funding, or the profit motive. Pay raises for military personnel

FIGURE 7. Swedish-built S-tank mounting 105-mm gun and three 7.62-mm machineguns. The S-tank has a fording depth of 5' and is amphibious when a built-in flotation screen is raised. The S-tank has a three-man crew. (C)



FIGURE 8. The Swedish-built PBV-302 armored personnel carrier mounting a 20-mm gun. The PBV-302 has a two-man crew and can transport 10 troops. (U/OU)

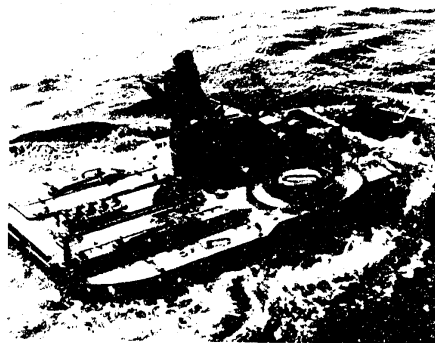
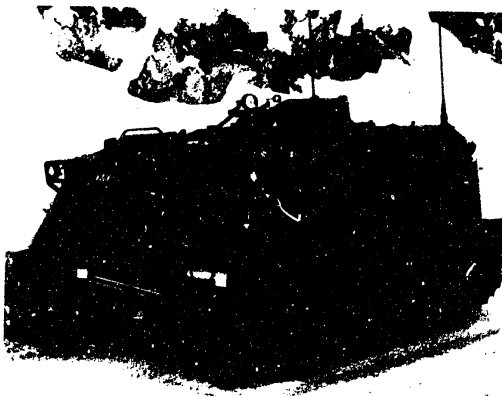


FIGURE 9. The PBV-302 in an amphibious role (U/OU)



FIGURE 10. Swedish-produced Miniman recoilless anti-tank weapon. The Miniman is a man-portable onetime weapon; the barrel is discarded after firing. (U/OU)

usually are approved at the expense of equipment allocations. (S)

1. Organization (C)

The Commander in Chief of the Army is not an operational commander; his responsibilities are limited to organizational, training, equipment, and personnel matters. Operational control is the responsibility of the Supreme Commander of the Armed Forces, effected through the commanders of the six regional joint military commands. It is the task of the Commander in Chief of the Army to put a combat-effective army at the disposal of the Supreme Commander. The Army Staff under the Commander in Chief of the Army exists in peacetime only. The Commander in Chief joins the staff of the Supreme Commander in wartime.

The Office of the Commander in Chief of the Army consists of the Army Staff which is divided into three sections—I (Organization and Equipment), II (Tactics and Training), and III (Personnel Administration)—and the Troop Inspectorate (including the Inspectors of the Arms and Services, the Surgeon General, and the Army Veterinarian). The Office of the Chief of the Home Guard, the Central Conscription Bureau, the Quartermaster Service, and the Medical Service are autonomous bureaus under the Commander in Chief.

2. Strength, composition, and disposition¹ (S)

The active army of 51,700 consists of about 12,300 authorized regulars (3,500 officers, 2,400 warrant

¹For current, detailed information, see *Order of Battle Summary, Foreign Ground Forces and Military Intelligence Summary*, both published by the Defense Intelligence Agency.

officers, 4,600 NCO's, and 1,800 civilian workers serving in staff assignments and as training cadre) and about 39,400 conscripts undergoing their initial training. The units of the active army are actually training elements engaged in conducting recruit training for conscripts. They should not be equated with mobilization units; however, many provide the nuclei for such units. The 49 conscript training centers comprise 39 regiments (15 infantry, seven armored, six field artillery, three air defense artillery, two combat engineer, two signal, and four service); six *karen*² (one field artillery, two air defense artillery, two cavalry, and one combat engineer); three battalions (one armored, one air defense artillery, and one signal); and one cavalry company.

Most of the active army units are in the southern third of Sweden, and the largest concentration is around Stockholm. The only units in the northern third are located around Boden and Umea (Figure 30).³

The Swedes claim they can mobilize 600,000 ground forces men in 72 hours—360,000 for the Field Army and 240,000 for the Local Defense Forces. In the event of mobilization, the forces would be poorly organized, inadequately equipped, and would require at least 6 months' training.

On initial mobilization the Field Army would be organized into 20 infantry and 10 armored brigades which, depending on strategic and tactical requirements, may be brought under operational command of an estimated six to 10 divisional headquarters. "Division" in Swedish planning implies a task force organization that would probably consist of a division command and a small staff as a tactical headquarters for a two- to four-brigade unit. The type of brigade—infantry, mountain infantry (norrland), or armored—would depend on the type best suited for ground operations within a particular military region but there would never be more than one armored brigade to a division.

The planned Swedish brigades roughly resemble U.S. Army brigades. The infantry brigade includes three rifle battalions, one artillery battalion, one maintenance battalion, one engineer battalion, one antitank company, one reconnaissance company, one self-propelled armored artillery company, and one air defense artillery company. The mountain infantry brigade is similar except that it lacks an antitank company. The armored brigade includes three

²A *kar* (plural, *karen*) is a unit between a regiment and battalion in size.

³For diacritics on place names see the list of names at the end of the chapter.

armored infantry battalions, one reconnaissance company, one engineer battalion, one artillery battalion, two antitank companies, one air defense artillery company, and one maintenance battalion.

3. Training (C)

Designed for the annual conscript class, training is mainly defensive in nature. Since Sweden has no plans for fighting on foreign soil, stress is placed on conducting training for operations in the difficult Swedish terrain. Techniques of winter combat are emphasized for units in northern Sweden, and coastal defense and utilization of the numerous streams as defensive barriers (Figure 11) is stressed for units in southern Sweden.

