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NATIONAL INTELLIGENCE ESTIMATE

The Uses of Soviet Military Power in Distant Areas
Annexes A through I

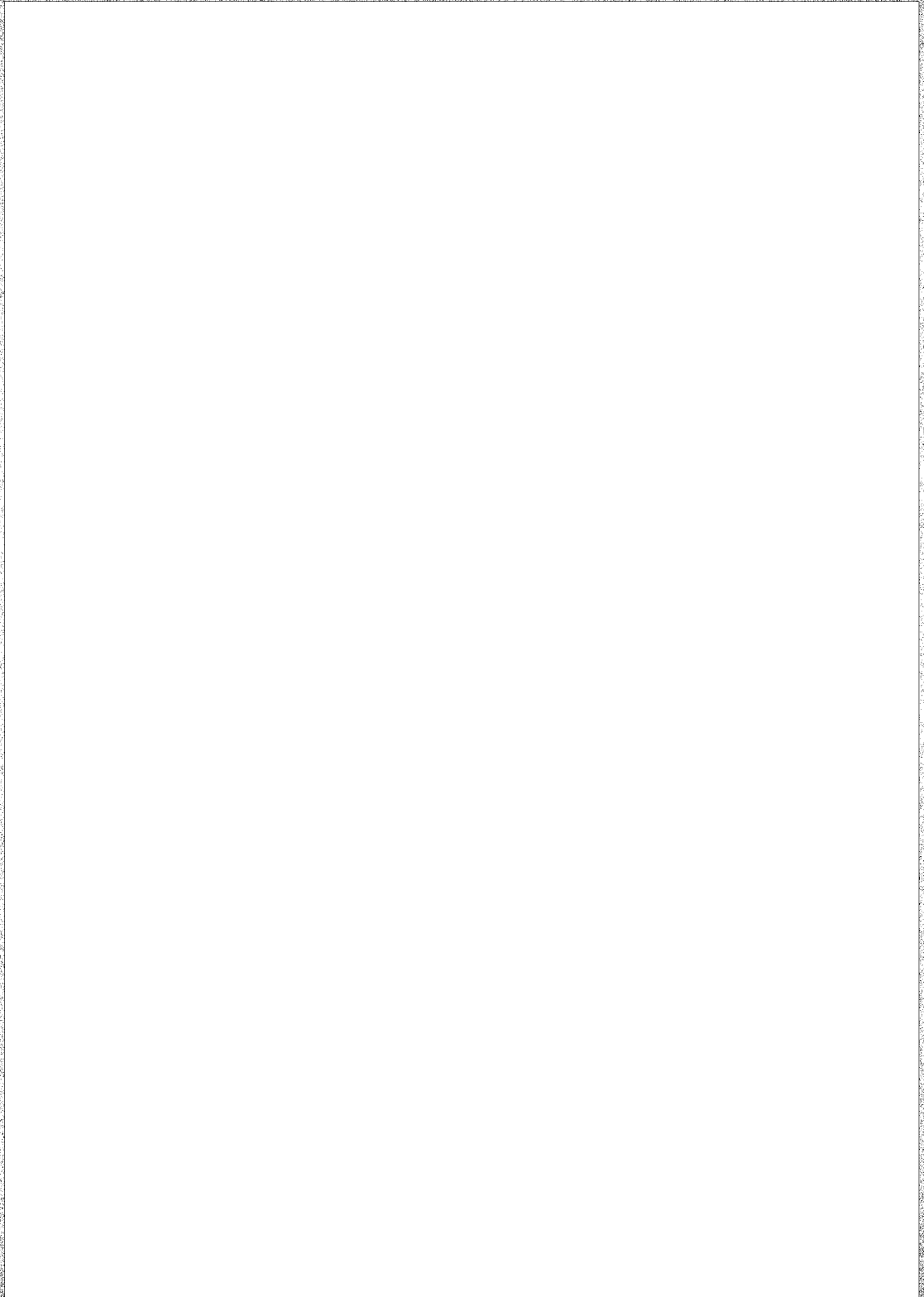
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ANNEX A

SOVIET SHIP DAYS ON DISTANT STATION

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SOVIET SHIP DAYS ON DISTANT STATION

GENERAL

1. In 1964 the Soviets began deployments into distant areas on a continuous basis by establishing a permanent naval presence in the Mediterranean Sea. Prior to that time Soviet naval combatants and associated units limited their activity in the area to occasional, non-continuous patrol activity.

2. During the period 1965-1970, the level of Soviet deployed operations, as measured in total ship days on distant station,¹ increased almost five times (see Table I). A substantial part of this time is for strategic purposes, not related to the Third World. Comparatively, of

¹Total ship days on distant station represent the cumulative total of days, excluding transit time, that all ships spend outside home waters.

course, the total number of Soviet ship days remains a small fraction of US total ship days.

3. Soviet distant area activity is still concentrated predominantly in the Mediterranean where, in 1970, one-half of their total ship days took place. Total ship days for Soviet naval forces in the Mediterranean have shown steady growth from 4,000 in 1965 to 17,700 exceeding those of the US in 1970. In the Indian Ocean, the number of ship days has grown from 1,100 in 1968 to 2,800 in 1970, exceeding the level of US activity in that area. Soviet ship days in the Pacific Ocean have increased from 915 in 1965 to 4,860 in 1970. In the Atlantic (including the Caribbean) Soviet ship days have grown from 1,150 in 1965 to 8,900 in 1970, partly as a result of the increased deployments to Cuba by naval combatants and submarines since 1969.

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TABLE I
COMPARISON OF UNITED STATES VS.
SOVIET DEPLOYED OPERATIONS 1965-1970
CUMULATIVE SHIP DAYS ^a

	USSR ^b					
	1965	1966	1967	1968	1969	1970
Pacific	915	1,220	1,875	2,567	3,252	4,859
Atlantic	1,150	2,320	3,784	4,334	6,650	8,306
Caribbean	0	0	0	0	254	605
Mediterranean	4,007	4,314	8,663	12,157	14,092	17,669
Indian Ocean	0	0	0	1,106	2,095	2,800
TOTAL	6,072	7,854	14,322	20,164	26,343	34,239

	UNITED STATES ^c					
	1965	1966	1967	1968	1969	1970
Pacific ^d	54,190	66,742	74,686	77,608	62,419	49,373
Atlantic ^e	36,179	36,083	36,854	37,432	35,022	30,383
Mediterranean	18,011	18,711	18,197	17,773	18,883	16,714
Indian Ocean	1,095	1,095	1,095	1,095	1,095	1,200
TOTAL	109,475	122,631	130,832	133,908	117,419	97,670

^a Deployed operations do not include ship days in normal operating areas as follows: USSR; Barents Sea, Baltic Sea, Black Sea, Sea of Japan, Sea of Okhotsk and Kamchatka areas. US; Western Atlantic, Gulf of Mexico, Eastern Pacific and Hawaiian Islands operating areas.

^b Excluding hydrographic, oceanographic, space support and SSB/SSBN operations.

^c Excluding SSBN operations.

^d Figures are provided for trend purposes only and are not comparative with those of the USSR due to heavy US Navy commitment in the Vietnam conflict.

^e Provisional figures based on preliminary data, including Caribbean operations.

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ANNEX B

PATTERN OF SOVIET NAVAL PORT VISITS

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PATTERN OF SOVIET NAVAL PORT VISITS

1. Since 1967, there has been a steady increase in the number of port visits in foreign countries by Soviet naval-subordinated ships. (See Table I, "Pattern of Soviet Naval Port Visits" and map of "Soviet Naval Port Visits", following.) These visits reflect traditional concerns of great power navies. In 1961, 2 Soviet ships made 1 port visit. In 1967, the Soviet Navy made 45 port visits with 106 ships, and in 1970 there were 481 port visits by 784 ships. There has been a corresponding increase in the geographic areas visited by the Soviets and consequently in the number of countries involved. In comparison, during 1970 the US Navy visited about 340 ports with more than 4,000 ships. US Navy port visits have traditionally been world-wide.

2. The chief areas of increased port visits have been in the Mediterranean, in the Atlantic, and in the Indian Ocean. Following the establishment of the Soviet Mediterranean

Squadron in 1964, visits to countries in this area increased from 39 by 97 ships in 1967 to 337 by 589 ships in 1970.

3. In the Indian Ocean area, a similar pattern of port visits is apparent. In 1967, Soviet naval port visits consisted of 2 visits by 2 ships; in 1970, 36 port visits by 61 ships were undertaken. The Soviets have established a small Indian Ocean force.

4. In the Atlantic Ocean area the past 2 years have shown an increasing number of port visits. This area had a total of 11 visits by 31 ships in 1969. In 1970, port visits increased to 94 by 120 ships. In this area, Cuba is of major interest.

5. There also has been a comparatively low number of visits in the Pacific area. The majority of these have been by units conducting hydrographic operations or supporting combatants in the Indian Ocean.

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Pattern of Soviet Naval Port Visits

Ships / Visits	1961	1962	1963	1964	196	1967	1968	1969	1970	1971*
Pacific Ocean						3 / 2	1 / 1	4 / 4	14 / 14	3 / 3
Mediterranean Sea	2 / 1	3 / 3		2 / 1	11 / 5	27 / 6	97 / 36	206 / 139	576 / 245	589 / 337
Atlantic Ocean**			2 / 2			1 / 1	4 / 2		31 / 11	120 / 94
Indian Ocean			3 / 3		-1 / 1	1 / 1	2 / 2	42 / 18	68 / 40	61 / 36
Total Ships / Visits	2 / 1	3 / 3	5 / 5	2 / 1	12 / 6	29 / 8	106 / 45	249 / 158	679 / 300	784 / 481

*Data as of July 1971

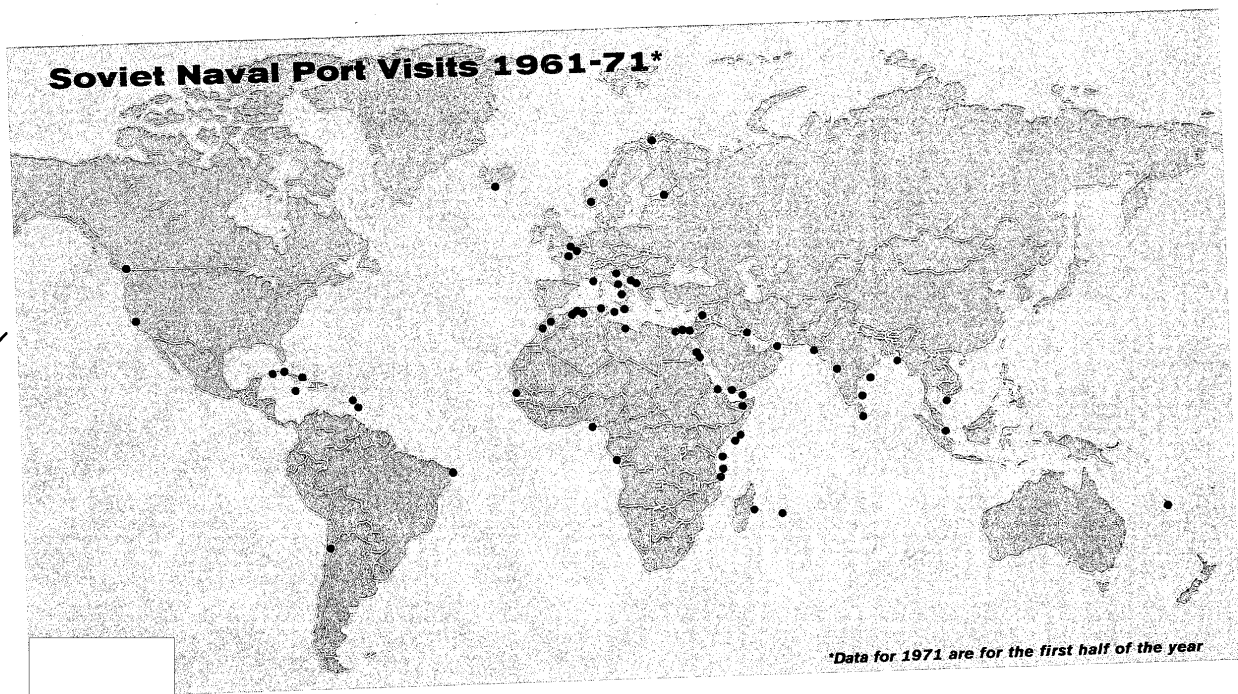
**Includes West Europe, West Africa, and South America

