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SOVIET AND EAST EUROPEAN GENERAL PURPOSE FORCES

PART I -- NAVAL FORCES

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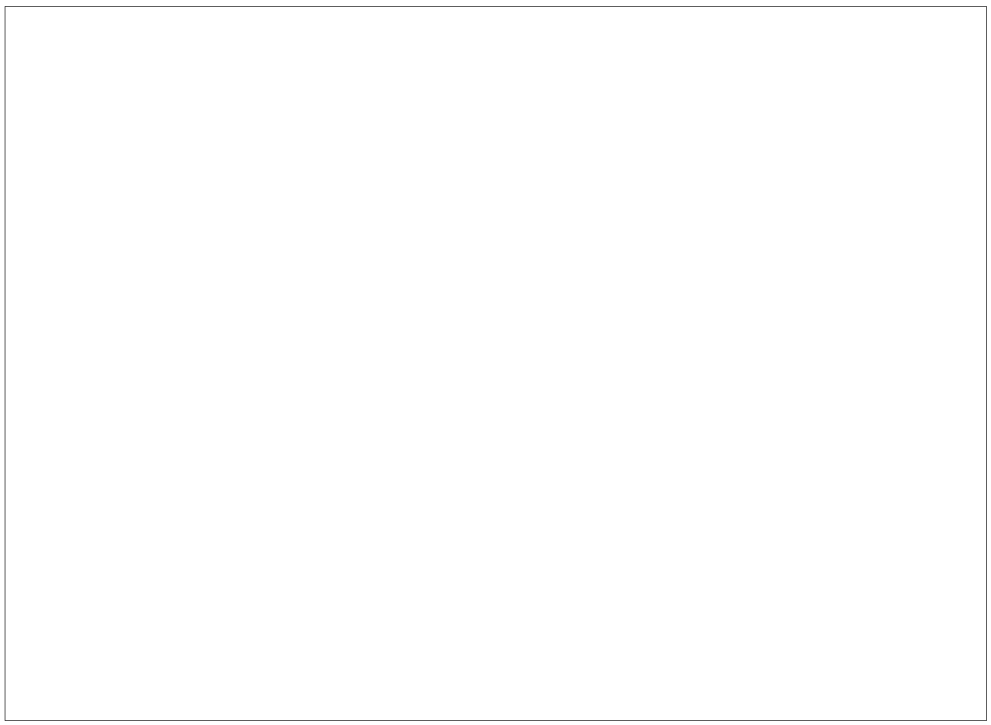

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I. Missions of Soviet General Purpose Naval Forces

The primary mission of Soviet naval general purpose forces is defensive--to prevent attacks from the sea against Soviet territory. In addition, however, the navy is being increasingly used to project a Soviet presence in various parts of the world.

The highest priority task for the Soviet navy is to counter the US ballistic missile submarine force by developing the capability to destroy the submarines which would serve as launch platforms for Polaris and--in the future--Poseidon missiles. Major advances were made during the past year in the capabilities of the forces assigned to anti-submarine warfare by the addition of new classes of submarines with advanced electronics and weapons, new surface ships, and increasing numbers of new ASW aircraft.

The second-priority task is to counter Western carrier task forces. The Soviets view the carrier as a threat to their expanding naval operations in the open oceans, as a platform for nuclear strikes against the USSR, and as an obstacle to the attainment of their foreign policy objectives.

Note: This partial OSR contribution to NIE 11-14-69 discusses the naval and naval aviation general purpose forces of the USSR and the East European Warsaw Pact countries. In accordance with the schedule for preparation of the estimate, a contribution on ground and air general purpose forces will be produced at a later date.

The task of developing the capability to counter carrier forces had top priority in the middle Fifties, and the Soviets believed they had solved this problem by the early Sixties. The Soviet combination of long-range reconnaissance and strike aircraft, cruise missile and torpedo submarines, and surface ships does present a formidable threat to US carrier task forces, and the major Soviet emphasis is now on refining operational strategy and tactics and continuing to improve both electronics and weapons.

As forces were developed to counter submarines and carriers in the open oceans, the Soviets began to use their fleets to project a new image of Soviet military and political power. Soviet naval "presence" is aimed at enhancing the Soviet image in the nonaligned and communist-leaning or anti-US countries, and special emphasis is being given to the Mediterranean and Indian Ocean areas, where British naval influence is waning. The navy is still handicapped for this purpose by shortages of the appropriate logistic support and maintenance shipping designed to sustain naval operations at great distances from base. This capability for a sustained "forward posture" has become an objective of Soviet naval development.

The other major tasks of the naval general purpose forces are to interdict enemy sea lines of communication, protect Soviet sea lines of communication, repulse naval attacks in coastal waters, and support the seaward flanks of ground troop operations.

II. Soviet Capabilities Against Submarines

A. The ASW Problem

The outlook for US naval capabilities changed abruptly in the late Fifties with the development of the nuclear-powered fleet ballistic missile submarine. When operational capability was achieved in 1960, the Polaris submarine became the major sea-based threat to the USSR. The attack aircraft carrier assumed a secondary role in US strike planning--and in Soviet countermeasures.

In the same period, US nuclear-powered attack submarines--with their range limited only by crew endurance--became able to patrol for protracted periods far at sea and even into the coastal approaches to the USSR.