The conscript training system now in force is known as VU 60 (*Varmplikt Utbildning* 1960). Under this system the majority of the conscripts undergo 10 months' training at one of the 49 conscript training centers. The period of training varies from a minimum of 8½ months (certain privates) to 18 months (officers). The various categories and length of obligatory training, in days, fall into seven groups:

CATEGORY	BASIC	REFRESHER	TOTAL
Officers	540	182	722
Warrant officers	540	92	632
NCO's	345	125	470
Privates, Grade "E" (some NCO candidates, vehicle operators, tank crews, technicians)	345	125	470
Privates, Grade "F" (combat troops)	300	90	390
Private, Grade "G" (unskilled soldiers)	255	90	345
Noncombatant personnel (mess waiters and other personnel who cannot be used in combat units because of mental or physical limitations)	390	...	390

... Not pertinent.

Conscript training usually includes 6 weeks of individual basic training; 14 weeks of squad and platoon training; 10 weeks of company-level training, including combined-arms operations; and 6 weeks of battalion-level training, including combined-arms operations and field exercises.

The conscription authorities divide conscripts into four categories: private soldier, potential NCO, potential warrant officer, and potential officer. The man usually remains in the category in which he is placed unless he seeks further education to improve qualifications. Conscripts who are preselected to be officers, NCO's, or technicians enter service first.

Other conscripts with less complicated job assignments are phased in, with those in the shortest term of service (Category "G") entering last. In principle, those with the longest training start earlier, so that the various ranks all come together later in the "training year" as a company size unit.

Reserve training consists of refresher training for conscript-trained men in the Field Army between the ages of 19 and 33; Local Defense Force reserves, composed of conscript-trained men from 33 through 46; and the Home Guard. Field Army refresher training consists of an 18-day period every 4 years. Training for Local Defense Forces personnel consists of one 30-day period during their liability to service. Home Guard training, which consists of a compulsory minimum of 20 hours and a maximum of 50 hours annually, includes infantry basic, individual, and small-unit training.

Schools operated by the army, and their locations, are as follows:

Royal Military Academy	Stockholm
Infantry Officer Candidate School	Halmstad
Cavalry Officer Candidate School	Umea
Armored Troops Officer Candidate School	Enkoping
Artillery Officer Candidate School	Jonkoping
Air Defense Artillery Officer Candidate School	Goteborg
Engineer Officer Candidate School	Solna
Signal Officer Candidate School	Uppsala
Service Troops Officer Candidate School	Linkoping
Artillery and Engineer Officers School	Stockholm
Infantry Combat School	Borensberg and Kvarn
Armored Troops School	Skovde
Artillery Gunnery School	Solna
Air Defense Gunnery School	Solna and Vaddo
Ordnance School	Sundbyberg
Army NCO School	Uppsala
Home Guard Combat School	Vallinge and Salem
Defense Protection (CB I) School	Kungsangen
Army Ranger (Jagar) School	Kiruna
Army Para-Ranger School	Karisborg
Artillery Flight School	Nykoping
Helicopter School	Boden
Army Radar and Air Defense Mechanical School	Goteborg
Army Signal School	Uppsala
Army Maintenance School	Skovde
Army Combat Engineer School	Solna
Army Motorized School	Strangnas
Army Pioneer School	Sundbyberg
Army Physical Education School	Solna

4. Logistics (S)

The Army Materiel Department, which is part of the Defense Materiel Administration (Figure 1), has

principal responsibility for procurement of all army materiel other than common-use supplies. The Chief of the Army Materiel Department reports directly to the Supreme Commander of the Armed Forces, although its activities are closely coordinated with the army.

Requirements estimates of ordnance materiel are prepared annually by the field units in the six regional joint military commands and are submitted to the Army Materiel Department's Procurement Division. On the basis of the estimates, a request for necessary funds is initiated, and, when approved, orders for materiel are placed with the appropriate installation. Before acceptance of major items, such as artillery pieces, the materiel is inspected by an ordnance officer attached to the receiving depot. Materiel which cannot be delivered by the manufacturer directly to the receiving depot is inspected at the plant. Detailed records of inspection are kept for all materiel.

Spare parts are procured by the Army Materiel Department and are stocked in its own depots and in those of the regional joint military commands for issue. Only standard spare parts that are not specifically military items are normally purchased from the civilian market.

Each of the peacetime training units has an ordnance section that performs repair and main-

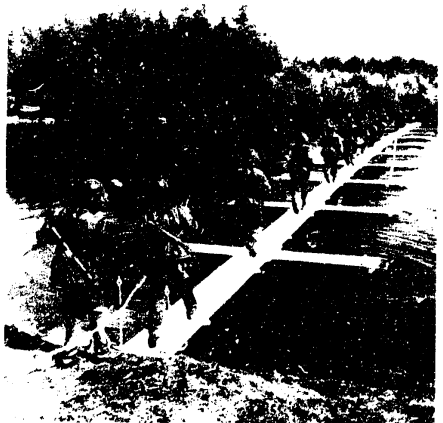


FIGURE 11. Army unit practicing crossing a stream. The troops in the left foreground are armed with Swedish 9-mm submachineguns. (U/OU)

tenance of vehicles and weapons. Maintenance beyond the capability of the using unit is performed by units under the control of a regional joint military command, by a central depot, or by a civilian workshop.

The logistic support system is inadequate to support Sweden's proposed mobilization plan. There are some 1,500 supply depots throughout the country, but these are unguarded, susceptible to theft, and uncared for. The irregular terrain and numerous streams are a handicap. Many bridges are unable to support the load required for an armored vehicle. The logistic system is to some extent an extension of the mobilization system. It is a complex and unsophisticated system further complicated by the fact that many officers do not fully comprehend normal logistic procedures.

5. Army aviation (C)

The Swedish Army Flying Corps is controlled by an aviation office of the artillery arm—in the Troops Inspectorate of the Army Staff. The mission of the corps is to provide support for army combat units; tasks in support of this mission are observation, reconnaissance, liaison, transport, and medical evacuation. The corps comprises two sections: the Artillery Flight Section, which controls the fixed-wing light aircraft, and the Helicopter Section, which controls the helicopters.

The Artillery Flight Section comprises the Artillery Flight School; it has two platoons, each consisting of six light aircraft. The Helicopter Section, which is a training force at the Helicopter School, has a battalion consisting of a number of helicopter and service support platoons; each helicopter platoon has six helicopters.