Soviet Naval Port Visits 1961-1971

Atlantic Ocean 152		Mediterranean Sea 972		Indian Ocean 110		Pacific Ocean 24	
Cuba 42	Barbados 2	Egypt 867	Somalia 21	Iran 4	Singapore 20		
Canary Islands 25	Equatorial Guinea 2	Syria 44	Yemen (Aden) 15	Kenya 3	Cambodia 1		
Uruguay 13	Finland 2	Algeria 28	Mauritius 14	Maldives Islands 3	Canada 1		
Senegal 13	Iceland 2	Italy 16	Ceylon 11	Tanzania 3	New Caledonia 1		
Morocco 12	Sierra Leone 2	Yugoslavia 16	India 8	Egypt 2	United States 1		
United Kingdom 9	Gambia 1	Libya 1	Ethiopia 6	Kuwait 1			
Guinea 7	Jamaica 1		Iraq 5	Madagascar 1			
St. Helena 5	Liberia 1		Yemen (Sana) 6	Sudan 1			
Ivory Coast 4	Martinique 1		Pakistan 5				
Norway 4	Nigeria 1						
France 3							

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ANNEX C

SOVIET ACTIVITIES IN THE MEDITERRANEAN

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SOVIET ACTIVITIES IN THE MEDITERRANEAN

I. GENERAL

1. The Mediterranean, especially the eastern Mediterranean, is the Third World area wherein the Soviets enjoy their greatest prestige and influence. This influence is a product of their diplomacy, trade, military and economic aid, military advisors, in some cases, the stationing of combat personnel in the area, and their Mediterranean Squadron.

2. The Mediterranean Squadron ¹ has grown to be the largest and most powerful force of ships and aircraft the Soviets have ever deployed outside their own waters for purposes other than a major exercise. Fleet Admiral Gorshkov, commander-in-chief of the Soviet Navy, stated in 1963 that the Soviet Navy was to be capable of "carrying out missions assigned to it, . . . as well as supporting state interests at sea in peacetime." The Navy, in short, in addition to its traditional defense-oriented missions, was to become an instrument for projecting Soviet power and influence abroad in peacetime.

3. The most visible example of the use of Soviet naval forces to support its foreign policy objectives in distant areas can be seen in the Mediterranean. Its importance is reflected in

¹ The Soviets identify their naval forces in the Mediterranean as the Fifth *Eskadra* (Squadron); however, it contains many more types and numbers of ships than does the US naval organization designated a squadron. The US Sixth Fleet and the Soviet Mediterranean Squadron contain a similar number of ships though differing in composition.

its designation as an independent command subordinate to Naval Headquarters, Moscow, rather than to the nearest fleet headquarters. Furthermore, it offers the Soviet Navy experience in peacetime in exercising against the most powerful forces of the US fleet, including aircraft carriers and missile submarines, in a conveniently small area.

II. MISSIONS

4. The primary mission of the naval Squadron is to provide strategic defense of the Soviet Union in the event of general war by countering aircraft carriers and ballistic missile submarines. In peacetime, its objectives are to collect intelligence on NATO and Israeli forces, to serve as a constraint on the political and military options of other countries, and to demonstrate support for their friends. In crisis situations, the Squadron may also be required to provide a limited intervention force. In support of these missions, Soviet intelligence ships, missile-equipped surface combatants, and submarines regularly maintain surveillance of choke points such as the Strait of Gibraltar and of US aircraft carriers. Reconnaissance, antisubmarine warfare (ASW) training patrols, and probably coordinated tactical aircraft missions are being flown by Soviet aircraft based in Egypt over both the Mediterranean and the Red Sea. Soviet ships regularly engage in numerous exercises, collect intelligence, perform oceanographic research activity and visit the ports of the countries along the Mediterranean littoral.

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5. Soviet surface ships have also conducted limited combined Soviet-Arab naval operations during the past several years and made extensive use of anchorages in waters adjacent to or within the territorial waters of Arab countries. There has been a near continuous Soviet naval warship presence in Alexandria and Port Said since July 1967.

III. EVOLUTION OF THE SQUADRON

A. General

6. Attempts by the Soviets to establish and maintain a standing naval force in the Mediterranean date back to the basing of submarines and supporting tenders in Albania from 1958 to 1961. Following the political rift between Albania and the USSR most of these units were withdrawn, and Soviet naval activity in the Mediterranean decreased sharply. Deployments to the Mediterranean consisted primarily of 3 individual submarine patrols of 30 to 40 days duration in both 1962 and 1963, with no surface ship deployments except for brief transits to or from the Black Sea until June 1964. At that time the Soviets began deployment on a regular basis of 4 surface combatants and 4 diesel submarines. These forces subsequently evolved as the Fifth Squadron with a two-star admiral as senior officer but under the operational control of the Black Sea Fleet Commander.

7. The outbreak of the 1967 war spurred the growth of the Mediterranean Squadron. In addition to a numerical increase, new types such as amphibious ships and cruise-missile submarines became a part of the regular and continuing mix of forces in the Mediterranean. A naval air arm was also added. The authority of the Mediterranean Squadron Commander was strengthened, and the squadron, formerly under Black Sea Fleet control, was placed directly under Naval Headquarters, Moscow, with operational control of the Squadron in

the hands of the commander on the scene. Today's Soviet Mediterranean Squadron is a balanced force, consisting of modern surface combatants, torpedo and missile-equipped diesel and nuclear-powered submarines, amphibious and mine warfare units, auxiliaries, ASW patrol, reconnaissance and air-to-surface missile (ASM) configured aircraft.

B. Surface

8. In June 1967, just prior to the Arab-Israeli war, the Soviet surface combatant force in the Mediterranean averaged 4 ships. After the war the surface combatant force averaged 13 to 15 ships. Soviet Mediterranean surface forces in the first half of 1971 generally consisted of 15-20 surface combatants and 20-25 auxiliary ships. Surface combatants assigned to the Mediterranean Squadron are drawn primarily from the Black Sea Fleet.

9. The Soviets sent amphibious ships to the Mediterranean for the first time in the summer of 1967. Since that time two to three amphibious ships have been assigned to the Mediterranean Squadron on a nearly continuous basis.

10. There has been a gradual increase in the number of support ships (tenders, tugs, etc.) and auxiliaries (tankers, refrigerator ships, and the like) deploying to the Mediterranean. Merchant tankers and cargo ships also provide logistic support to Mediterranean Squadron units and appear to deploy to the area on an as-needed basis.

C. Intelligence Collectors

11. All Soviet ships have some intelligence collection capability. Merchant ships and auxiliaries routinely report on visits to foreign ports and on significant sightings at sea. Surface combatants have a better capability and some are equipped with specialized electronic equipment to increase their col-

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lection potential. Certain classes of Soviet auxiliaries have a specialized intelligence collection capability and function primarily as intelligence collectors; these units are designated as AGIs.

12. An operational pattern of Soviet AGI deployments to the Mediterranean was evident by the end of 1961. Since 1966 AGIs have been operating in the Mediterranean continuously. The average number of units deployed has risen from two during the 1967 Arab-Israeli war, to the current four unit deployments. The annual total of AGI ship days in the Mediterranean increased from some 120 days in 1961 to 1,275 days in 1970.

13. AGI patrol areas are normally located in the eastern Mediterranean, along the Levant coast; in the central Mediterranean near the Straits of Sicily; in the western Mediterranean in the vicinity of the Strait of Gibraltar; and in the Gulf of Cadiz near Rota. The primary mission of the AGI is to provide early warning against NATO carrier task groups, and to exploit US and NATO operations and exercises. The AGI on patrol along the Levant coast appears to be primarily tasked against Israel. The relative significance of the Levant is pointed up by the fact that this area is being patrolled by the Primorye class AGI, the latest and most sophisticated intelligence collector yet constructed by the Soviets.

D. Subsurface

14. Deployment levels for submarines followed the pattern of surface combatants prior to June 1967 in that fewer deployed during the winter than during other months. Since June 1967, the number of submarines operating in the Mediterranean has increased from 8 to a level of 10 to 12 units. This level rises during the two-week overlap in relieving units and during major exercises which at times have involved as many as 17-19 units. In

contrast to surface ships, submarines assigned to the Mediterranean are drawn primarily from the Northern Fleet.

15. The submarine force in the Mediterranean usually consists of 2 nuclear and 8 to 10 diesel units. Diesels have been deployed almost continuously since 1964. The first nuclear submarine was noted in the Mediterranean in August 1965 on a patrol lasting about 30 days. The second nuclear submarine deployed to the Mediterranean in June 1967. Also, in June 1967 a nuclear-powered E-II cruise-missile submarine made its Mediterranean debut.

16. It now appears that the Soviets are trying to maintain at least two cruise-missile submarines in the Mediterranean at all times. In addition to the E-II class submarines, C-class nuclear-powered, cruise-missile submarines² have made Mediterranean patrols since July 1969. J-class diesel-powered cruise-missile submarines also have deployed to the area.

17. The first Mediterranean patrol of the new V-class nuclear attack submarine (SSN) occurred in May of 1971. Should these units appear regularly in the Mediterranean, Soviet ASW capabilities in that area will be significantly improved.

E. Aviation

18. The Soviets deployed their first naval aircraft to Egypt in April 1968. By December 1971 the force was estimated to consist of some 30 aircraft stationed at 3 airfields: Cairo West, Aswan, and Mersa Matruh. Some 20 of the aircraft are TU-16 Badgers, 6 of which are reconnaissance, 10 are ASM-configured, and 4 are strike-support aircraft for

² The C-class submarine is armed with eight cruise missiles and is capable of firing them from beneath the surface. The C-class is believed to have a primarily anticarrier role.