The Soviets were thus confronted simultaneously with two major ASW problems: First and more important was the task of building a defense against the ballistic missile submarine. Second, it became more difficult for the Soviets to protect their own missile submarines from submarine attack.

The Soviet approach to countering the Polaris threat during general war would probably be threefold: First, the Soviets would probably attempt to destroy Polaris submarine bases. Second, they would probably attempt to trail ballistic missile submarines leaving base and destroy them while en route to their operating areas. Third, Soviet antisubmarine task forces deployed into probable Polaris launch areas would attempt to detect, locate, and destroy US submarines there.

The protection of Soviet surface units, submarines, and merchant ships from hostile attack submarines would be conducted by the coordinated efforts of ASW-capable ships, aircraft, and submarines. Antisubmarine submarines would play the major role.

B. ASW Forces

During the past three years the Soviets have made a number of advances in ASW. The scope and timing of these developments indicate that a serious effort is under way to upgrade the ASW capability of the navy, reflecting decisions made in the late Fifties.

Nuclear-powered attack submarines offer the greatest promise for ASW, and the Soviets' naval construction programs indicate they share this view. Five new classes of attack submarines have appeared since 1966--an unusually large number of new hull designs--including the nuclear-powered C and V classes; the 196-B and 402-J classes, which are probably nuclear; and the B class, which is probably not nuclear powered. At least some of these five are probably intended specifically for ASW use and the others for anti-ship missions against naval and merchant ships. (See Table 1 on page 28 for current and projected numbers of submarines, by type and class.) The new C and V classes have participated in Northern Fleet exercises, and in December 1968 a C class attempted to intercept another Soviet nuclear submarine.

The new submarines are believed to be quieter than older classes and are probably equipped with better sonars. Reduction of self-noise, including sound isolation in machinery and new propeller design, has been noted as a continuing Soviet effort for the older classes, and these and other advances are probably incorporated in the new classes. Since 1962 one R, one W, one N, and three Z class have been fitted with experimental bow sonars. We believe that the results of the tests of these sonars have been incorporated in the sonars on the new attack submarines.

All major new Soviet surface combatants are designed to have an ASW capability, and carry both sonars and ASW weapons. Every unit produced

since 1962 is also equipped with SAM armament, which would facilitate ASW operations at sea without air cover. The Soviets group their Kresta-class cruisers and the Kashin- and Kanin-classes of destroyers under operational ASW commands, and all are equipped to operate the new KA-25 Hormone helicopter from stern platforms. The Kresta class has a hangar which can accommodate two ASW helicopters.

The most important new ASW ship is the Moskva-class helicopter carrier--which the Soviets call an "antisubmarine cruiser"--with its extensive ASW and SAM armament and a complement of about 15 Hormone ASW helicopters. The Moskva reached full operational capability during 1968 and its sister ship, the Leningrad, has completed sea trials and will probably deploy to the Mediterranean soon. Most of the systems on this class are new developments, including the Hormone helicopter with dipping sonar, a hull-mounted sonar, a variable depth sonar, and an ASROC-type ASW weapon launcher.

Some of these new systems will probably also appear on other new ships and be refitted on some older ones. Over the past several years, three Krupnyy-class missile destroyers converted to ASW ships have had their two SSM launchers replaced by a SAM launcher and AA guns. The bow was lengthened and an improved sonar was probably installed.

The lead ships of two new classes of combatants are now under construction. One ship, being built [redacted] is somewhat larger than the Kresta-class cruiser. The other ship, being built [redacted] is smaller than a Kashin. Although both are in the early stages of construction and details of their characteristics and equipment are not yet apparent, the smaller unit appears to have an opening in the stern, possibly for a variable depth sonar.

New aircraft being supplied to the Soviet ASW forces provide a limited capability for distant ASW operations, although their major impact

is on short-range capabilities, and the deployment of Hormone helicopters on the Moskva-class carriers is a major improvement in providing airborne ASW support to afloat units. A new land-based ASW aircraft--designated the May--which entered service during the past year improves naval capability for more distant ASW operations. This aircraft and the small number of TU-16 Badgers used in an ASW role can conduct limited ASW operations at a range of about 1,000 nautical miles from base, although they normally would be employed closer to the Soviet coast.

The BE-12 Mail amphibian, which is rapidly replacing the BE-6 Madge seaplane, is best suited for ASW operations within a few hundred nautical miles of the coast, although it is also capable of operating at distances up to about 1,000 nm from base. The Mays and Mails, in conjunction with the land-based helicopter force of MI-4 Hounds and KA-25 Hormones, will provide a substantial contribution to Soviet ASW capabilities in coastal areas.

Soviet operational capabilities to detect, locate, and attack submarines within range of patrol aircraft are improving as crews gain experience with the new and improved equipment and detection methods--radar, ECM, sonar, and magnetic anomaly detectors.

The Soviets have had passive short-range hydroacoustic listening devices since 1940 and these systems are now operational in all fleet areas. They are estimated to be effective against noisy submarines out to about 20 nm from shore.

C. ASW Operations and Training

ASW operations and exercises are increasing in scope, expanding in realism, and moving to the open ocean. The impact of new ASW developments upon operations is already becoming apparent, although capabilities are still greatest in the coastal zone and weak in the open ocean.