Personnel who are accepted for service in the Artillery Flight Section possess a civilian pilot's license. The 8-week training program at the Artillery Flight School consists principally of tactical flying and training in artillery observation techniques. Applicants for service in the Helicopter Flight Section are not required to be licensed pilots. The Helicopter School conducts basic and advanced flight courses totaling 23 weeks, special flight training, and courses for unit commanders and technicians. Some of the instructor personnel in both schools have received training in the United States.

The Army Flying Corps has 48 aircraft, of which 14 are fixed-wing light aircraft and 34 are helicopters.

D. Navy

The Royal Swedish Navy is designed, trained, and intended primarily for operations in coastal waters. Its

basic missions are defense of the Swedish coast against amphibious assault and protection of coastal shipping. Professional competence of the regular officers and petty officers, especially among those serving aboard submarines and patrol ships, is outstanding. When fully mobilized, the navy, with its relatively large submarine and motor torpedo boat forces, plus the officers' intimate knowledge of the rugged Swedish coast, could inflict moderate initial losses on an enemy. It could not, however, prevent invasion of the homeland by a major force. (S)

Combat effectiveness at any given time depends upon the stage of the training cycle; it is lowest in winter and highest in early fall. The navy has made maximum utilization of the rugged coastline and possesses a number of dispersal berths and underground ship shelters (Figure 12), as well as an underground shipyard with bombproof rock shelters at Musko island (Figure 13). Underwater obstructions, including mines, are in place at all times. Naval tactics not only are suited to the geographical conditions but also are ideal for survival in a nuclear attack. (S)

Weaknesses include a shortage of trained personnel, the maintenance of a ready-reserve fleet which would require 2 to 3 weeks to become operational, inadequate training of reserves, lack of wartime experience, a short operating season, substandard anti-air and antisubmarine armament, and the absence of air cover. (S)

Long-range naval construction plans include mine warfare ships, additional motor gunboats, fast patrol boats, and conventional attack submarines. (S)

A contract was placed during 1970 for the construction of 12 new *Spica II* class fast patrol boats, the first of which was commissioned in late 1972. This program should be completed by 1975. Extensive studies are being made on the feasibility of various missile systems for these units. In addition, a prototype "experimental" gunboat has been delivered from Norway. Additional units may be built for Sweden pending results of 1 year of testing of this ship. (S)

The first of the three planned 2,700-ton submarine tender/minelayers was delivered to the Royal Swedish Navy during April 1971. The second is expected to enter service in 1975. (C)

Construction of three A-14 class submarine is to begin in 1973, with delivery scheduled for 1977-78. Of five units originally planned, two have been deleted because of budgetary restrictions. (C)

Sweden has no marine corps or naval infantry organization. The Royal Swedish Coast Artillery, an integral part of the navy, provides defense of the coastal areas against invasion. Both the navy and the coast artillery have the domestically manufactured

surface-to-surface RB-08 missiles. They are installed on two destroyers and on fixed and mobile launchers of the coast artillery (Figure 14). (S)

Although the navy has no conventional air arm, it does have a helicopter service with 30 helicopters that are used in antisubmarine warfare (ASW), minesweeping, troop carrier, rescue, reconnaissance, and training roles. (C)

1. Organization (C)

In October 1966 the navy was integrated into the joint defense organization. The former naval districts and coast artillery defense commands became a part of the regional joint commands. The Commander in Chief of the Navy has operational control of the Coastal Fleet. In time of war the fleet would cease to exist as an entity and all ships would be assigned to the commanders of the regional joint commands who are directly responsible to the Supreme Commander of the Armed Forces. Within each regional command, the commander of the naval base has duties comparable to those of the former naval district commander; he is responsible for the operation of naval stations, shipyards, naval schools, coast artillery installations, and miscellaneous harbor and service craft within the region.

The Commander in Chief of the Navy is responsible to the Supreme Commander of the Armed Forces for planning and for the organization and training of naval forces. In these duties he is assisted by the Chief of Naval Staff, usually a general officer of the coast artillery. The Naval Staff, aside from a long-range planning department, consists of four sections: I (Security, Intelligence, and Communications); II (Personnel and Training, Naval Library, Press Department, and other administrative matters); III (Fleet Training, Organization, and Personnel); and IV (Coast Artillery Training, Organization, and

Personnel). For personnel matters the chiefs of Sections III and IV are directly subordinate to the Commander in Chief of the Navy.

Naval communications headquarters, in Stockholm, is directed by the Chief of the Communications Branch, Section I, Naval Staff. Communications with forces afloat are maintained through radio stations in Vaxholm, Horsfjarden, Karlskrona, Gotland island, and Alysborg. These five stations use a continuous wave (CW) broadcast system for delivery of traffic to units at sea. Ship-to-ship traffic can also be relayed through regular commercial radio stations along the coast. The navy has two very-low-frequency (VLF) stations; one in Varberg and one on the southeast coast near Vastervik. Complete coastal coverage is provided by a very-high-frequency (VHF) network; ships have VHF equipment which is compatible with air force equipment.

The major afloat command is the Coastal Fleet, a training force comprising ships rotated annually

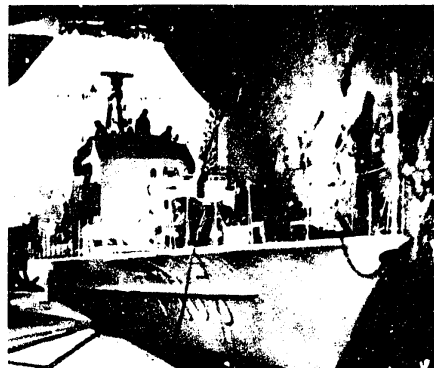


FIGURE 12. The Swedish fast patrol boat *Regulus* entering an underground ship shelter. (U/OU)



FIGURE 13. Entrances to the new underground naval base at Musko island (C)

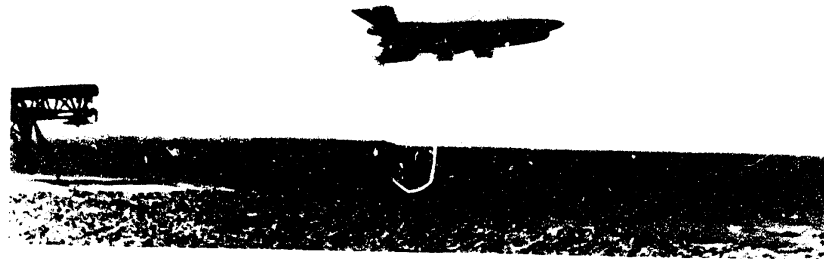


FIGURE 14. Swedish-manufactured surface-to-surface RB-08 missile. Coastal missile units form an effective part of invasion defense. (U/OU)

between active and ready-reserve status. Fleet strength usually consists of three major elements: destroyer, submarine, and minesweeping flotillas.