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the ASM force. The original 4 BE-12 Mail ASW aircraft have been replaced in 1971 by 4 longer range IL-38 May ASW aircraft and there are 6 AN-12 Cub reconnaissance and electronic countermeasure aircraft. Although these aircraft all have Egyptian markings, they are piloted by the Soviets. The reconnaissance and ASW aircraft have for the most part operated against the US Sixth Fleet and other NATO forces.

19. The stationing of the ASM Badgers in Egypt allows the Soviets forward basing of a significant antiship capability and is directed primarily against the US Sixth Fleet in the central and eastern Mediterranean. The Soviets probably believe that this force will serve to inhibit US freedom of action in future crises in the area. Preparations to receive missile aircraft were underway at Aswan Airfield in southern Egypt in early spring of 1970. Four strike-associated aircraft arrived in April 1970. The 10 missile-configured Badgers which recently arrived at Aswan have Egyptian markings and are armed with AS-5 Kelt missiles. Thus the Soviets appear to have an ASM Badger squadron based at Aswan.

20. The Soviet fighter aircraft which have been stationed in Egypt since the spring of 1970, though having a primary air defense role in Egypt, can serve in a support role for the Mediterranean Squadron. There are no positive indications as to how they might be used in a naval-oriented role. At this time the Soviets are flying some 60-65 Fishbed Js, and possibly as many as 10 Flagon A aircraft from airfields in Egypt but the presence of the Flagon in Egypt cannot be confirmed. These fighters form part of the air defenses of Egypt and as such would be available for the defense of port facilities and airfields and the Mediterranean Squadron. At least 4 Foxbats have been deployed in a reconnaissance role.

F. Logistics

21. The Mediterranean Squadron has placed heavy demands on the Soviet naval logistics force. For purposes of refueling and resupply the Mediterranean Squadron relies primarily on naval tankers and supply ships. Under certain conditions, tankers can refuel elements of the Squadron while underway; re-arming and reprovisioning, however, are normally accomplished either at anchor or in port.

22. Since June 1967 there has been a submarine tender in the Mediterranean on an almost continuous basis. Diesel attack submarines have been given mid-patrol support extending the duration of these patrols to six months. If nuclear submarine deployments are extended and mid-patrol support is needed, ample port facilities and anchorages are available to provide necessary logistic support and routine maintenance (see Annex F, page 35).

23. A considerable amount of maintenance and repair work and other logistical support is done during in-port periods at Alexandria. Most of this support, however, is accomplished by Soviet tenders and repair ships rather than by Egyptian port facilities. The Soviets are apparently reluctant to rely on base facilities such as the fuel and lubricant storage at Port Said which has been leased from Egypt since January 1968. Although the Soviets have established shore-based naval facilities in Egypt at Alexandria, and at Mersa Matruh, they have been unable to gain permission to do so on a wider scale in other Mediterranean countries (see Annex F).

24. The withdrawal of Egyptian port facilities would force the Squadron to return to procedures of maintenance and repair at open anchorages and would degrade somewhat its capability for extended deployment, particularly for diesel submarine deployment.

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25. The Soviets are apparently reluctant to become dependent on Egyptian repair facilities for Soviet naval aircraft. Every four to six months these aircraft return to the USSR for maintenance even though the Soviets have control over air facilities at Cairo West and Aswan.

IV. OPERATIONS

26. In the process of establishing a large naval force in the Mediterranean on a permanent basis, the Soviets have made some pronounced changes in their methods of operations. Among these are: more at-sea time for major combatants; a substantial increase in the number of visits to various ports; upgrading the tempo, variety, and complexity of exercises; and an expanded use of task group and multiship operations.

27. When Soviet warships began regular deployments to the Mediterranean, the length of deployment rarely exceeded 50 days. Typical times were: cruisers-42 days, destroyers-40 days. A large percentage of this time was spent in one of the various anchorages (see Annex F) and even underway surface combatant operations were largely restricted to the eastern and central Mediterranean.

28. Currently, surface ship deployments average three to four months and diesel submarines even longer. The ratio of days actually underway to days at anchor or in port has increased substantially.

29. Since April 1968, operations by surface combatant ships into the western Mediterranean have increased steadily, lasting an average of 30 days. Although the patrol east of the Strait of Gibraltar is the only permanent one in the Mediterranean, operations of various types have been conducted in the Straits

of Sicily and the Alboran Island area near the Strait of Gibraltar. Both are important choke points.

30. Soviet intelligence ships have operated extensively throughout the Mediterranean shadowing Western fleet units and surveilling US/NATO exercises, with the greatest concentration around the Straits of Sicily, Sardinia, and the eastern Mediterranean. Soviet hydrographic units have concentrated their efforts near the Straits of Sicily and the Gibraltar area. In the Straits of Sicily the Soviets have conducted hydroacoustic surveys, possibly in support of future ASW measures, to assist in the defense of their forces that operate in these areas. Soviet amphibious ships remain almost exclusively in Port Said, with some diversions to Syrian waters and Alexandria for participation in exercises with the navies of Syria and Egypt.

31. The TU-16 Badger aircraft of the Soviet Naval Air Squadron based at Cairo West Airfield conduct almost daily reconnaissance of Western forces. These aircraft average 11 flying days per month with 2 aircraft airborne daily. The IL-38 May ASW aircraft average 1 or 2 days of operation per week, frequently in conjunction with the helicopter ships.

32. Nuclear submarines had average patrols of around a month in the Mediterranean until November 1969 when an N-class began a patrol lasting over two months and in January 1970 when an E-II remained for about 75 days. These patrols reflect a trend toward longer nuclear submarine patrols. Patrols of nuclear-powered, cruise-missile submarines such as the E-II class average over 60 days.

33. Because of limited information concerning Soviet submarine operating procedures and the difficulty in locating submarines while in the Mediterranean (especially nuclear submarines), our estimate of their operations and operating areas is based on their associations

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with surface ships sightings and assumed objectives. In the eastern Mediterranean cruise-missile submarines normally intercept carrier forces and trail them within range of their missiles. Attack submarines, when not engaged in surveillance, intelligence collection, or exercises, probably take up stations near the various Mediterranean choke points and in the central basin. Most Soviet submarine operations appear to be concentrated in the central and eastern Mediterranean.

34. The large-scale exercises held in August and September 1969, and the Mediterranean phase of Exercise OCEAN in April 1970 demonstrated the Soviets' determination to develop and maintain a well-trained and capable Squadron, especially in the eastern and central portions of the Mediterranean. In addition to antisubmarine exercises involving surface ships, submarines, helicopters, and aircraft, emphasis was placed on anticarrier operations, anti-air warfare (AAW), amphibious operations, and attack exercises.

V. CAPABILITIES

35. The variety and complexity of Soviet Mediterranean operations since August 1969 point up the level of flexibility that the Squadron has attained over a relatively short period of time. New ships, concepts and tactics have been tested in this area.

36. The most graphic demonstration of Soviet capabilities in the area has been the training and readiness exercises, covering the entire spectrum of Soviet naval warfare, which have been conducted every one or two months since February 1968. In 1970 there were seven major exercises involving missile ships, aircraft and cruise-missile submarines. Soviet AAW and ASW exercises have become complex as well as numerous since the first deployment of the helicopter ship, Moskva in September of 1968.

37. In the area of command and control the Soviets probably have the ability to: control task group operations to carry out different missions, shift operational control from on the scene commanders to fleet headquarters, shift control between commanders on the scene, coordinate naval aircraft, subsurface and surface units in the conduct of both ASW and AAW exercises. Most important of all, they have the ability to carry out coordinated missile attacks using cruise missiles launched from submarines, surface ships, and aircraft. Target acquisition can be provided by reconnaissance aircraft, and other surface ships or submarines.

38. The amphibious forces in the Soviet Mediterranean Squadron have conducted landings in the eastern Mediterranean area. This force could have a battalion sized landing team embarked (normal complement, 560 men, 10 tanks, plus armored personnel carriers and other vehicles).

39. The Soviet Mediterranean Squadron can be augmented most readily from the Black Sea Fleet's 70 major surface combatants and substantial number of minor combatants, amphibious ships, and auxiliaries. Though provisions of the Montreux Convention technically impose limitations on the freedom of warship transits through the Turkish Straits, the Soviets have circumvented these restrictions by utilizing a series of "contingency declarations."³ In effect, this practice insures flexibility in Soviet transits to reinforce its Squadron as demonstrated during the April 1970 Soviet world-wide naval Exercise OCEAN. The Mediterranean force reached an all-time high of 69 naval and naval associated ships at that time.

³ The Montreux Convention normally requires eight days notification to Turkey prior to warship transits. The Soviets, on a regular basis, declare, for contingency purposes, more ships than actually transit.

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40. During and after the hostilities in 1967 between Israel and the Arab countries, the Mediterranean Squadron was reinforced. Soviet exercise activity, however, was apparently suspended and most of their ships remained at their various anchorages while a few were engaged in shadowing Western carrier forces.

41. During the disturbances in Jordan in September 1970, there was no evidence of any Soviet effort to heavily reinforce their military posture in the Mediterranean. Naval and air activities seemed limited to the usual surveillance of the Sixth Fleet. They did, however, increase the number of cruise-missile submarines in the area during the crisis.

42. As a result of their basing in Egypt and their naval deployments, the Soviets have increased their military capabilities; specifically, they have developed a strategic defensive capability and a limited intervention capability.

43. *Strategic Defense.* The Soviets probably perceive a dual strategic problem in the Mediterranean—to protect the USSR from attack by carrier aircraft and from submarine launched ballistic missiles.

a. At this time, Soviet capabilities to attack Western naval forces are formidable. This capability is enhanced by their utilization of Egyptian basing which has extended the Mediterranean operating time of Soviet ships and submarines, and now provides protected forward airfields for reconnaissance and tactical aircraft. These airfields also give the Soviets the capability to quickly deploy additional ASM aircraft to Egypt. This combined capability of the Soviet assets in Egypt and their naval forces greatly increases the defense problem for the Sixth Fleet.

b. Soviet efforts against US Polaris submarines have not resulted in the same degree of success. Soviet forces can inhibit

Polaris operations somewhat but pose no significant threat to the survivability of the US fleet ballistic missile (FBM) force operating there at this time. Nonetheless, the Soviets continue to improve their capabilities by deploying newer classes of ships and attack submarines to the Mediterranean and by increasing the quantity and quality of their ASW aircraft based in Egypt.

VI. OUTLOOK

44. The Soviet Mediterranean Squadron will continue in its present efforts to provide an effective counter to the US Sixth Fleet and to improve their capabilities against FBM submarines. While carrying out these tasks, the Squadron will almost certainly be assigned a greater role in promoting Soviet state interests and political influence among the nations of the Mediterranean littoral.

45. Although it is likely that Soviet naval strength will continue to be concentrated in the eastern Mediterranean, increased operations west of the Sicilian Straits are anticipated. Moscow will probably seek to expand its political influence along the North African coast and will employ the Navy as one instrument in this expansion.

46. The Soviets will probably continue to expand their naval repair, air, and ASW capabilities and refine and tailor the composition and organization of their Mediterranean Squadron. The intensity of the Squadron's shadowing and surveillance operations will probably continue to be reactive to crisis situations and to the movements of Western carriers into the eastern Mediterranean. Badger tankers may be deployed to Egypt to enable Egyptian-based ASM-carrying and reconnaissance Badgers to provide full air coverage of the Mediterranean.