Basic approaches to ASW operations at sea can be divided into several categories--submarine vs submarine; submarine and ship vs submarine; submarine and aircraft vs submarine; ship and aircraft vs submarine; and combined submarine, aircraft, and surface ship vs submarine. The Soviets have at least experimented with all of these.

The Soviets apparently consider the combination of aircraft, helicopters, surface ships, and submarines to be the most effective ASW force. Helicopters have been largely restricted to operating from land bases in the past, but with the deployment of Moskva in late 1968 the ASW helicopter force was able to put to sea.

The Moskva has been deployed in combination with two or more major ASW surface units, helicopters, shore-based ASW patrol aircraft, and possibly several submarines for coordinated ASW operations. Although this group has operated only in the Mediterranean and the Black Sea, similar forces may deploy to the Norwegian Sea and in the approaches to the Sea of Japan when additional helicopter carriers become available. (Only two Moskva-class ships have been built, but additional units may be laid down in a year or two when performance of the first two units has been fully evaluated.)

The emphasis on developing capabilities and tactics to counter the Polaris threat has been evident for some time. Soviet naval statements continue to reflect concern, and current ASW operations point to efforts to develop a capability to counter Polaris units in their present launch zones in the Norwegian Sea, the Mediterranean, and the northwest Pacific Ocean:

--In the Norwegian Sea, the Soviets are more frequently operating their submarines and surface units and also are starting to use land-based patrol aircraft over these waters.

--In the Mediterranean,

They apparently operate in pairs and employ lying-in-wait tactics in key areas such as the narrow waters of the Straits of Gibraltar and Sicily. F- and W-class diesel submarines and possibly N-class nuclear units have performed in this way.

--In the Pacific, Soviet submarines frequently operate in the large area extending from the Japanese Islands to Guam,

Although ASW operations in the potential Polaris launch zones have apparently been given a high priority, there is evidence that Soviet plans also include strikes against the Polaris bases using the G-II and H-II class submarines equipped with 650-nm ballistic missiles. Over the past two years or so these submarines have not operated in patrol areas threatening the continental United States, but have deployed in areas where their missiles could reach the overseas Polaris bases at Rota and Holy Loch (but not Guam).

Continuous surveillance of all three overseas bases--as well as the one at Charleston, South Carolina--is maintained by Soviet intelligence collection ships (AGIs), and the Soviets have used AGIs and submarines in attempts to trail Polaris submarines leaving port en route to patrol stations. Soviet ships have also used harassment tactics--such as crossing the bow of a submarine at close range--against Polaris units entering and leaving port.

The location of most Soviet naval bases forces Soviet ships to move along vulnerable transit routes through narrow seas to reach operating zones. Soviet ASW forces must counter opposing submarines along these transit routes in order to free Soviet units for distant missions. In 1968, the Soviets took some steps to protect their units

in transit from Northern Fleet bases past the Greenland-Iceland-United Kingdom gap by establishing two new diesel submarine patrol areas in the Norwegian Sea and its approaches. Units on these stations are in position to evaluate the feasibility of countering Western submarines capable of interdicting or shadowing Soviet submarines and surface ships passing through the zone.

In local fleet areas, much of the naval training is devoted to ASW operations.

D. Future ASW Capabilities

Improvement in ASW capabilities is a slow and costly process, but positive indications of recent Soviet progress are unmistakable.

Data on two of the new classes of submarine indicate they will be faster, quieter, and deeper diving than older classes. We expect a long-range ASW weapon in the attack submarine force within a year or two as a parallel development to the ASROC-type weapon now deployed in the Moskva. One or more of the new classes--perhaps the V class because of its speed--are probably intended to trail Western nuclear submarines by using active sonar.

Surface forces and air units will probably show similar improvements in ASW as the new classes of combatants become operational and as advanced sonar and magnetic anomaly detection techniques are perfected or improved with future training.

New fixed hydroacoustic detection systems will begin to support the ASW forces when the system installed off Kamchatka and the Kurils becomes operational, probably in a year or two.

By 1975, we believe Soviet ASW forces will have some capability to detect nuclear submarines, including Polaris units, in areas where Soviet ASW forces can be concentrated. The probability of such detection will be greatest in the vicinity of narrow or restricted passages or in areas of the Mediterranean Sea. In larger areas where submarines can operate more freely, detection will continue to be difficult.

III. Capabilities Against Carrier Task Forces and Sea Lines of Communication

The main task of the Soviet navy in the immediate postwar period was the interdiction of sea lines of communication. The war at sea during World War II provided Soviet naval planners with insights into the importance of sea lines to the maritime nations--and into the effectiveness of submarines against them. Early Soviet postwar growth in submarine and surface forces was aimed in large part at meeting the naval responsibilities for interdiction.

When the US attack carrier became capable of launching nuclear strikes on the USSR, naval defense against the carrier assumed primary importance. This new task was a special application of the interdiction mission, and required a variety of new weapon systems. The delivery of these weapon systems to the navy in the late Fifties and early Sixties gave the Soviets a capability which they believe can fulfill this task.

A. Defense Against Carriers

The Soviet navy has relied heavily upon cruise missile submarines and aircraft as the principal defense against carrier attacks. The Soviets have discussed the specific means to carry out this naval responsibility in both open and classified naval writings, and annual deployments and exercises have demonstrated the application of these means.