Numerous small craft are assigned to the regional joint commands and are under the jurisdiction of the appropriate naval base commanders or the appropriate coast artillery area commanders.

Icebreaking (Figure 15) and survey ships are under the jurisdiction of the Royal Board of Shipping and Navigation in peacetime, but are manned, operated, and maintained by the navy.

2. Strength, composition, and disposition⁴ (S)

The navy has 105 principal combatant, patrol, and mine warfare ships as follows:

Principal combatant ships:	
Guided missile destroyer (DDGS)	2
Destroyer (DD) (Figure 16)	8
Destroyer escort (DE)	3
Submarine (SS) (Figure 17)	17
Antisubmarine submarine (SSK)	5
Patrol ships:	
Fast patrol boat (PTF) (Figure 18)	17
Motor torpedo boat (PT)	16
Mine warfare ships:	
Fleet minelayer (MMF) (Figure 19)	2
Medium minesweeper (MSM)	6
Coastal minesweeper (MSC)	12
Inshore minesweeper (MSI)	8
Auxiliary minesweeper (MSA)	9

In addition there are 83 miscellaneous amphibious, auxiliary, and service craft.

⁴For current, detailed information, see *Automated Naval Order of Battle* (Ships), Volume V, the *Military Intelligence Summary*, and the *Naval Forces Intelligence Study*, all published by the Defense Intelligence Agency.

Personnel strength totals approximately 5,800 officers and enlisted general service personnel. An additional 3,900 personnel are in the coast artillery, and 100 officers and enlisted men are assigned to the naval helicopter service.

Swedish Naval Headquarters and the Coastal Fleet Command are located in Stockholm. Main naval bases are at Musko island, Berga, Karlskrona, and Goteborg.

Rapid mobilization potential is the basis of Swedish naval capability. Ready-reserve ships are maintained at a "mobilization ready" level. They could be activated within 2 to 5 weeks.

The naval staff estimates that in the event that full mobilization becomes necessary this can be achieved in 30 days—30,000 officers and enlisted men for the navy, and 30,000 for the coast artillery. The coast artillery could probably man all batteries within 72 hours. In addition, 10,000 Women's Naval Auxiliary Corps personnel would release enlisted men to combat posts.

3. Training (C)

The navy's training is directed primarily toward invasion defense and antisubmarine warfare. Within the limitations imposed by size, budgetary restrictions, and the requirement for training large numbers of conscripts each year, naval training is adequate.

Following basic training, officer cadets attend the Royal Swedish Naval Academy at Nasbyark. After a period of sea duty, and prior to promotion, they must go to the Officers Weapons School at Berga for specialized training. Selected senior officers attend the interservice schools.

Recruits receive thorough training in basic seamanship, often followed by some technical training prior to sea duty. Career enlisted personnel can receive considerable advanced technical training as petty officers. After 3 years of service, well-qualified men are eligible to become warrant officer candidates. Basic conscript training is more limited because it is intended only to produce individuals capable of filling specific wartime billets afloat or ashore.

Fleet training is conducted by the Commander, Coastal Fleet. The winter is spent in team training, utilizing facilities afloat and ashore, and elementary single ship exercises. In the spring, the Coastal Fleet begins more advanced single ship exercises, builds up to multiship exercises, and concludes its training cycle with the annual fall maneuvers.

The navy has no organized reserve, but refresher training is provided for reservists. Within 6 years of completion of conscript service and prior to reaching age 47, enlisted reservists are required to complete a minimum of four periods of refresher training, each lasting for 18 days, and five mobilization training exercises, each of 1 to 2 days' duration. Retired regular personnel in the grade of petty officer and above are liable for recall for training for a 30-day period every 4 years until they reach the ages of 55 to 66 depending on rank. Reserve officers are liable for recall for three 30-day refresher training periods up to the age of 47.

The Sea Defense Corps, a quasi-naval organization, gives pre-military training on a volunteer basis for youths 15 to 18 years of age (Figure 20), and the Women's Naval Auxiliary Corps (Figure 21) provides important training to reserve women personnel.

Major naval training installations and their locations are as follows:

Training Barracks (2)	Karlskrona
Coast Artillery Gunnery and Ranger Schools	Vaxholm (near Stockholm)
Gunnery, Radar, Signal, Submarine and ASW, Engineering, and Damage Control Schools	Berga
Naval Flying Schools (helicopters)	Berga and Save (near Goteborg)
Naval Technical School and Petty Officers School (specialist training for chiefs and petty officers)	Karlskrona
Naval Supply, Diving, and Mine Warfare Schools	Karlskrona
Naval Medical School	Alvsborg
Women's Naval Auxiliary Corps School (summer only)	Berga
Warrant Officers School	Berga
Royal Swedish Naval Academy	Nasbypark (near Stockholm)
Officers Weapons School	Berga
Coast Artillery Officer and Noncommissioned Officer Schools	Alvsborg

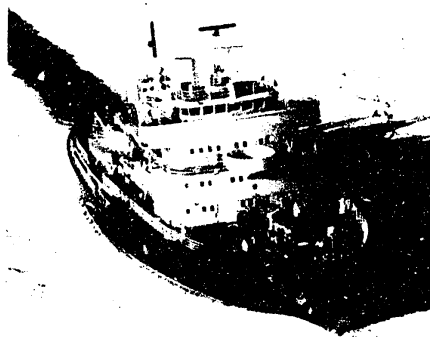


FIGURE 15. The Swedish icebreaker Tor (U/OU)

4. Logistics (S)

The Navy's Materiel Department is an integral part of the Defense Materiel Administration. The centralized Defense Medical Board (subordinate to the Surgeon General and Chief of the Medical Corps) controls medical logistical support to the services through its Medical Bureau. Construction of shore facilities is the responsibility of the Fortification Administration.