47. The Soviets probably see their present Mediterranean force of between 50 and 60

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ships as approaching the optimum level to fulfill their military and political requirements in the area. As such, we will probably witness only a marginal increase in the average numerical strength of the Soviet Mediterranean Squadron. Temporary increases in the numbers of Soviet units in the Mediterranean can be expected during periods of high tension, exercises, or on-station relief of deployed units.

48. Qualitative improvements to the Squadron will occur as newer and more effective units become available. No additional Moskva-class helicopter cruisers are anticipated in the near future. However, a large surface combatant has been reported to be under construction; it may have an air-associated mission. Additionally, a new guided-missile cruiser class is reported to be under construction, the first of which will become operational in a year or so. Also, the Soviets are reactivating and modernizing four previously retired cruisers. By 1975, the number of Krivak-class missile destroyers in the Soviet inventory should number about 20 and some of these will probably be deployed to the Mediterranean. Additionally, Nanuchka-class guided-missile patrol boats and Grisha-class escorts will probably be deployed to the Mediterranean on a regular basis when the evaluation programs for these new classes are completed.

49. These new classes, as well as others under construction or conversion, will pro-

gressively replace the older ships that now comprise the bulk of the Mediterranean Squadron. One result of these changes will be an increase in the proportion of missile-equipped ships, giving the Squadron improved capabilities for anticarrier and AAW. Soviet capabilities in ASW may also improve with the introduction of new and more sophisticated sensors, advanced weapons, and versatile air, surface and submarine platforms. New intelligence collectors, such as the Primorye-class, provide the Soviets with greatly improved collection capabilities against Western forces.

50. Soviet submarine strength in the Mediterranean will probably be maintained at about a dozen units. Of these, almost half will most likely be nuclear powered. Soviet nuclear-powered cruise-missile submarines will continue to have anticarrier warfare as a primary mission while nuclear-powered torpedo attack submarines will be employed primarily in anti-FBM operations.

51. While the numbers of auxiliary support vessels are not likely to increase significantly a qualitative improvement will occur as larger, fast underway replenishment ships such as the Boris Chilikin enter the fleet and as better equipment for underway replenishment is installed on older units. This should include the capability for underway transfer of solid stores which has so far not been a feature of Soviet naval activity.

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ANNEX D

INDIAN OCEAN OPERATIONS

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INDIAN OCEAN OPERATIONS

I. GENERAL

1. As in the case of the Mediterranean, Soviet naval activities in the Indian Ocean have served a number of military or quasi-military as well as political purposes since the establishment of the Indian Ocean presence in 1968. They support Soviet space and oceanographic operations, test Soviet ships and submarines in a tropical environment, and are related to efforts to improve Soviet antisubmarine warfare (ASW) techniques in an area in which Moscow may expect the US eventually to deploy nuclear ballistic missile submarines. These operations also support the Soviet Navy's efforts to gain experience in distant operations and prepare the way for the establishment of a more convenient transit route between the USSR's eastern and western fleet operating areas if and when the Suez Canal is reopened. The USSR's increased visibility in the Indian Ocean includes not only its growing naval presence, but also its civil air routes, arrangements for facilities for the Soviet fishing fleet, and increased diplomatic and trade relations.

2. Although Soviet naval forces now operate on a continuous basis in the Indian Ocean, the Soviets have thus far not committed a large combatant force to the area. Their naval activity to date appears to be limited to showing the flag, hydrographic research (some of which is submarine and ASW related), space support, and numerous port visits. Operational exercises may have occurred during the deployments, but because

of limited surveillance, what occurred is unknown.

3. While Soviet naval activity has been low keyed, their diplomatic and other activity has not. Over the past year they:

a. Signed a friendship treaty with India in the wake of the revolt in East Pakistan and probably requested the use of naval facilities.

b. Signed a trade agreement with Thailand.

c. Dispatched military aid to Ceylon in the wake of that country's internal crisis and have signed a fishing agreement with that country.

d. Are negotiating with Singapore for the use of commercial and perhaps naval port facilities.

e. Implanted two more buoys in the Indian Ocean in the Chagos Archipelago (150 n.m. northeast of Diego Gracia).

f. Are continuing to supply military and economic aid to many countries in the area.

g. Are extending their civil air routes and increasing their fishing operations.

II. SOVIET NAVAL DEPLOYMENTS IN THE INDIAN OCEAN

A. Surface

4. Since 1968, at least 4 groups of surface ships have deployed for periods of 3 to 6

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months with occasional lapses between deployments. The general composition of the surface ship deployment has included a guided-missile cruiser, a destroyer, an amphibious ship, an oiler, and other support ships. The Soviets usually operate a destroyer and various support ships in the area between deployments of larger groups. As a result the USSR has maintained an almost continuous naval presence in the Indian Ocean since October 1968. Except for a brief period of one week in the spring of 1969, there has always been at least one Soviet surface combatant ship in the Indian Ocean.

5. The initial Soviet deployment to the Indian Ocean was made by an oceanographic research ship in 1957. Ships of this type have been deployed on a sporadic basis from 1957 till the present. During 1965-1967 the Soviets began sending a destroyer on an annual visit to Ethiopia and in 1967 a force of 17 recovery and support ships sailed into the Indian Ocean for the first Soviet circumlunar space probe.

6. In the spring of 1968, three Pacific Fleet combatant ships, accompanied by an oiler, made a four-month cruise through the area visiting Ceylon, India, Iran, Iraq, Pakistan, Somalia, Southern Yemen, and Egypt. The then commander-in-chief of the Soviet Pacific Fleet, Vice Admiral Amelko, was in command of this naval group when it visited India.

7. In November 1968 the Soviets began a second naval deployment which lasted for six months. Surface combatants, auxiliaries, and submarines were deployed from both Pacific and western fleet bases and port visits were made in 10 countries. Little is known of the operational activities of this group between port visits.

8. In May 1969, a Soviet naval presence was re-established by two Pacific Fleet ships, a missile destroyer and an oiler. These ships

made frequent port calls in Iraq, Iran, and Somalia, and then departed from the area in September. Almost immediately, a naval group from the Soviet western fleets consisting of a missile cruiser, a frigate, a landing ship, and a tanker arrived in the Indian Ocean for a five-month deployment. All of the units except the tanker were transferred to the Pacific Ocean Fleet upon leaving the Indian Ocean in February 1970. A group from the Pacific Fleet arrived in April, operating there during the Soviet naval exercise OCEAN and conducting port visits to Somalia and Mauritius. Upon completion of the deployments the group returned to the Pacific Fleet. A single missile destroyer maintained the naval presence through mid-1971, when it was joined by a small group of combatants, including a minesweeper and an amphibious assault ship.

B. Submarines

9. The first deployment of Soviet submarines to the Indian Ocean occurred in October 1968 when two F-class diesel-powered units entered the area from the Atlantic. Since then, various submarines, including nuclear-powered E- and diesel-powered J-class cruise-missile units, and F- and Z-class diesel-powered attack submarines, have operated in the Indian Ocean at sporadic intervals. From August 1969 through July 1970, the Soviets kept at least one submarine in the Indian Ocean, and they sent another F-class submarine there in September 1971.

10. The exact nature of submarine operations in the Indian Ocean is not fully known, primarily because of limited surveillance. As an illustration, a J-class diesel-powered cruise-missile submarine is believed to have operated for about two and one-half months in the Indian Ocean without being detected. On the other hand, F-class diesel submarines operate

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more overtly, often in proximity to a submarine tender. These submarines have made occasional port visits.

C. Research Operations

11. Two oceanographic or scientific research expeditions were conducted from November 1969 to April 1970 by the Soviets. Involved in each case were a Z-class diesel submarine and a research ship. Research en route and in the Indian Ocean environments appeared to be concerned with geomagnetics which would have particular import for submarine operations and long-range communications. This type of research is also useful for merchant ship, fishing fleet, and space vehicle recovery activities.

D. Air

12. The Soviets have been flying long-range, naval TU-95 Bear reconnaissance aircraft over the Arabian Sea since 1 August 1968 to support space vehicle recoveries. For these 19-hour flights, the TU-95s operate from a base in the southern USSR. In May 1970, four Bears flew to the Indian Ocean. The Soviets at present lack airfields in the area to support their space and naval operations in the Indian Ocean.

III. NAVAL OPERATIONS

13. Since the initial appearance of Soviet naval ships in the Indian Ocean, the smallest number of naval ships deployed—combatants and non-combatants—has been 7 and the highest 24 (the higher figure includes 5 space support ships associated with the Zond 6 moon probe of 1968).

14. The level of Soviet naval activity in the Indian Ocean during the past few years has increased substantially. Some of this increase is due to space support operations. The total

number of ship operating days for all naval activity (combatant, space support, logistic, and oceanographic and submarine related research) increased from 1,900 in 1968, to 4,100 in 1969 and 1970, and the total for 1971 is likely to be higher.

15. Over 2,800 naval ship (naval combatants and auxiliaries) days were logged in 1970 as compared to 2,100 ship days in 1969 and 1,100 ship days in 1968. Approximately half of the total naval ship days in the Indian Ocean were accrued by naval auxiliaries.

16. The average deployment period for Soviet ships in the Indian Ocean in 1969 was:

- a. surface combatants (including amphibious ships), 106 days;
- b. auxiliaries, 89 days;
- c. oceanographic research vessels, 107 days; and
- d. space support ships, 98 days.

17. The strength and composition of the Soviet Indian Ocean force varies considerably, but a typical group may comprise some or all of the following:

- 2 surface combatants, 1 of which may be missile-armed;
- 1 amphibious ship;
- 1 diesel-powered attack submarine;
- 1 submarine tender;
- 2 oilers, 1 of which may be subordinated to the merchant fleet;
- 1 ocean rescue tug or salvage rescue vessel;
- 1 small refrigerator cargo vessel;
- 1 to 2 space vehicle recovery ships; and
- 1 oceanographic research vessel.

18. In 1965, a single Soviet naval ship made one port visit in the Indian Ocean. In 1970, 36 port visits by about 61 ships (combatants and non-combatants) are estimated to have

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taken place. The number of Soviet naval port calls in the Indian Ocean ranks third, behind the Mediterranean and Atlantic areas as to frequency of visits and number of ships involved.

IV. LOGISTICS

19. For the present, the Soviets appear to be relying on accompanying auxiliaries to provide the necessary fuel and dry and refrigerated stores to maintain their naval presence. Minor repairs can be accomplished at anchor, using the repair facilities aboard a subtender. Major mechanical difficulties necessitate a return to a Soviet port. The afloat logistic support presently provided the Soviet ships in the Indian Ocean is believed adequate for the current force size and composition.

V. CAPABILITIES AND LIMITATIONS

20. Numerous constraints limit the size and effectiveness of the Soviet Indian Ocean naval force—other higher priority tasks, the difficulty of force rotation, the immensity of the Indian Ocean, and the lack of adequate base support facilities and air support are all limiting factors. Nevertheless, in an area which largely lacks counterbalancing Western naval forces, Soviet intervention capabilities might take on significance in certain circumstances.