The basic submarine weapon system for the anticarrier mission is the nuclear-powered E class equipped with 250-nm SS-N-3 cruise missiles. The E class is routinely deployed on a continuing basis, and usually one unit patrols in carrier transit zones in the mid-Atlantic, one in the western Pacific, and one is frequently in the Mediterranean. Although the E class can operate independently, the range from which it can fire its missile is increased if a forward reconnaissance

unit--submarine or aircraft--is performing target location and reporting.

The SS-N-3 submarine force is divided between Atlantic and Pacific bases in direct relation to the distribution of Western attack carriers. Long-range TU-95 Bear reconnaissance aircraft, with a Drambuie data link for extended target detection, are available to operate from Soviet bases with cruise missile submarines in the northeast Atlantic and northwest Pacific.

The N-class nuclear-powered torpedo attack submarine regularly operates in conjunction with the E class. Overlapping E- and N-class patrols in the Atlantic and Mediterranean throughout 1968 and the first half of 1969 illustrate a potential pairing for anticarrier operations at times when both types are in the vicinity of Western carriers or carrier transit routes.

The diesel-powered J-class submarine also carries the SS-N-3 missile, and can probably now operate in the Atlantic and Pacific approaches to the Soviet Union. A J class which limped back to home base on the surface from a Mediterranean patrol in 1966 was the only unit of this class deployed outside the Norwegian Sea before this spring, but exercises in the Norwegian Sea in 1968 and a Mediterranean patrol in 1969 indicate this class is now ready for reliable operational use--about seven years after the first unit joined the fleet.

Long-range naval aircraft, and occasionally Soviet Long Range Aviation units, are employed in reconnaissance and attack roles against carriers and other surface ships. The chief weapons of attack are the AS-2 and AS-5 air-to-surface missiles, which have ranges of about 100 nm.

Soviet nuclear- and diesel-powered torpedo attack submarines have a short-range anticarrier capability and employed in large numbers they are a

threat to carriers and other surface units, but they lack the standoff capability of the cruise missile units. Deployments are routine in the Mediterranean and frequent in the Norwegian Sea during exercises and crisis periods, such as the August 1968 invasion of Czechoslovakia.

Soviet cruise missile surface ships of the Kresta, Kynda, and Kildin classes have the ability, given effective reconnaissance, to attack major surface ships. These ships have lost their primary role as an anticarrier force to the submarines, however, and their missiles are now intended primarily to provide antiship defenses for surface forces.

Major fleet exercises in both oceans continue to feature the anticarrier theme as a central element, and the large-scale "Sever" maneuvers of July 1968 included E-, J-, and N-class submarines, aircraft, and surface forces in anticarrier roles.

B. Interdiction of Sea Lines

Interdiction of Western sea lines of communication--particularly those in the Atlantic between North America and Western Europe--remains a major mission of the Soviet navy. The forces and measures developed for the destruction of the carrier are also effective in a general interdiction role, and torpedo attack submarines are particularly suited for this role.

C. Future Capabilities

The Soviets are taking steps to extend the effective operating range of their anticarrier and interdiction forces, especially the submarines.

Of the five new classes of attack submarines to appear since 1966, three--C, V, and 402-J--are likely to operate in the open ocean. At least one of these, the C class, is fitted with a new weapon system. This system may be a short-range, submerged-launch cruise missile of the type noted under development in the Black Sea during the

early Sixties. Such a system would be particularly effective against carriers and other surface ships because the submarine would not have to surface to fire and would gain a standoff capability, possibly up to about 35 nm. The three classes will carry torpedoes and by the mid-Seventies will probably more than double the antiship capability operating in the open ocean.

The attack submarine force will probably decrease in number in the late Seventies as the large force of medium-range diesel-powered submarines is retired. The qualitative improvement provided by the new nuclear units will far outweigh this numerical decline and will contribute to a net increase in capability.

Nuclear submarines can be kept on station far longer than their normal unreplenished patrols of about 60 days by the use of long-range surface support ships. This support concept was tested successfully in the mid-Atlantic in 1967, the Indian Ocean in 1968, the Caribbean in 1969, and probably will be used with increasing frequency in the next several years. With both afloat and shore support available, diesel-powered units regularly make six-month patrols in the Mediterranean.

New and improved missiles will probably be deployed to increase antiship capabilities.

Osa-class guided missile patrol boats are being equipped with launchers smaller than those formerly carried, evidently for a modified SS-N-2 short-range cruise missile. Another type of short-range naval cruise missile, probably with a solid-propellant sustainer motor, is believed to be in production but its specific application is uncertain.

IV. Soviet "Forward Posture" Capabilities

Soviet naval general purpose forces are being used increasingly in out-of-area deployments. Initial efforts began in the Mediterranean and are now expanding to include the Indian Ocean and the Atlantic.

Such naval operations are increasing in scope, probably in part to improve the navy's capabilities to counter strategic attack by Western carriers and missile submarines and in part because of the potential value of the navy for supporting Soviet foreign policy. Through these deployments, the Soviets probably hope to create an image consistent with that of great power status.

Forward deployment can be considered in three general categories: the sustained deployment of a combat-capable fleet such as has been maintained in the Mediterranean; a "show the flag" naval presence; and a force capable of projecting significant power ashore by means of amphibious assault.