The principal operating bases and shore establishments are at Berga, Karlskrona, Goteborg, and the underground base at Musko island. The naval bases have large stocks of wartime supplies, some of which are dispersed at numerous underground supply points throughout the archipelago areas of Stockholm.

Although most naval materiel is manufactured in Sweden, some components and electronic equipment are imported. Guns and ammunition are purchased principally from *AB Bofors* in Sweden. Electronic equipment is obtained from various domestic sources, including the Philips and L.M. Erickson companies, as well as French and British companies. Helicopter radars and dipping sonars are purchased from the United States.

Sweden ranks foremost among the smaller maritime nations capable of designing and constructing its own naval ships. With the exception of 11 motor torpedo boats built in West Germany during the late 1950's and the new experimental Norwegian gunboat, all of

FIGURE 16. The Swedish-built destroyer *Smaland* of the *Halland* class. The *Smaland* is equipped with the RB-08 surface-to-surface missile system. (U OU)

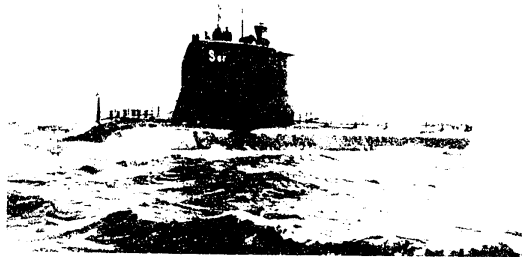


FIGURE 17. Swedish-built submarine *Sjoormen* of the *Sjoormen* class. (U OU)

FIGURE 18. Swedish-built fast patrol boat *Spica* of the T-121 class (U OU)

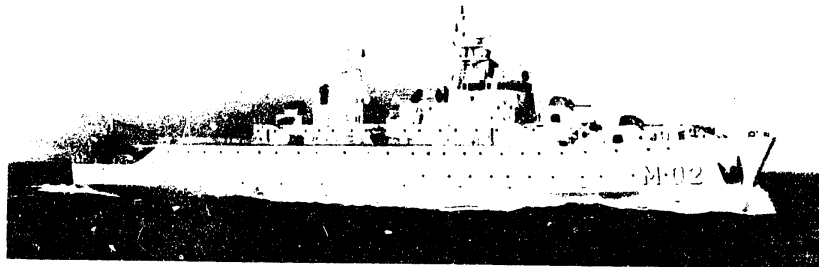
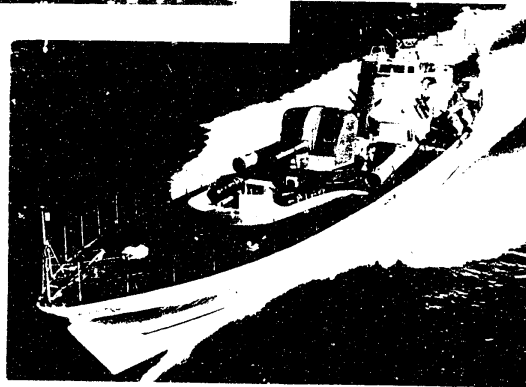


FIGURE 19. Swedish-built fleet minelayer *Alvsborg* of the *Alvsborg* class (U OU)

Sweden's combatant ships have been constructed domestically. Sweden is also able to manufacture almost all components required in the construction of naval units. Domestic naval repair facilities are modern and capable of all types of hull and engine repairs on ships.

5. Naval coast artillery (C)

The coast artillery is a special part of the naval forces, contributing much to force effectiveness. Combat terrain requirements have resulted in three principal types of coast artillery units: artillery and missile, mine warfare, and coastal rangers. The artillery and mine warfare units represent integrated components for the direct defense of harbor and sea approaches. Most fixed artillery installations have been blasted out of solid rock in areas surrounding important harbors. Each unit is self-supporting. New mobile 75-mm guns (Figure 22) in shrapnel-proof turrets are replacing some of the fixed coastal artillery batteries (Figure 23). An unknown number of both fixed and mobile units have a missile capability, including the French Nord SS-II and the Swedish RB-08 surface-to-surface missiles. Minelaying units (Figure 24) are capable of laying extensive minefields along the coast and in potential landing areas. All mines are of the controlled type. Ranger units, utilizing fast amphibious craft (Figure 25), have received amphibious training and can conduct small-scale raid and reconnaissance missions.

Coast artillery officers and NCO's are principally drawn from regular naval personnel. Other personnel are selected from conscripts who volunteer for coast artillery duties and from reserve officers and NCO's.

The navy and coast artillery are integrated at staff level, with coast artillery personnel serving in naval headquarters in Stockholm. Other personnel are largely concentrated in field regimental headquarters from which they may be assigned to dispersed coast artillery stations within the region.

6. Naval air arm (C)

The air component of the navy consists solely of the Swedish Naval Helicopter Service. Its mission is to support the navy and coast artillery in their tasks of antisubmarine warfare (ASW), mine countermeasures, troop movement, reconnaissance, and search and rescue. The service has a total of 30 helicopters (seven Vertol 107, four Vertol 44, nine Alouette II, and 10 Agusta Bell 206A Jet Ranger), and is organized into two multipurpose squadrons. In addition, the helicopters inventory will be increased by several KV-



FIGURE 20. A member of the Sea Defense Corps (U/OU)

107 H helicopters ordered from Japan, and delivery is to take place in 1972-73. These helicopters will replace the Vertol 44 which have been in service since the mid-1950's. Helicopter Division I is located at the helicopter base at Berga; Division II is at Saxe.

Personnel are well trained to carry out their mission, but their capability is restricted by the small number of helicopters and other equipment and by the number of ships designed to accommodate them. Effectiveness in support of coastal ASW operations is negligible, but support of coast artillery operations is good. Search and rescue operations are conducted effectively.