21. Deployment of Soviet forces to the Indian Ocean was undertaken only after ensuring the availability of fleet defensive forces in the four fleet areas and the adequacy of other deployed forces in the Mediterranean and the Atlantic and Pacific. The policy of moving naval forces further to seaward and into the Mediterranean, the Caribbean, and Philippine Seas has absorbed a large part of available naval forces. On the scale of priorities, it is probably fair to say that deployment of naval units to the Indian Ocean has ranked low.

22. Combat capabilities of the naval force in the Indian Ocean are severely restricted because of size, logistic factors, and lack of air cover. Furthermore, this force presently has little or no capability to conduct operations to support major Soviet naval tasks such as ASW, carrier surveillance or protection of sea lines of communications. Should, however, the West deploy a major naval force or should there be increasing instability in that area, the Soviets will probably increase their own naval presence.

23. The status of the Suez Canal plays a prominent role in the development of the Indian Ocean force. Should it remain closed, the burden of providing the major contingent for the Indian Ocean force probably will remain with the Soviet Pacific Fleet. The Soviet Pacific Fleet would have considerable difficulty in meeting this commitment without augmentation from the western USSR fleets. If the Canal is opened, then a larger number of ships could come from the western USSR fleets permitting the Pacific Fleet more capability in carrying out its missions.

24. If the western USSR fleets assume more of the burden of supplying ships to the Indian Ocean force, an adjustment in fleet strengths and responsibilities, particularly in the Black Sea Fleet, may be necessary, especially if the Suez Canal is opened. This would be a better alternative than the present practice of augmenting the force from the Pacific Fleet, where the long transit time still causes acute logistic problems.

VI. OUTLOOK

25. The greatest material constraints on future Soviet operations are the availability of Soviet ships for distant operations, the lack of a local repair facility, and the geographic difficulty of augmenting their force, especially in the northwestern Indian Ocean. Some of

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these problems could be overcome by the opening of the Suez Canal. In time of crisis in the Indian Ocean the Soviets could use the Canal to augment their forces from the Mediterranean within a week.

26. Whether the Canal is opened or not, logistic problems will motivate the Soviets to seek support facilities in the Indian Ocean. If obtained these would, like the facilities in Egypt, be labeled as indigenous; though they might in fact be controlled in some respects by the Soviets.

27. Such facilities could, in principle, be located in any one of a dozen or so areas in the Indian Ocean. Because of present Soviet activity in the Middle East, Moscow would probably initially prefer a location in the northwestern part of the Indian Ocean.

28. The Soviets may also seek to provide limited air support—and reconnaissance support—for their Indian Ocean force. They already have aircraft in Egypt to provide reconnaissance over the Mediterranean and the Red Sea.

29. Over the next five years, Soviet involvement in the Indian Ocean will probably increase. In the absence of any crisis in the area in which the Soviets might become involved, or in the absence of a US strategic naval presence it is probable that increases to the Soviet naval force in the Indian Ocean will be gradual. If the Suez Canal remains closed, this might amount to 5 to 7 combatants, an approximate doubling of the average 1969-1970 force. If the Suez Canal is reopened, the logistics and force level constraints would be lessened somewhat and force levels could range from 7 to 13 combatants.

30. Finally, African and Asian sensitivities to foreign naval forces and basing will probably influence the size of Soviet naval operations in the Indian Ocean. Concern for a counterbuildup by the West may influence the Soviets to limit the size of their deployments. However, these restraints may prove negligible if the Soviets were to deploy naval forces and use local base facilities in response to a request for aid (such as India might request in hostilities with Pakistan).

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ANNEX E

CARIBBEAN AND WEST AFRICAN OPERATIONS

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CARIBBEAN AND WEST AFRICAN OPERATIONS

I. CARIBBEAN

1. Soviet military activities in the Caribbean date back to the abortive attempt by the Soviets in 1962 to emplace strategic weapons in Cuba. At that time the Soviets withdrew because they faced overwhelming US forces in the area and were reluctant to press a situation which could escalate to nuclear conflict.

2. Soviet activity in the Caribbean was very low from 1963 until 1969. The Soviets began a series of probes whose ultimate motives are not yet clear:

a. A cruiser, 2 destroyers, 2 diesel-powered submarines, and 2 support ships made a highly publicized ceremonial visit to Havana in July 1969. They conducted antisubmarine warfare operations with an N-class nuclear-powered torpedo attack submarine, but the N-class did not enter port.

b. The second visit to Cuba, in May 1970, included a 15-day port call to Cienfuegos by an E-class nuclear-powered cruise-missile submarine, along with a cruiser, a destroyer, 2 diesel-powered submarines, and 2 support ships. This was the first port visit to Cuba by a nuclear-powered cruise-missile submarine, and its presence may have been designed to test US reactions.

c. Three happenings in the fall of 1970 indicated that the Soviets intended to make greater use of Cienfuegos in the future. First was the rapid construction of barracks, a

pier, and administration and recreational areas on an island in the harbor at Cienfuegos. Second was the appearance at Cienfuegos of special barges of the type used to support Soviet nuclear-powered submarines while in port. Third was another port visit by Soviet combatant ships.

d. After the fall of 1970 through May 1971, the Soviets continued to use Cienfuegos, Havana, Antilla, and Mariel for a series of visits. These activities—which did not fall into any discernible pattern—involved a missile cruiser, 2 destroyers, support ships, a diesel submarine, and a nuclear, torpedo attack submarine, on short calls, and more prolonged stays by a submarine tender. This submarine tender departed Cuba in May 1971. This left the rescue tug and the nuclear support barges which have been in Cuba since September 1970. The rescue tug may be utilized for emergency aid to Soviet submarines on patrol. The nuclear support barges could be used to service Soviet nuclear submarines which visit Cuban ports.

e. In late 1971, another Soviet task force visited Cuba. This force included two guided-missile surface ships, one support ship, and two diesel-powered submarines.

3. Long-range Soviet naval reconnaissance aircraft landed in Cuba four times in 1970 and twice in 1971. Flying in pairs from the USSR, they have transited to Cuba and back without conducting extensive military operations en

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route. The flights were probably for evaluation, training, and may also have been designed to set a precedent for future operations.

4. Nevertheless, the USSR is likely to continue in its present efforts to establish and maintain a small continuous naval presence in the Caribbean. The size and composition of this force, however, will be tailored to the specific plans and requirements associated with Soviet objectives in the Caribbean. For the near term, these objectives are believed to be oriented primarily towards promoting Soviet political interests in Latin America, rather than the creation of a naval force capable of challenging US military power. The speed with which a naval presence would be established is a function of many factors, not the least of which is the reaction and concern demonstrated by the US. The implications of a permanent Soviet naval presence in the Caribbean would be apparent to nations around the world and most profoundly felt in Latin America. A continuous naval presence in the Caribbean would also play a role in Soviet military planning. The use of support or basing facilities in the Caribbean would enhance Soviet capabilities to maintain submarine and surface combatant forces near major ports and naval bases in the Gulf of Mexico, the Caribbean, and along the US east coast.

II. WEST AFRICA

5. A group of submarines and submarine support ships operated in the central Atlantic in the vicinity of the Cape Verde Islands for about six months in 1967, ranging between West Africa and the coast of South America. A few of the support ships made short calls at West African ports. The operation appears to have been a test of distant afloat support procedures which have since been used on a

smaller scale by Soviet submarines in the Atlantic and Indian Oceans.

6. The recent series of Soviet naval forays to West Africa started in early 1969 with a show of force in a dispute with Ghana. In that episode, two destroyers and a submarine cruised off Ghana while Soviet diplomats sought the release of two fishing boats and their crews which the Ghanaians had seized. The demonstration—which also included port calls at Conakry, Guinea, and Lagos, Nigeria—was successful from the Soviet viewpoint. The ships and crews were released without adverse response from any West African or Western governments. Other Soviet ships visited Conakry and Lagos later in 1969, some on their way to the Indian Ocean.

7. The Portuguese-backed raid on Guinea in November 1970 led Sekou Touré to request assistance from both the USSR and the US in the form of a naval presence. The US rejected the invitation; the Soviets responded by sending two destroyers. Since that time, there has been a nearly continuous presence of at least one Soviet combatant ship in Conakry or in nearby waters. The presence of warships is apparently intended to symbolize Soviet support for Guinea and to discourage further raids, in the same way that Soviet ships in Port Said discourage attack on that city. It is being continued at the request of the Government of Guinea.

8. These naval ships are being used as an adjunct to Soviet-African diplomacy. The ships are available from the Mediterranean Squadron or in transits to or from the Indian Ocean. Although the Soviet Navy would stand to benefit militarily vis-à-vis Western navies and merchant sea lanes from a more permanent use of West African ports, there is no evidence that the Soviets are striving to use West African ports to the extent that they use Egyptian, Syrian, and even Cuban ports.

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ANNEX F

OVERSEAS BASE AND FACILITIES ARRANGEMENTS

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OVERSEAS BASE AND FACILITIES ARRANGEMENTS

I. INTRODUCTION

1. An examination of Soviet overseas bases and facilities arrangements reveals a fairly consistent pattern of naval anchorages and facilities, detached as much as possible from neighboring or host countries—except for Egypt and Cuba. In Egypt the level of Soviet involvement is conspicuously greater than in any of the other nations of the Third World.

2. As the Soviet Navy has extended the geographic scope and duration of its ship deployments, it has been confronted with the problem of developing sufficient logistic support to sustain distant operations. Initially, the Soviets attempted to rely on facilities made available by Communist allies. The USSR founded a Mediterranean naval presence in 1958 by basing medium-range submarines in Albania. However, a shift in Albania's political alignment occasioned by the Sino-Soviet split brought an abrupt end to this arrangement in 1961. With no alternative shore support in the offing, the Soviets withdrew their naval forces from the area.

3. When the Soviet Navy returned to the Mediterranean on a continuous basis in 1964, it did not depend upon foreign port facilities. A very limited underway replenishment capability restricted the Soviet ships to a low level of activity. Gradually they established a string of anchorages in international waters where their units could pass the periods be-

tween underway operations. Though untenable in heavy weather, under most conditions the anchorages afford a means for obtaining crew rest, general upkeep, maintenance and repairs. Additionally, an anchorage serves as a suitable site for receiving logistic support from naval auxiliary and merchant ships shuttling from the Black Sea.

4. As Soviet naval units have ventured increasingly farther from their home waters, they have continued to utilize the anchorage concept originated in the Mediterranean. Some locations, such as the holding ground off Socotra Island in the Arabian Sea, have been habitually frequented by Soviet ships and submarines. Other sites, such as the Dry Tortugas in the Gulf of Mexico, have been used only once. In selected locations such as the Chagos Archipelago (150 n.m. north of Diego Garcia) near Fortune Bank in the Seychelles Island group in the Indian Ocean and Pagan Island in the Philippine Sea—the anchorage concept has been improved by implanting permanent mooring buoys.