A. Combat Forces

Since the mid-Fifties, large annual exercises have been held in the North Atlantic and smaller exercises in the Pacific. Initial efforts to deploy large naval combat forces on a continuing basis began in the Mediterranean after 1963.

From a few surface ships and submarines in 1964, the Soviet Mediterranean Squadron has grown to become the largest naval force which the Soviets have regularly maintained outside their four traditional fleet operating areas. The squadron usually consists of four to six major surface combatant ships, some minor combatants, a few amphibious units, six to ten submarines, and at least ten auxiliary ships. Although the size of the squadron has at times declined to about 20, it has reached a peak strength of over 50 ships. The squadron is not expected to increase in average size during the mid-Seventies

but its antiship and ASW capabilities will improve as new types of ships and submarines operate with it.

The North Atlantic and North Pacific, along with the Mediterranean, represent the areas of greatest strategic naval interest to the USSR. Soviet submarine operations in these areas began sporadically in the mid-Fifties and became continuous about 1963. Since then, deployments have grown steadily in numbers of both submarines and surface ships and length of time at sea.

Surface forces deployed in these areas are more distant from Soviet bases than those deployed in the Mediterranean and present greater difficulties in continuously maintaining large forces. An initial experiment was undertaken during 1968 with the six-month deployment of a combat force to a region between the United Kingdom and Iceland.

The new submarines and large combatants will substantially increase the force of long-range, combat-effective units. As these units enter the Soviet fleet, deployments in each area will probably grow in size and duration, and may become continuous. By 1975, the North Atlantic squadron could approach the size of the Mediterranean squadron.

B. Naval Presence

Soviet naval activity in the Indian Ocean is probably aimed primarily at influencing foreign policy with an accepted Soviet presence in an area where Western forces are drawn thin. The Soviets have deployed small naval task groups of surface combatants and submarines there in the past two years. The most notable was the cruise to Indian Ocean ports in 1968 by the commander in chief of the Soviet Pacific fleet.

With the decline of British power east of Suez, the Soviets will probably establish a semi-permanent Indian Ocean force to advance their political and military objectives there. By 1975 we expect that deployments in the Indian Ocean will have become routine. Because potential naval opposition in the area is weak, this naval force need not be large to have impact. The typical Indian Ocean force might be composed of one or two major combatants, a division of escorts, a few submarines, and a small support group.

Deployment on a regular basis will probably depend on the acquisition of the right to use local base facilities. Soviet efforts to acquire distant land-based support have been directed toward use of local facilities, often improved with Soviet assistance, rather than development of wholly-Soviet forward bases. This pattern is expected to continue.

The Soviet navy first showed interest in the South Atlantic in 1967 when a submarine support group operated near Cape Verde for about six months. The submarines were in position to operate in major shipping lanes and to intercept US naval forces en route to the Mediterranean.

Although this activity has not been followed by other deployments in the same region, Soviet interest will probably continue. By 1975, we believe that intermittent deployments will be made to the west coast of Africa and to South America. These operations may develop into continuous deployments in the eastern portions of the South Atlantic if forward land-based support can be obtained on the west coast of Africa or at bases in the western Mediterranean such as Mers el Kebir in Algeria. These deployments are likely to be designed primarily to provide support for submarines.

Until 1965 the Soviet navy maintained a strong influence in Southeast Asia through its close relationship with Indonesia. Since the deterioration of

these relations, naval activity in the area has been limited to transits between the Pacific and Indian Oceans. Through 1976, Soviet naval interest will probably be maintained primarily through occasional or sporadic deployments.

Of the Caribbean countries, Cuba has by far the greatest potential and capability as a base for Soviet naval operations. Since an apparent intent to support submarine operations in the area at the time of the missile crisis in the fall of 1962, the USSR has not attempted to use Cuba as a naval base, however.

Cuba was visited by a small force of Soviet naval units in July 1969, and such visits may become periodic as a means of intruding visibly in a US sphere of influence.

Soviet military assistance has been the means of establishing an initial naval "presence" in a number of areas in the underdeveloped world. Major recipients--apart from Warsaw Pact countries and Communist China--have been Cuba, Indonesia, India, and some Arab countries.

Change from a supplier relationship to more active naval presence has been slow to develop. In the case of the UAR, although large-scale assistance had been provided for some 15 years it took the Middle East war of June 1967 to open the way for the Soviets to obtain the use of base facilities there.

Barring unforeseen political circumstances that can be exploited by the USSR, the most likely areas for continuing Soviet efforts to develop a limited form of base rights are in the western Mediterranean and in India.

C. Intervention

Establishment of a naval presence or "forward posture" combat force provides a potential for

Soviet intervention in local crises. Under some circumstances, mere naval presence might advance Soviet political objectives. In other situations a local crisis might present an opportunity for Soviet combatant ships to reach the scene ahead of Western forces.

Present Soviet amphibious forces are small and are maintained to support ground and air operations in waters peripheral to the USSR and to help secure key access routes controlling the Baltic and Black Seas. These forces are not equipped nor do they have the support necessary for use in more distant areas against opposition. Although a token force of naval infantry in landing ships has been maintained in the Mediterranean since June 1967, its presence is probably primarily for political effect. Soviet amphibious forces and naval infantry are expanding only slowly, and have shown no indications of being developed into a force for long-range operations against significant opposition.