Helicopter pilots are procured from volunteer petty and junior officers of the navy and coast artillery. Basic helicopter training is given by Helicopter Division I at Berga naval helicopter base; advanced training is given by both helicopter divisions. The Osterman Aircraft Company shops in Sodertalje train all maintenance personnel. Selected military and civilian personnel are trained in the United States, and Swedish naval schools provide sonar and electronic

training. Pilots are eligible to attend the Royal Armed Forces Staff College and the Royal National Defense College.

E. Air force

The Royal Swedish Air Force (RSAF) is organized to maintain air defense of Sweden, perform tactical operations in conjunction with ground and naval forces, and provide reconnaissance for surface forces. (S)

The air force lacks combat experience and the logistic and personnel support necessary to maintain itself in sustained combat. Nevertheless, the RSAF is in a continuous state of readiness, maintains a high state of security on its bases, and is well led and well trained. In the event of an attack on Sweden the air force would be capable of a vigorous initial defense against an enemy of comparable strength and equipment, but it would be unable to maintain a sustained effort against a major aggressor. (S)

Nearly all combat aircraft and spare parts are produced by the privately owned Swedish Aircraft Company (SAAB) which has a moderate but technologically competent capability for producing jet fighters and trainers, and light utility aircraft. Recent

production efforts centered around the J-35F Draken interceptor aircraft (Figure 26), the F-35 attack aircraft (exported to Denmark), the AJ-37 Viggen short-takeoff-and-landing (STOL) attack aircraft (Figure 27), and the Saab 105 trainer/light attack aircraft (Figure 28) being exported to Austria. Although Sweden has the production capability to fulfill its requirements for fighter aircraft, transport aircraft and helicopters (Figure 29) have been purchased from France, Italy, the United Kingdom, Japan, and the United States. (S)

The SAAB missile department has been producing Hughes missiles under license since 1959. At the beginning of the license agreement, SAAB built the Sidewinder (USAF AIM-9B) which was fitted on the J-35A/B/D systems. Over the past few years SAAB has produced the RB-27 which is a license manufacture of the Hughes HM-55 missile (USAF AIM-26B-Falcon). Nine hundred of these radar-guided air-to-air missiles were produced by SAAB, the last of which was built in June 1970. The RB-27 is compatible only with the J-35F Draken. SAAB is now completing the production run of the RB-28, a license manufacture of the Hughes HM-58 missile, a variation of the USAF AIM-4D. The RB-28 is an infrared-guided air-to-air missile. An estimated 1,150 of the total run of 1,200 missiles had been produced as of 1 January 1971. Upon completion of the series run for the RSAF, SAAB was to produce additional RB-28's to be shipped to Finland as part of a Draken sale to that country. The RSAF is training Finnish pilots in the use of the Draken aircraft. (S)

FIGURE 21. Member of the Women's Naval Auxiliary Corps (U/OU)



I. Organization (S)

Operational command of the air force is the responsibility of the Supreme Commander of the Armed Forces, to whom the Commander in Chief of the Air Force is responsible for training, mobilization, tactics, and organization. The Commander in Chief of the Air Force supplies trained personnel and equipment to the First Air Command and to the regional joint military commands. Directly subordinate to him is the Chief of the Air Force Staff, whose staff consists of the Planning Office, the Air Safety and Air Systems Inspectorates, the Meteorological Office, the Air Force Surgeon in Chief, and two sections: I (Communications and Intelligence Offices) and II (Organization, Training, Personnel, and Press Offices).

The First Air Command, with headquarters at Goteborg, has all of the attack aircraft and most of the reconnaissance aircraft; some of the latter are in the 21st Reconnaissance and All-Weather Fighter Wing at Lulea/Kallax Airfield.



FIGURE 22. New mobile 75-mm gun in shrapnel-proof turret. This gun can be rapidly emplaced or displaced and is part of a coast artillery unit formed in mid-1971 to begin implementation of a more mobile type of coastal defense. (C)



FIGURE 23. Fixed coastal artillery battery (U/OU)



FIGURE 24. Coast artillery minelaying unit (U/OU)

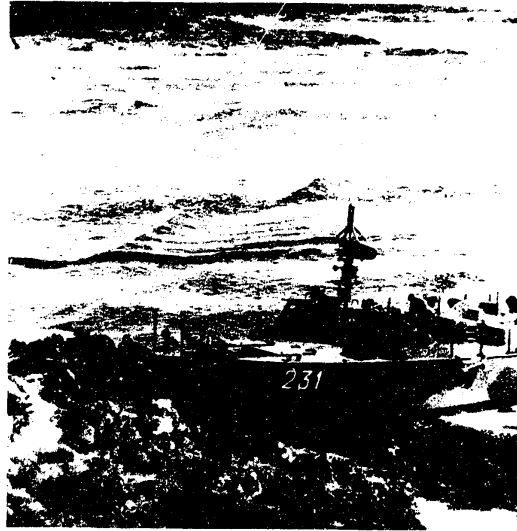


FIGURE 25. Coast artillery ranger unit taking part in amphibious training exercise (U/OU)

Operational control of all fighter aircraft is vested in three regional joint commanders, each of whom provides air defense for his command and one adjacent region. These three regional joint commands (Southern, Eastern, and Upper Norrland) differ from the others only in that they each have an air force section and are commanded by lieutenant generals rather than major generals or rear admirals.

2. Strength, composition, and disposition³ (S)

The Royal Swedish Air Force ranks fourth among Western European air forces (after the United Kingdom, West Germany, and France) in the number of jet aircraft; 765 out of 958 aircraft are jet propelled. It has 14 operational wings: seven all-weather (AWX) fighter wings, four attack wings, one reconnaissance wing, one combination reconnaissance and all-weather fighter wing, and one AWX training wing. All wings are jet aircraft equipped, principally with the Draken J-35. The aircraft inventory comprises 323 fighters, 147 attack, 85 reconnaissance, 28 transports,

³For current, detailed information, see the *Free World Air Order of Battle*, the *Military Intelligence Summary*, and the *Air Force Intelligence Study*, all published by the Defense Intelligence Agency. The Swedish airfield system is described and some details of fields are given in the Transportation and Telecommunications chapter of this General Survey.