5. With the qualified exceptions of Egypt and Cuba the USSR has so far avoided acquiring overseas bases, in the conventional sense, i.e., where they exercise control over facilities rather than merely having access to them. While the Soviets appear to be wary of rushing into the obligations entailed in establishing bases on foreign soil and sensitive to associated

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accusations of imperialism, they have sought, with mixed results, to extend their basing to accommodate their expanding naval and air operations.

6. Still, where Soviet military interests and activities have become closely integrated with those of a client state, such as in Egypt, they have taken advantage of the situation to enhance their naval support arrangements. An examination of the evolution of their acquisition of bases in Egypt is instructive. In the first stage, from 1955 to 1967, the Soviets primarily played a passive role. They supplied large amounts of economic and military aid, sent advisors to that country, and made limited use of Egyptian naval facilities. Even though the Soviets helped the Egyptians recover from two major defeats including large losses of Soviet equipment, the Soviets were not committed to the survival of Egypt, nor did their prestige decline irretrievably when the Egyptians were humiliated on the battlefield. As a result of the Egyptian defeat in 1967, the Soviets apparently decided that as part of the price of re-equipping the Egyptian Armed Forces, they would insist on use of Egyptian territory for forward basing. After 1967, the Soviet use of Egyptian facilities increased their stake in that country's survival. Thus, when the Israelis began their deep penetration raids into Egypt early in 1970, endangering the Egyptian regime, the Soviets were faced with a fundamental decision. They had to decide whether to risk their own power and prestige to protect Egypt from Israeli attack, or to avoid overt involvement and risk losing their influence in the Middle East and possibly their forward basing. An additional means of reinforcing the Soviet commitment was the Treaty of Friendship and Cooperation signed by the Soviets and Egypt on 27 May 1971. This treaty seems to have been primarily motivated by Soviet concern for their own position in Egypt

following US-Egyptian negotiations, and also as a result of a purge of those Egyptians who were sympathetic to the USSR. This treaty requires the Egyptians to consult with the Soviets prior to making future foreign policy or military moves. Although the treaty implicitly commits the Soviets to continue providing military equipment and other types of aid to the Egyptians, the Soviets were careful to avoid any (known) clause which would bind them to any specific military action.

II. PRESENT SOVIET ACTIVITIES IN EGYPT

7. There are now four activities in Egypt which involve the Soviet forces to a large extent: Soviet naval air operations; fighter defense operations; missile air defense; and naval port facilities.

A. The Buildup of Soviet Naval Aviation in Egypt

8. In April 1968 a naval air unit of six reconnaissance Badgers was established in Egypt at Cairo West Airfield. It was supplemented in August 1968 by the addition of three antisubmarine warfare (ASW) Mail and again in 1970 by another ASW aircraft. Four probably air-to-surface missile (ASM) strike-associated Badgers deployed to Aswan in April 1970.

9. The reconnaissance force was doubled in the second half of 1970 by the addition of six SIGINT-configured Cubs which can perform both reconnaissance and other missions. In 1970 the four Mail ASW air units were replaced by four longer range May aircraft. In November 1971, the ASM capabilities of the Soviet naval air units were confirmed by the arrival of 10 ASM Badgers.

10. Since these ASMs are not very effective against land targets we believe that their pri-

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mary mission is to improve Soviet antiship capabilities in the Mediterranean against the Sixth Fleet and other NATO forces. The Soviets probably also hope that the presence of these aircraft will serve to bolster their commitment to Sadat and to bring pressure on Israel.

11. We doubt that the ASMs now in Egypt have nuclear warheads (they are reasonably effective weapons against ships without such warheads). We cannot, however, entirely exclude the possibility that nuclear warheads might be introduced—if, for example, the Soviets concluded that Israel had acquired a nuclear capability.

B. The Buildup of Soviet Fighter Defense

12. From February to April 1970 in the aftermath of Israeli deep penetration raids, most of the approximately 60 Soviet tactical air force fighter aircraft and associated personnel were airlifted to Egypt to provide a defense for Soviet installations there, Egyptian population centers, and ultimately the Canal area.

13. Independent Soviet fighter operations are conducted out of Jiyanklis, Beni Suef, and Kawm Awshim Airfields. The first-noted defensive fighter patrol was in mid-April 1970. Operations by this group are performed in Fishbed aircraft and consist of both tactical and training activities. Generally, elements of four aircraft each are noted in operational scrambles and defensive fighter patrols. Aggressiveness was continually noted during the months of April through July, culminating in an air engagement on 30 July 1970, in which four Soviet-piloted aircraft were shot down. Since the cease-fire, these air operations have been generally noted during Israeli penetrations west of the Canal but are not limited to times of Israeli action. In February-April

1971, the Soviets increased their air strength in Egypt by an airlift of 4 reconnaissance Foxbats. And they may also have sent 10 Flagons but the presence of the latter cannot be confirmed. We are unable to isolate specific routine areas of operations of all Soviet fighter aircraft. In the late summer of 1971, these aircraft began flying coordinated air defense intercepts with the Soviet Naval Squadron. As of November 1971 four Foxbats have been noted flying from Cairo West Airfield and their activities have included several reconnaissance flights over the Sinai.

14. While the Soviets have not hesitated to commit large numbers of aircraft for defense, they have been more cautious in adding numbers and types of aircraft to the naval air units. The doubling of their reconnaissance capability by SIGINT-configured Cubs was done in three different deliveries in July, October, and December 1970. The Soviets may have also considered these aircraft less likely to be provocative because of their resemblance to cargo planes. Finally the Soviets were extremely cautious in creating an ASM capability. Although the Soviets initially sent ASM strike/associated Badgers to Egypt by the end of April 1970, they waited until November 1971 to send ASM-carrying Badgers to make this capability operational.

C. Missile Air Defense Elements in Egypt

15. Beginning in early March 1970, shipment of the low-altitude surface-to-air missile (SAM) system, the SA-3, by the Soviet Union to Egypt was detected. The first of these sites, manned entirely by the Soviets, was in operational status by mid-March. We believe that by late 1971 reveals there were approximately 50 or so SA-3 battalions in Egypt. These battalions are deployed in the following

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areas: (a) Alexandria; (b) Cairo West; (c) Cairo Hulwan; and (d) North Cairo/Nile Delta. An additional group was in the Suez Canal area in July and August 1970. A small number of SA-3 units are deployed for point defense of Mersa Matruh and Aswan. Additionally, some of the prepared sites at Aswan are believed to be occupied by SA-6 units. Recent evidence indicates that Soviets also man some of the SA-7s (Strela) that provide low-altitude protection for Egyptian SAM sites.

16. The only known Soviet anti-aircraft units in Egypt are the ZSU 23-4 elements attached to Soviet SA-3 and SA-6 battalions for low-altitude defense. The number of ZSU 23-4s in Egypt is estimated to range from a minimum of 40 to a maximum of 120. Recent evidence suggests that this radar-controlled gun system may also have been given to the Egyptians for protection of some of their SAM sites.

D. Soviet Shipyard and Port Facilities

17. Moscow has concluded a number of facilities arrangements with Egypt which permit the Soviets to make regular use of repair facilities in Alexandria, and of storage and billeting facilities there and in Port Said. They are also developing a port at Mersa Matruh. Soviet use of these facilities helps increase the on-station time of their units in the Mediterranean; they retain capabilities for supporting ships at anchorage and could operate, though less efficiently, without them.

a. *Alexandria.* While not a base in the conventional sense—the Egyptians evidently retain official control—the facilities at Alexandria provide the Mediterranean Squadron with support services comparable to those obtainable at a Soviet base. By agreement, the Soviets have acquired managerial control of the El Gabbari Shipyard in Alexandria which was designed and constructed

by Soviet engineers. All key personnel in the shipyard including engineers, technical and naval personnel, are Soviet nationals and are under the supervision of a Soviet admiral. Designed to build naval and merchant ships, 30 percent of the El Gabbari Shipyard facilities are earmarked for ship repair and refitting. Facilities available to Soviet naval units include 2 large graving docks, 2 floating drydocks, and miscellaneous shops which can handle repairs of submarines and ships up to destroyer size. Alexandria is the main port used for providing mid-patrol support to diesel submarines deployed in the Mediterranean. Spare parts, ammunition, petroleum, oil, and lubricants (POL) and stores are stored at Alexandria and the Soviet auxiliary ships that are moored there provide logistic support and perform maintenance and repairs. Thus, the Alexandria port complex furnishes the squadron with a significant naval facility in the eastern Mediterranean.

b. *Port Said.* This port offers POL storage and billeting facilities necessary for the 1 destroyer and 3 amphibious ships which are almost always present. The Soviet amphibious units in Port Said usually consist of 1 tank landing ship (LST) and 2 medium landing ships (LSM). These units are generally deployed in a group and are believed to have 200 to 250 naval infantry troops embarked.

c. *Mersa Matruh.* The Soviets are developing a new port at Mersa Matruh. Activities noted to date include dredging operations in the harbor, installation of 2 floating piers, security fencing around the port, SA-2 and SA-3 site construction in the vicinity, and the recent arrival of a fairly small number of Egyptian and possibly Soviet naval personnel in the area. Reports also indicate 400 Soviet technicians and various

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naval construction projects at Mersa Matruh. These indicators, plus the continuous presence of Soviet naval ships (usually consisting of 2 to 3 auxiliaries and a minesweeper) since August 1970 and the visit of 2 W-class submarines in September-October 1970, denote considerably increased Egyptian and Soviet naval association with this hitherto minor port. Mersa Matruh has few shore support facilities, but continued improvement of the port would provide the Soviets with an alternative to the less secluded and more vulnerable facilities at Alexandria and Port Said.⁴ Further, the harbor is connected by road with the nearby airfield used by Soviet naval reconnaissance and ASW aircraft.

III. OTHER SOVIET BASING ARRANGEMENTS

A. Mediterranean Area

18. Anchorages and facilities used so far in the Mediterranean include the following (also see Map I for Mediterranean anchorages):

a. and b. *Alboran Island and Melilla*. About 100 miles east of Gibraltar, these anchorages are normally used by combatants and naval auxiliaries involved in western Mediterranean patrols.

c. *As Sallum*. Located within Egyptian territorial waters near the Libyan border, it is frequently used by submarines for mid-patrol support and by major surface combatants.

d. *Hammamet*. Off the east coast of Tunisia, the area is frequently used by combatants which operate routinely in the Strait

of Sicily. It also has a history of use for submarine support and upkeep.

e. *Hurd Bank*. This anchorage near Malta is commonly occupied by Soviet units positioned to intercept US and NATO ships transiting eastbound via the Strait of Sicily or the Strait of Messina.

f. *Crete East*. Least frequently used of the principal anchorage areas.

g. *Cyprus East*. Frequented by Soviet amphibious ships and minesweepers, and AGIs.

h. *Kithera*. South of the Peloponnesus, this is the principal eastern Mediterranean combatant anchorage area.

i. *Sirte*. Located off the coast of Libya, southwest of Benghazi, this is one of the original Soviet anchorages. It is now seldom used.

j. *Mersa Matruh*. An anchorage outside of the Egyptian port of the same name.