D. Afloat Support for Distant Operations

Key to the Soviets' capabilities for sustained distant operations is the provision of afloat logistic and maintenance support for the fleet. The general purpose submarine force generally has been adequately equipped with support ships to meet operational requirements, and no major deficiencies are evident. Extensive shore facilities have been established in the USSR to support the submarine force, and afloat support serves as a mobile backup to the shore facilities and for dispersal purposes. Restrictions on submarine operations appear to result mainly from the limits of crew endurance and from the operating characteristics of the submarines.

The deployment of a group of surface support ships to the Cape Verde and equatorial Atlantic Ocean areas for about six months in 1967 remains the most impressive single development in submarine afloat support techniques. This Atlantic submarine support

group consisted of a submarine tender, a missile support ship, an intelligence collector, a hydrographic ship, an oiler, and a tanker. On six occasions Northern Fleet submarines were observed with this group, and the force supported E- and F-class submarines and possibly an N class. One E-class submarine was associated with the group during the six-month deployment.

This logistic support experiment probably was a feasibility test. No further tests on a similar scale have been noted, but if adopted, such afloat support techniques would extend the length of time at sea and the operating areas of out-of-area submarines. The technique could also reduce the number of units required for a given level of deployment.

Surface forces, in contrast, have operational limitations because of inadequate afloat support. Very little repair or resupply capability is available, thus limiting the size of a force that can be deployed at a distance from the USSR and the length of time such a force can maintain a combat capability.

The logistic deficiencies largely are the result of the neglect of auxiliary and support fleets during Khrushchev's rule. The effect of such deficiencies has been intensified by the rapid and continuing increase in Soviet naval out-of-area operations since 1963. Some efforts are being devoted to producing new logistic support ships, but the deficiencies will not be overcome quickly.

The Soviets may have a development program for logistic support ships with increased speed, cargo capacity, and underway replenishment capability. An unidentified type of large ship now under construction in [redacted] could be the first of a series of new support ships for supply of widely dispersed fleets and bases.

At least until the new logistic ships are available in quantity, the Soviets probably will

continue to press for the use of base facilities, such as Alexandria and Port Said for the Mediterranean Squadron. The Soviets may be negotiating for similar base rights in other areas, such as the Indian Ocean.

The Soviets' biggest effort so far in distant operations--the Mediterranean Squadron--is provided with afloat support by submarine tenders, oilers, water carriers, repair ships, and rescue ships, usually operating from fleet anchorages or Arab ports. Merchant fleet tankers have unloaded at the Port Said naval oil storage depot and have on occasion also supplied oil directly to fleet units.

V. East European Naval Forces

The small East European Warsaw Pact navies, especially those of East Germany and Poland, are adopting improved tactics and expanding their capabilities through training. They remain subordinate to the Soviet navy, and combined exercises held during the past few years have stressed coordination of the East European naval forces with the Soviet fleets.

The primary responsibilities of the Polish and East German navies include defending the Baltic and aiding Soviet forces to seize and maintain control of the Baltic exits. Their secondary responsibilities are submarine and antisubmarine warfare.

East German forces, supported by Soviet patrol craft, form the first line of defense in the Baltic. The Polish navy is operating submarines in the open sea more often and for longer periods. Two Polish submarines which visited the Barents Sea area in 1968 participated in an ASW exercise with elements of the Soviet Northern Fleet, and Polish submarines also have carried out patrols west of the United Kingdom. Poland also has an amphibious force of some 40 ships and small craft, and all indications point to its steady growth.

The Soviets in the Polish port of Swinoujscie will probably withdraw in 1970, leaving no Soviet naval commands or naval logistics centers in Poland. Polish naval strength is being built up at the port to compensate for the Soviets' departure.

Romanian and Bulgarian navies participate in patrol, minesweeping, and logistic functions in the Black Sea, but the bulk of the Warsaw Pact strength there is provided by the Soviet fleet. Last June the Bulgarian navy did assist the Soviets in the surveillance of US ships in the Black Sea, marking the first such operation by an East European nation, but the presence of the Bulgarian ships was probably for political purposes and not necessary to the shadowing operation, which the Soviets have conducted successfully by themselves many times.

East European Warsaw Pact naval forces have a small air arm made up of Polish IL-28 Beagle jet light bombers. These aircraft are used primarily for reconnaissance in support of pact naval forces in the Baltic, but do have a limited capability for attacking surface ships.

East European shipyards are currently producing more military equipment for the USSR than East European navies are receiving from the Soviets. For example, in 1968 Poland received one fast guided missile patrol boat from the USSR, and East Germany received one torpedo boat. In the same year, four of the eight Polnocny-class landing ships and all nine research ships built in Poland were delivered to the USSR. East Germany is building a class of medium minesweepers for its own use, and several salvage lifting ships for the USSR.

The clarification of command relationships remains a problem within the Warsaw Pact. Extensive reporting in the Polish, East German, and Soviet news media stressed the equality among the navies taking part in the Baltic portion of the "Sever" exercise in mid-1968, but a more equal sharing of command responsibility apparently did not follow. The March 1969 Warsaw Pact summit meeting resulted in agreements to modify the pact's command structure and approved "new regulations on combined armed forces and combined commands," but in spite of this, there has been little reduction in the firm Soviet control of pact naval forces, suggesting that no major change can be expected.