FIGURE 26. J-35F Draken interceptor aircraft with Falcon air-to-air missile. The infrared target seeker is fitted under the nose of the aircraft. (U/OU)

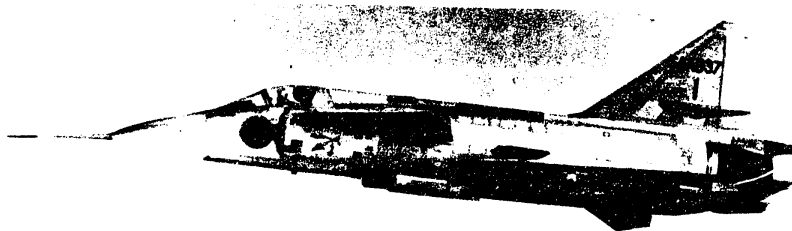


FIGURE 27. J-37 single-seater Viggen attack aircraft. Other versions of the Viggen range from trainers and tactical reconnaissance aircraft to high-altitude interceptors. It is capable of utilizing runways of about 500 meters length and of limited width. (U/OU)

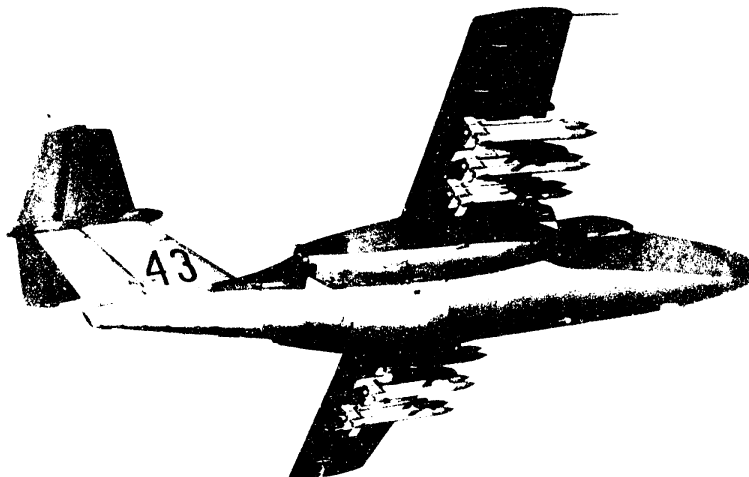


FIGURE 28. The Saab 105 trainer/light attack aircraft capable of firing salvos of 12 air-to-surface rockets. Maximum speed at sea level is 900 kilometers per hour. (U/OU)

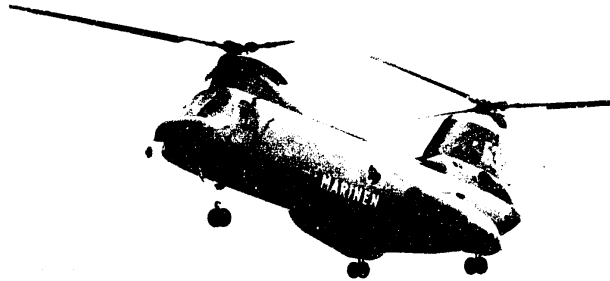


FIGURE 29. U.S.-built (Boeing-Vertol) HKP-4 helicopter. Built for the Royal Swedish Navy and Air Force, the naval version has equipment for antisubmarine and mine countermeasures operations, plus a retractable hook for towing surface vessels and minesweeping gear. The RSAF version is fitted with special search and rescue equipment, including a retractable rescue boom in the forward door. (U/OU)

325 trainers, 16 helicopters, and 34 miscellaneous; 471 aircraft are in tactical units.

The air defense system consists of an extensive early warning radar network in the southern part of the country, a semiautomatic ground-control and surveillance system (STRIL 50-60), J-35D/F Draken all-weather fighters, J-35A/8 day fighters, Bloodhound II surface-to-air missiles (SAM's), and army-controlled air defense artillery (ADA) and Hawk SAM units. The complete air defense force is well trained and maintained in a semialert condition. However, vulnerabilities exist including incomplete radar coverage, a lack of electronic-counter-countermeasure (ECCM) capability, probable saturation of early warning and ground control facilities during a massive enemy air attack, and inadequate petroleum stores.

The tactical forces consist of four attack wings, with aging A-32A Lansens, and two reconnaissance wings, with both S-32C and S-35E aircraft. Pilots are proficient in ground and sea tactics, but are limited by the lack of emphasis placed on joint service training.

Transport aircraft are adequate to satisfy peacetime requirements but do not have sufficient capability to meet emergency airlift needs. In spite of plans to mobilize the Swedish-registered civil air fleet to augment its airlift capacity, the RSAF would be hard pressed to meet its airlift commitments in the event of an invasion of Sweden by a major power.

The number of military personnel on active duty totals 12,100 (750 pilots, 120 trainees, 260 other aircrew, 10,930 ground personnel, and 100 missile personnel). In addition, the air force employs about 4,600 civilians. Upon mobilization, an immediate air force reserve force of 1,855 personnel would be assigned to active duty units and would be able to function without further training. An additional 40,000 to 45,000 conscripts who have completed their

active duty could be mobilized to augment the immediate air force reserve force. A 72-hour mobilization plan provides sufficient personnel to accomplish assigned wartime missions. Mobilization provides enough pilots and navigators to man operational aircraft on a 1-to-1 basis. The RSAF is probably the only service capable of meeting its mobilization plan.