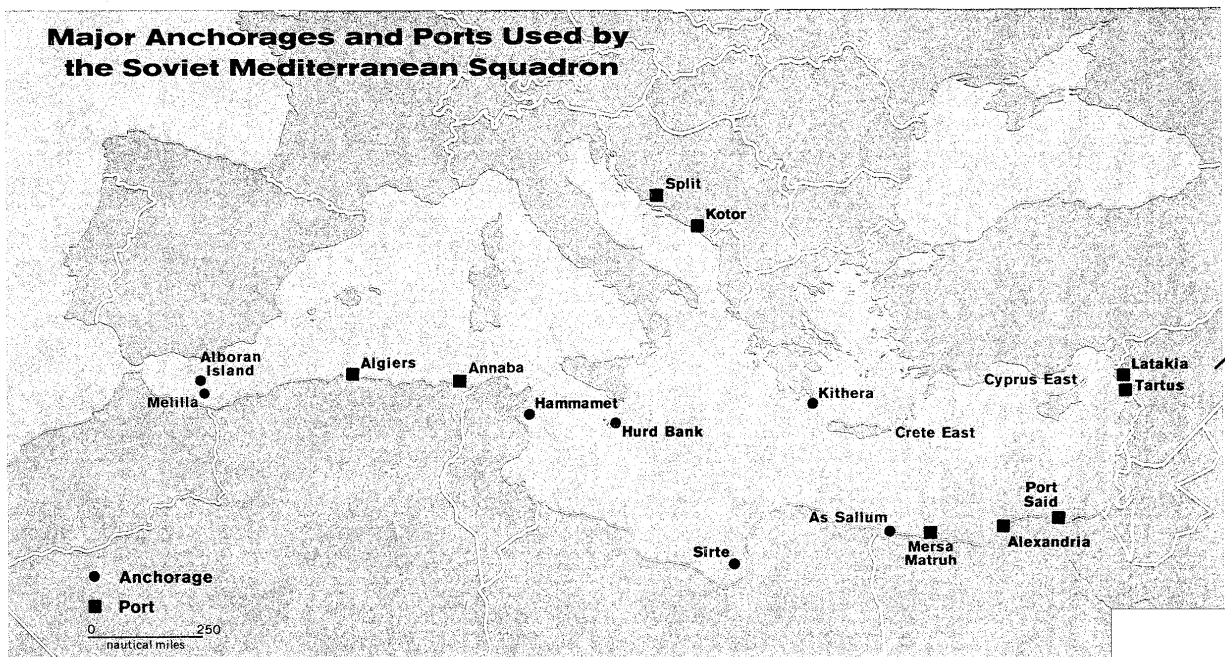
B. Malta

19. The Soviets do not have military base or facilities arrangements with Malta. Soviet naval vessels, however, are showing the flag off Malta's shores with growing regularity. The Soviet fleet anchorage at nearby Hurd Bank is in regular use. Soviet merchant ships have made use of Maltese dockyard facilities on a few occasions. A Soviet tanker was sent into the dockyards for repairs within 2 weeks after these were nationalized in 1968; and in the last 3 months of 1969 two additional Soviet merchant ships used the drydocks. Use made of the Grand Harbor, Malta, by vessels of the merchant fleet of Communist Bloc countries is slowly increasing. The average number of Soviet merchant ships visiting Malta each month is reported to be 4 to 5. This number may increase if the Soviets benefit from the efforts of the Mintoff government which took

⁴ Sighting of a Soviet F-class submarine and a support ship at the floating piers at Matruh early in November 1971 suggests that the Soviets have started to shift their support of diesel class submarines from Alexandria.

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office in June 1971, to balance its relations with NATO and the USSR.

20. *Other Mediterranean Ports.* Except for the facility arrangements with Egypt, there is no evidence that the Soviets have acquired similar naval facilities anywhere else on the Mediterranean littoral. Most of the Soviet visits to the Syrian ports of Latakia and Tartus and to the Algerian ports of Algiers and Annaba have been of short duration. They are probably to "show the flag" and to take on provisions and fuel. The geographical location of Mers-El-Kebir in Algeria would be suitable for Soviet squadron ships operating in the western Mediterranean. However, the use of port facilities in Algeria in the same way as those in Egypt seems unlikely as the Algerians increasingly oppose the presence of the Soviet Union and US in the Mediterranean. They have previously rebuffed Soviet efforts to acquire access to the naval facilities of Mers-El-Kebir. Except for emergency repairs on an F-class submarine in February 1969, Soviet units have not utilized this Algerian base. However, a small number of Soviet naval and technical personnel are assigned there to assist the Algerian Navy. Finally, units of the Mediterranean Squadron make occasional formal visits to the Yugoslav ports of Split and Kotor.

C. Caribbean

21. Analysis of naval activity during and subsequent to the third Soviet Caribbean deployment in September 1970 and of construction observed in the Cienfuegos Bay area indicates that a naval support facility capable of minor repair and provisioning both nuclear submarines and surface combatants has been established in Cuba. The construction of recreational and support facilities at the Cienfuegos island of Alcatraz includes barracks, athletic fields, and an administration building. These facilities and availability of Soviet nuclear submarine support barges pro-

vide suitable features for supporting naval units during crew rest and maintenance periods. Submarines conducting deployments off the Atlantic coast, could increase time on station by utilizing Cuban port facilities. Soviet units, including a nuclear cruise-missile submarine have used Cienfuegos port facilities, but the port has not been turned over to the Soviets.

D. Indian Ocean

22. Current Soviet logistics practice in the Indian Ocean resembles the patterns established in the early years of the Mediterranean Squadron. This includes the use of anchorages in international waters and a rudimentary form of underway replenishment for supplies of fuel oil, provisions, mail, and minor repairs. A major difference is that Soviet naval ships have been permitted to visit more ports in the Indian Ocean than they did in the Mediterranean from 1964 to June 1967. While access to ports is not essential for logistics purposes it does make the logistics burden lighter. Five anchorages (see Map II) in particular have been used for logistics functions as well as waiting positions:

a. and b. *Socotra.* Anchorages to the north and south of the island are used frequently by combatant and support ships.

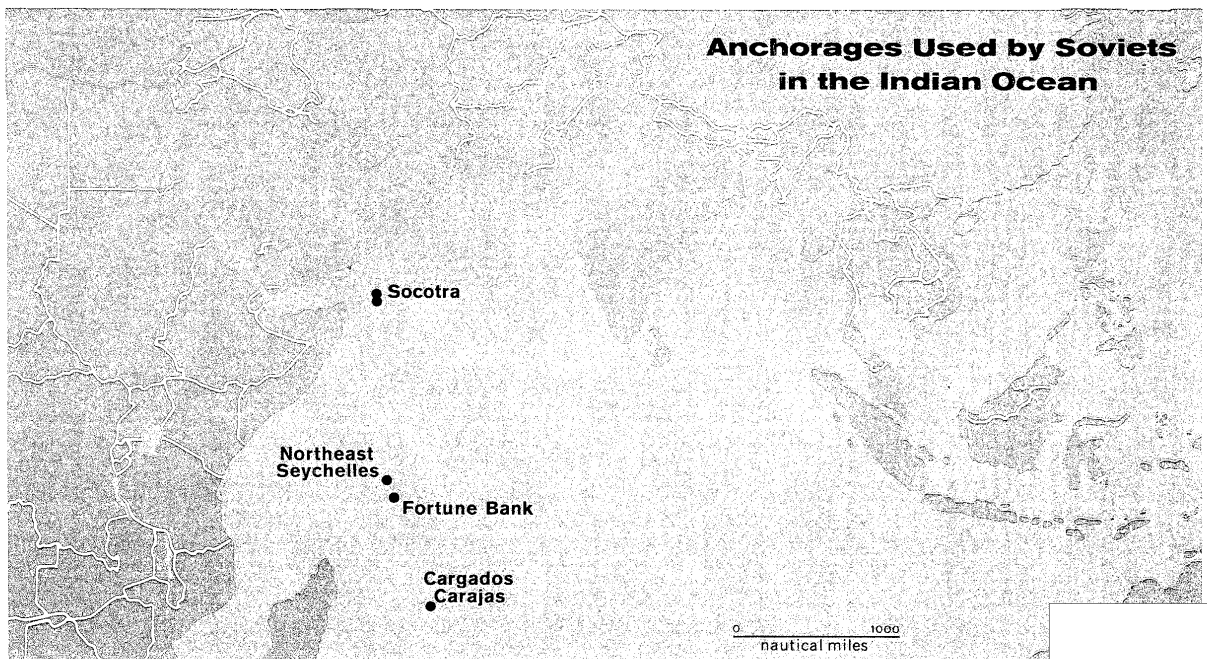
c. *Cargados Carajos.* About 200 n.m. north/northeast of Mauritius, the anchorage is used often by space support and hydrographic research ships but rarely by combatants.

d. *Fortune Bank.* This is one of the three anchorages in international waters where the Soviets are known to have implanted mooring buoys. (The others are in the Philippine Sea and the Chagos Archipelago.) Since the buoys were emplaced in April 1969, hydrographic research ships have used Fortune Bank, but combatants have not been detected using it.

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e. *Northeast Seychelles*. About 90 n.m. from the nearest land, the area was used by combatant ships in 1968 and 1969, but the center of Soviet activity has shifted to other anchorages, near Socotra.

23. While de facto bases in the area may be unnecessary (as Moscow claims), they would be useful, add flexibility, and permit expansion of Soviet operations in the area. As far as is known, Moscow has not acquired formal base rights. Soviet use of port facilities in the Indian Ocean area is dependent on the nature and location of the facilities and receptivity of the host country. The following areas suitable for port facilities are listed alphabetically.

24. *Ceylon*. Despite Ceylon's economic difficulties the previous Ceylonese government rejected Soviet overtures for naval support facilities. However, in the future the Ceylonese may be more forthcoming to such requests. To do so, however, would be a hard choice for the government because it might jeopardize its relations with India, China, or the West. Both Colombo and Trincomalee have facilities suitable for supporting a Soviet naval squadron. Colombo has a graving dock large enough to handle any Soviet Pacific Fleet surface ship. In the summer of 1971, the USSR gained access for their fishing vessels at Galle and Colombo through a fishing agreement.

25. *India*. The USSR is assisting in the improvement of the Indian east coast naval base at Visakhapatnam. The Soviets attempted unsuccessfully to gain access to Indian naval facilities in March 1969 when Defense Minister Grechko visited there. However, a friendship treaty was signed recently which may lead to closer cooperation in the immediate future.

26. *Indonesia*. Despite its large-scale aid to Indonesia under the Sukarno regime the Soviets never had access to Indonesian base or repair facilities. Since the political upheaval

in 1965, there has been no indication, on either side, of interest in use of Indonesia's poor ship repair facilities.

27. *Mauritius*. Port Louis has been used by Soviet Navy and space event support ships (but not submarines) over the past two years for port visits and to take on provisions and fuel. Recently the USSR and Mauritius concluded a fishing agreement which will enable Soviet fishing vessels to utilize port facilities and exchange crews on the island; crewmen would be transported between the USSR and Mauritius by the Soviet commercial airline.