ANNEX

Warsaw Pact General Purpose Naval Forces

This annex briefly discusses the current strengths of the major elements of the Soviet general purpose naval forces--general purpose submarines, major surface ships, and naval aviation--and projects force levels through 1979. Details are presented in three tables following the text. The fourth table, on page 31, gives the current strengths of the naval forces of the East European Warsaw Pact countries.

Submarines

The Soviet navy has about 60 cruise missile submarines and 250 attack submarines in active operational status. The cruise missile submarines are divided about equally between nuclear-powered and diesel-powered units. The attack submarine force includes 226 diesel-powered submarines and 22 nuclear-powered units, a ratio of about ten to one.

Almost all of the modern long-range submarines are assigned to the Northern and Pacific Fleets, with about 80 of the older medium-range attack and converted missile-launching units assigned to the Baltic and Black Sea Fleets.

Cruise missile submarine strength is expected to remain stable for the next couple of years. By the mid-Seventies, phaseout of the converted W-class diesel-powered units is expected to reduce the force by 12 units.

Most of the five new classes of attack submarine are expected to be produced in quantity, with total output exceeding 100 submarines over the next decade.

The number of diesel-powered attack submarines is expected to decline from 226 at present to approximately 100 in 1975 and to about 50 in 1979 (see Table 1, page 28).

Surface Forces

The Soviet surface combatant force of cruisers, destroyers, and escorts totals 216 operational ships. Of these about 20 percent are fitted with missiles. The missile force numbers 44 ships, including the two helicopter carriers--24 with surface-to-air missiles (SAMs) alone, 11 with antiship missiles (SSMs) alone, and 9 with both. All-gun ships include 11 cruisers, 55 destroyers, and 106 escorts.

The entire force was completed after 1948. Missile units began entering the fleets in 1958, and no nonmissile cruiser or destroyer has been built since.

In the mid-Seventies the total force will be about the same size as it is now, but the percentage of operational missile ships will have increased to an estimated 40 to 45 percent in 1975. Of these, nearly all will carry SAMs alone or in combination with SSMs. We estimate that the all-gun force will consist of three to five cruisers (depending on the number of SAM conversions of Sverdlov-class cruisers), 23 destroyers, and 93 escorts. About 90 percent of the major surface ships will still be under 20 years old. (See Table 2, page 29.)

Current production and conversion programs for major surface combatants emphasize ASW and air defense capabilities at the expense of antiship cruise missile capabilities. SAMs are added in the Kotlin and Kanin conversions, Kresta carries SAMs, and the two new classes now under construction may also be equipped with SAMs.

Naval Aviation

The Soviet naval air forces presently have about 950 combat aircraft distributed among the four fleet areas. Roughly two-thirds are bombers and air-to-surface missile carriers assigned to reconnoiter or attack surface targets. ASW aircraft, including both helicopters and fixed-wing airplanes, make up the other one-third of the force.

No major changes in the size of the Soviet Naval Air Force (SNAF) TU-16 Badger force occurred during the past year, although the AS-5 Kelt is believed to have replaced all or virtually all of the AS-1 Kennel missiles previously deployed and has also been deployed with one regiment previously equipped with the AS-2 Kipper. Earlier it was believed that one regiment still equipped with the bomber version of the TU-16 might be converting to the AS-5 system, but this has not as yet taken place.

Totals for the TU-16 force include about six reconnaissance aircraft based in the UAR in support of the Soviet Mediterranean Squadron. These aircraft carry UAR markings, but are operated by SNAF crews under direct Soviet control.

Other SNAF bomber forces include two regiments of IL-28 Beagle light bombers assigned to the Baltic Fleet Air Force. These aircraft are used for various reconnaissance and light strike missions, including some ASW operations.

The SNAF received a few TU-22 Blinder medium bombers during the past year. These aircraft are assigned to two regiments in the Baltic and the Black Sea Fleet Air Forces. There has been no indication of the assignment of TU-22s to the Northern Fleet or the Pacific Ocean Fleet Air Forces.

There is no evidence that either of the SNAF TU-22 units has received the AS-4 Kitchen missile. Both units continue to perform reconnaissance missions, including some overflights of NATO surface forces, and to engage in practice bombing activity.

Production of the reconnaissance variant of the TU-95 Bear continues at a rate of about one a month. These aircraft are deployed only with the Northern Fleet and Pacific Ocean Fleet Air Forces.

The SNAF also receives some support from Long Range Aviation (LRA) for operations against surface

forces. LRA aircraft continue to engage in reconnaissance missions directed against NATO (primarily US) surface forces, and LRA also participates in some joint exercises. Although this is only a secondary mission for LRA, which is oriented primarily to strategic attack, it is evident that the LRA is prepared to support SNAF operations if required. This support might include strikes by a few of LRA's long-range ASM-equipped TU-95 heavy bombers.

Soviet naval aviation is expected to change in the next ten years to a force about evenly divided between bomber types and ASW aircraft (see Table 3, page 30). The bomber force, which has seen relatively little change in recent years, probably will decline slowly through attrition of old aircraft. In contrast, the ASW forces are growing both in size and capability through the addition of the three new types of antisubmarine aircraft--Mail, May, and Hormone--which have entered service in the past five years.