The following is a summary of RSAF unit designations with Swedish designations in parentheses, type(s) of aircraft, and locations:

UNIT DESIGNATION	SWEDISH DESIGNATION	AIRCRAFT TYPE(S)	AIRFIELD
6th Attack Wing	F-6	A-32A	Karlsborg
7th Attack Wing	F-7	A-32A C-47 C-130	Satenas
11th Reconnaissance Wing	F-11	S-32C S-35E	Nykoping
15th Attack Wing	F-15	A-32A	Soderhamn
17th Attack Wing	F-17	A-32A	Ronneby
3d AWX Fighter Wing	F-3	J-35F1	Malmen
10th AWX Fighter Wing	F-10	J-35F1 J-35F2	Angelholm
12th AWX Fighter Wing	F-12	J-35F1	Kalmar
1st AWX Fighter Wing	F-1	J-35F1 J-35F2	Hasslo
13th AWX Fighter Wing	F-13	J-35F2	Bjersala
16th Day Fighter/Training Wing	F-16	J-35A SK-35C	Uppsala
18th Day Fighter Wing	F-18	J-35B	Tullinge
4th AWX Fighter Wing	F-4	J-35D	Ostersund/Frosen
21st Reconnaissance and AWX Fighter Wing	F-21	J-35D S-35E	Lulea/Kallax

Of the 14 wings, 12 are based on 12 primary operating airfields in southern Sweden. The remaining two are based at Luiea/Kallax and Ostersund/Frosen Airfields in northern Sweden.

3. Training (C)

The Training Office in Section II of the Air Staff handles training plans and policies, but the various flying training schools are under the direct control of the Commander in Chief of the Air Force.

The most significant air force schools and their locations are as follows:

Air Force Academy	Uppsala Airfield
Flying Training School	Ljungbyhed Airfield
Halland Schools (technical, signals, and general troop training)	Halmstad
Roslagen Schools (radar, radar controllers, and air traffic controllers)	Hagernas (near Stockholm)
Helicopter School	Ronneby Airfield
Weather School	Kalmar Airfield

Selected air force officers also attend the Royal National Defense College and the Royal Armed Forces Staff College, both located in Stockholm.

Conscripts normally receive 12 weeks of basic general military training, after which they are considered ready for service. The remaining 40 weeks of conscript duty are spent in practice and simulated exercises. Upon completion of compulsory service, training continues through participation in a refresher training program, which is closely tied to regular air force operations. Nevertheless, the value of this refresher training and readiness of the individual after active duty release are questionable. The quality of basic, specialist, and operational training is average. However, the output is considered adequate for current or projected air force needs, except for the pilot category where a shortage of experienced pilots exists. Three pilot training courses of approximately 75 students each are conducted yearly at Ljungbyhed Airfield. These flight training programs consist of 12 months of instruction in both prop and jet trainers. Upon completion of the 1-year program, pilots are assigned for 6 months to Uppsala Airfield where they undergo 65 hours of transitional training in the Draken aircraft as well as 25 hours in a flight simulator. They are then assigned to an operational

conversion squadron for over 200 hours of operational training in the Draken. Air force pilots are limited to 120 flying hours per year, mostly in 15- to 45-minute flights.

4. Logistics (S)

The supply and maintenance system operates effectively in peacetime. However, inexperience in wartime requirements would be a tremendous handicap, particularly if the hostile action required continuous utilization of equipment. The transportation system would be heavily taxed to support air supply requirements above and beyond stockpiled items located near the dispersal areas, particularly in the north and the more remote areas. Sweden imports 70% of its petroleum fuels, oil, and lubricants (POL) from Western Europe and the Soviet Union. Each airbase and operational airfield has hardened underground storage facilities for fuel in sufficient quantities to support intensive flight operations for only 1 week. Total air force war reserves of fuel available in dispersed underground sites are estimated at 120 days. After exhaustion of this supply by wartime operations, Sweden would be dependent on outside sources.

The Planning Office of the Air Staff is responsible for broad logistic policies, materiel plans, and guidance. The Air Materiel Department, part of the unified Defense Materiel Administration, is responsible for detailed planning, procurement, and distribution of air materiel. It functions as both an air materiel command and as a research and development command. Common-use supplies are provided for the air force by the Defense Materiel Administration.

The air force operates maintenance depots at Arboga and Malmen Airfields where major overhauls, and repair and salvage of aircraft, engines, and missiles are accomplished. Because of a decrease in air force activities, the workshop at Hasslo Airfield (northwest of Stockholm) was closed as a maintenance workshop on 1 January 1970. The RSAF has a three-level maintenance system. The first is base-level, responsible for aircraft performance. The second level is regional workshop maintenance, and the third level is depot maintenance which performs general maintenance repairs and modifications.



FIGURE 30. Military regions (S)

SECRET

Places and features referred to in this Chapter (u/ou)

	COORDINATES	
	° 'N.	° 'E.
Älvsborg	57 40	11 52
Berga	59 05	18 09
Boden	65 50	21 42
Borensberg	58 34	15 17
Enköping	59 38	17 04
Goteborg	57 43	11 58
Gotland (isl)	57 30	18 33
Hägernäs	59 27	18 08
Halmstad	56 39	12 50
Horsfjärden (bay)	59 04	18 09
Jonköping	57 47	14 11
Karlsborg	65 48	23 17
Karlskrona	56 10	15 35
Kiruna	67 51	20 13
Kungsängen	59 29	17 45
Kvarn (farm)	58 38	15 18
Linköping	58 25	15 37
Muskö (isl)	59 00	18 06
Näsbypark	59 26	18 06
Nyköping	58 45	17 00
Salem	59 13	17 44
Säve	57 48	11 55
Skövde	58 24	13 50
Södertälje	59 12	17 37
Solna	59 22	18 01
Stockholm	59 20	18 03
Strängnäs	59 23	17 02
Sundbyberg	59 22	17 58
Umeå	63 50	20 15
Uppsala	59 52	17 38
Vaddö	59 59	18 49
Vällinge (farm)	59 16	17 42
Varberg	57 06	12 15
Västervik	56 15	14 24
Växholm (fort)	59 24	18 21

Selected airfields

Angelholm	56 18	12 52
Arboga	59 23	15 56
Bravalla	58 37	16 06
Hasslo	59 35	16 38
Kalmar	56 41	16 17
Karlsborg	58 31	14 31
Ljungbyhed	56 05	13 13
Luleå/Kallax	65 33	22 08
Malmen	58 24	15 32
Nyköping	58 47	16 55
Ostersund/Frosön	63 12	14 30
Ronneby	56 16	15 16
Satenas	58 26	12 43
Soderhamn	61 16	17 07
Tullinge	59 11	17 54
Uppsala	59 54	17 36

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