The total number of naval combat aircraft is expected to decline from about 950 at present to about 750 by 1979, but the introduction of new electronic systems, weapons, and tactics will improve the naval air forces' overall capabilities, especially against submarines.

Table 1
Soviet General Purpose Submarines
Total Numbers, Selected Years at Midyear

	1969	1970	1971	1975	1979
Total General Purpose	313	306	300	242	224
Cruise Missile Submarines	61	61	59	51	49
Nuclear	33	33	33	33	33
E-I class *a/*	5	5	5	5	5
E-II class	28	28	28	28	28
Diesel *b/*	28	28	26	18	16
W conversion class	12 *c/*	12	10	2	0
J class	16	16	16	16	16
Attack Submarines	252	245	241	191	175
Nuclear	22	28	38	81	115
N class	15	15	15	15	15
C class *d/*	3	5	9	25	40
V class	4	6	8	19	25
402-J class *e/*	0	1	3	11	20
196-B class *e/*	0	1	3	11	15
Diesel *b/*	226	210	193	95	45
F class (long range)	45	45	45	43	33
Z class (long range)	21	21	21	5	0
R class (medium range)	14	14	14	14	12
W class (medium range) *f/*	135	120	105	30	0
Q class (short range)	11	10	8	3	0
Propulsion Unknown					
B class	4	7	10	15	15

Note: Projections reflect current production rates of existing classes and estimated rates of new classes expected in the mid-Seventies.

a. At least three E-I class submarines may be undergoing an SSGN to SSN conversion.
b. The overall reduction in diesel-powered submarines through 1979 results from projected retirements and transfers to other countries.
c. Includes seven Long Bin and five Twin-Cylinder.
d. The C-class submarine is believed to be fitted with a new weapon. It could be either an antisubmarine or an antiship weapon.
e. The propulsion systems in these classes have not been determined, but they are probably nuclear powered.
f. These figures include five radar picket conversion units (Canvas Bag).

Table 2
Soviet General Purpose Large Combatant Ships
Total Numbers, Selected Years at Midyear

	1969	1970	1971	1975	1979
Total General Purpose	244	245-247	241-243	225-237	209-23
Operational Surface Ships	216	221-223	219-221	209-221	196-22
SAM/SSM light cruisers	9	11-12	14-15	23-28	27-34
SAM light cruisers	1	2	2-3	3-5	3-5
SSM destroyers	11	9	8	2	0
SAM destroyers and escorts	21	29-30	34-35	58-63	76-89
Cruisers	11	10	9-8	5-3	2-0
Destroyers	55	48	43	23	7
Escorts	106	110	107	93	79
Helicopter cruisers	2	2	2	2-4	2-6
Reserve Surface Ships	28	24	22	16	13
Cruisers	5	4	5	5	1
SSM destroyers	0	0	0	2	4
Destroyers	13	12	11	4	3
Escorts	10	8	6	5	5

Table 3
Soviet General Purpose Naval Air Forces
Total Numbers, Selected Years at Midyear

	1969	1970	1971	1975	1979
Bomber Forces *a/*	615-665	605-675	565-645	430-515	300-390
TU-95 Bear	45-50	45-55	45-55	45-55	30-45
TU-16 Badger	460-490	460-490	430-470	325-390	225-290
TU-22 Blinder	60-65	60-70	60-70	60-70	45-55
IL-28 Beagle	50-60	40-60	30-50	0	0
ASW Forces *a/*	275-350	310-415	340-460	340-480	340-480
BE-6 Madge	35-25	25-15	5-10	0	0
BE-12 Mail	45-65	60-85	80-100	80-100	80-100
IL-? May	15-20	25-35	35-50	40-60	40-60
MI-4 Hound	120-140	110-140	100-130	20-40	0
KA-25 Hormone	60-100	90-140	120-170	200-280	220-320

a. About 15 TU-16 Badgers also are used in the ASW role, and some IL-28 Beagles have a limited ASW function.

Table 4
Eastern European Naval Strength at Midyear 1969

	Baltic Sea Area		Black Sea Area	
	East Germany	Poland	Bulgaria	Romania
Destroyer types	3	3	2	
Submarines		7	2	
Guided missile patrol boats	12	12		5
Motor torpedo boats	66	28	8	13
Submarine chasers	26	8	8	3
Miscellaneous patrol boats	60			3
Fleet minesweepers	19	24	2	4
Small minesweepers	28	35	18	28
Amphibious ships	6	21		
Amphibious craft	12	23	11	8
Total	232	161	51	64

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20 August 1969

MEMORANDUM FOR: Director of National Estimates

SUBJECT : Part I of OSR Contribution to NIE 11-14-69

Attached are three copies of Part I of OSR's contribution to NIE 11-14-69, "Soviet and East European General Purpose Forces." It covers naval and naval aviation general purpose forces of the USSR and its Warsaw Pact allies. Part II, covering general purpose ground and air forces, will be forwarded later. Copies are being sent to the other USIB agencies participating in the estimate.

[redacted]
Acting Director
Strategic Research

Attachment:
SR SP 69-10, Cys 5, 6, 7

[redacted]
Copy No. 5

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