28. *Singapore*. Singapore's Prime Minister Lee Kuan Yew is known to be considering an arrangement that would allow Soviet naval as well as merchant ships to be serviced in the commercial shipyards during peacetime. However, this may be a ploy by the Prime Minister to keep Western navies using Singapore's repair facilities and to maintain their subsidies. A Singapore Soviet merchant shipping agency has been formed and preliminary plans made for a commercial joint ship repair agreement. A five-year contract with Vosper Thornycroft Uniteers for the repair of Soviet trawlers and merchant vessels is being negotiated. The concern's shipyard is one of the most significant in Singapore. There are no indications that this agreement, if it materializes, would be a forerunner of arrangements for Soviet naval base facilities. The Singapore Government has, however, apparently agreed to permit short informal Soviet naval port visits. The first such visit, by a destroyer and an oiler, took place in July 1971.

29. *Somalia*. Soviet naval units visit Somalia more often than any other country in the Indian Ocean. The Soviet-built fishing port at Berbera is available to the Soviets, but they have no formal base right agreement with Somalia.

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30. *Southern Yemen.* The Soviet Navy has not yet made extensive use of the naval and air facilities of the former British base at Aden. It is noteworthy, however, that the current harbor master at Aden is a Soviet citizen. Should the Soviet Union so request, facilities in the area would probably be made available to them by the present pro-Soviet regime.

31. *Socotra.* The island of Socotra which belongs to the People's Republic of South Yemen, might offer some attractions to the Soviets as a forward base for maritime reconnaissance or space support aircraft because of its position near the Red Sea and Persian Gulf. The island has several drawbacks, however, and there are no signs that the Soviets have been given permission to use the island militarily. The nearby anchorages that are used by Soviet naval ships are in international waters.

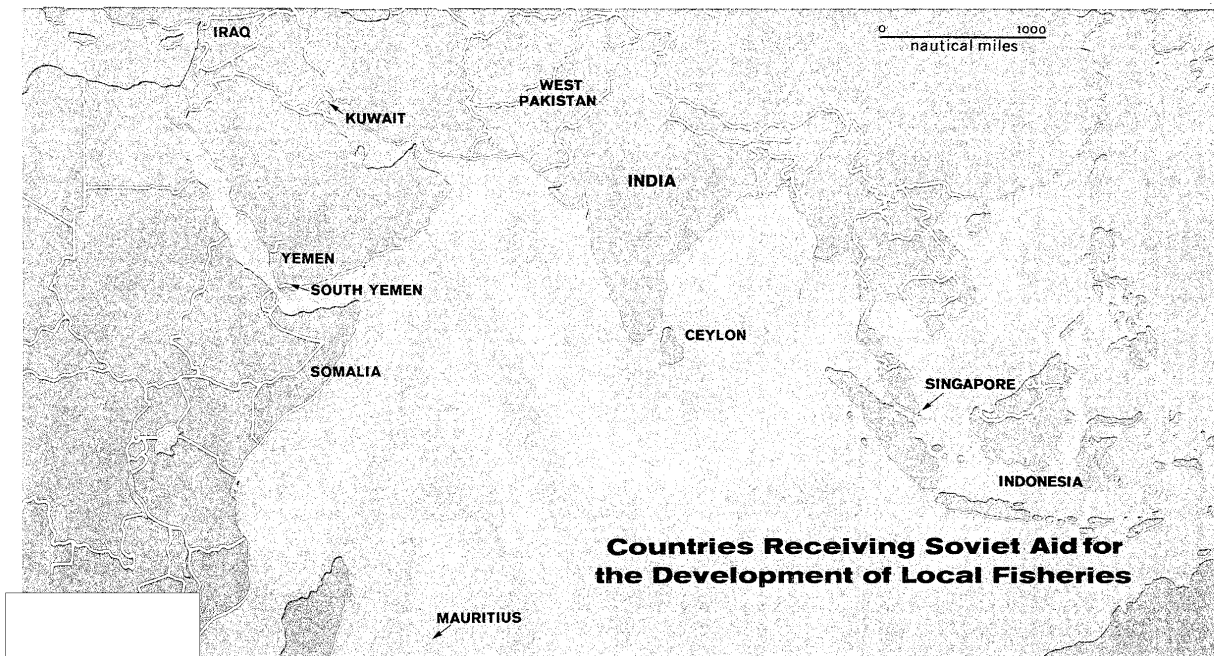
32. *Yemen.* Hodeida, the only important port in Yemen, was constructed by the Soviets in 1968-1969. Although Soviet pilots are believed to have participated briefly on the Republican side in the Yemen civil war in December 1967, there are no indications that the Soviets have airbases or facility arrangements in Yemen.

33. The Soviets are also increasing their entree in Indian Ocean countries by developing fisheries in various countries. Map III depicts this aid.

E. Other Soviet Naval Anchorage Areas

34. A mooring buoy was implanted by a Soviet lifting vessel in October 1969, at approximately 18-20N, 143-15E (west of Pagan Island, 150 miles north of Guam). This buoy is only known to have been used for 18 hours by a Sverdlov-class cruiser during Exercise OCEAN in April 1970.

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ANNEX G

AMPHIBIOUS AND MERCHANT MARINE SEALIFT CAPABILITIES

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AMPHIBIOUS AND MERCHANT MARINE SEALIFT CAPABILITIES

1. Soviet sealift capabilities consist of merchant shipping and amphibious assault lift. The first is a strictly non-combatant support force requiring a developed port to handle its cargo, while the second is designed to land naval infantry forces to either a port or a beach.

I. SOVIET AMPHIBIOUS FORCES

2. While the Soviet naval infantry and amphibious forces are primarily tasked with assault missions on the Eurasian periphery, the endurance and sea-worthiness of some of the landing ships could permit a longer range operation. The current and anticipated lift capacity for each fleet is sufficient to provide military lift for the numbers of battalion landing teams⁵ and equipment listed below:

	NORTHERN FLEET	BALTIC FLEET	BLACK SEA FLEET	PACIFIC FLEET	TOTAL ⁶
1971 ..	2½ - 3	5½ - 6½	4	3 - 5	15 - 18½
1975 ..	6	6 - 8	6 - 8	6	24 - 28

3. A Soviet amphibious group can cover 300 to 350 miles per day at economical steaming rates. Because of the extreme loading density at full capacity, the habitability aboard these ships on long transits would probably

⁵ A battalion landing team consists of about 560 naval infantrymen and includes about 10 tanks and 30 armored personnel carriers among its vehicles and weapons.

⁶ High figure includes use of older landing ship classes which have not been observed on distant deployments.

become a limitation on the assault readiness of the embarked forces.

4. The Soviet Union has not built any ships of the amphibious transport or dock type. Thus, the sole capability for amphibious lift is vested in the Alligator-class landing ships, tank (LSTs), and the Polnocny-class landing ships, medium (LSMs), and no special capability for transporting the hundreds of Soviet landing craft exists. The Alligator LST is currently being produced at the rate of two per year. The USSR is purchasing LSMs from Poland.

5. A more detailed account of the Soviet naval amphibious force and naval infantry will be found in NIE 11-14-71, "Warsaw Pact Forces for Operations in Eurasia", dated 9 September 1971, SECRET.

II. THE SOVIET MERCHANT MARINE

6. In 1955, the Soviet fleet had fewer than 600 ships and totaled about 2.5 million dead-weight tons (DWT). In the following 10 years, it was expanded to more than 1,000 ships totaling over 8 million DWT. Between 1965 and 1970, the Soviets added 470 ships of 4.3 million DWT. Their fleet now totals 1,460 ships of 12.1 million DWT.⁷ While vessels of

⁷ Preliminary data indicate that the USSR contemplates fleet growth to approximately 16 million DWT by the end of 1975 and 20 million DWT by the end of 1980. The planned allocation of these tonnages between dry cargo ships and tankers is not known.

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the Soviet fleet are fully utilized in peacetime, they could be valuable adjuncts to distant operations to the extent that the Soviets chose to divert them for this purpose.

7. A group of 380 cargo ships in the merchant fleet is particularly well suited to needs of a military sealift (see Table I, page 52). These ships comprise over 4.1 million DWT. All these ships (which we designate "select" ships) are less than 20 years old, have DWTs of 5,000 to 17,000, have speeds in excess of 14 knots, and have heavy lift booms with capacities of 40 to 80 tons. They include more than 145 ships with large hatches (over 50 feet in length), capable of carrying military equipment too large for ships with conventional-sized hatches (see Table II, page 53). Large hatch ships comprise over 1.8 million DWT.

8. Most of the remaining 3.4 million DWT of cargo ships could also be used for a military supply lift. Operations with these ships would necessarily be much less efficient than with those in the preceding group. Some of these ships would be confined to short-range operations in areas such as the Baltic and Black Seas because of their small size and advanced age.

9. The suitability of Soviet tankers for participation in military supply operations depends largely on their size. More than 90 percent of the ship tonnage is less than 15 years old, thus age, as such, is not a constraint. Ships best suited for distant operations consist of 106 tankers (3.3 million DWT) ranging in size from 15,000 DWT to 50,000 DWT. All but 2 of these have speeds of 15 knots or greater (see Table III, page 53). Most of the remaining tanker tonnage is in 2 groups of smaller ships that are suitable for short-haul operations such as from the Black Sea to

Egypt. The first group is made up of 11,800 DWT Kazbek-class tankers with speeds of 13 knots. The 62 tankers in this group aggregate approximately 800,000 DWT. The second group consists of about 50 Finnish-built tankers between 4,300 and 5,000 DWT, with speeds of about 14 knots, and totaling about 230,000 DWT.

10. Though the diversion of Soviet tonnage for a large-scale military sealift operation would be costly in terms both of foreign exchange earnings foregone and increased payments for the charter of foreign ships, the Soviets have not hesitated to do so when they believed it was in their interest. During 1965-1969 yearly deliveries of military aid by Soviet merchant ships to non-Warsaw Pact countries averaged 131. Because of their massive shipments of air defense equipment to Egypt in 1970-1971 the average number of deliveries increased to 288 for these two years. Deliveries of military goods to Cuba and less-developed countries such as Egypt and India in 1970 required the equivalent of almost 200,000 DWT in dry cargo tonnage, 1.5 percent of total fleet capacity. Support of North Vietnam's wartime economy in the same year occupied another 3 percent or 340,000 DWT of shipping, both dry cargo and tankers. In addition, Soviet Merchant Fleet cargo ships and tankers regularly support Soviet naval operations and exercises in distant areas.

III. SHIP TONNAGES REQUIRED

11. The actual DWT of tankers and cargo ships required for a given supply lift will depend on the circumstances of that lift, distance being one of the two most important factors. On the short-haul 1,100 n.m. route from Soviet Black Sea ports to Egypt, the equivalent of 1.6 modern 12,500 DWT freighters (20,000 DWT) would be required to sustain a 1,000 ton/day lift of mixed dry cargo.

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The equivalent of 0.2 Sofiya-class tankers of 49,000 DWT (9,800 DWT) would be required to keep petroleum moving to Egypt at the rate of 1,000 tons/day. To sustain the same lifts on the 14,200 n.m. route from Soviet Black Sea ports to Haiphong via the

petroleum products. The Table below shows the tonnages of cargo ships and tankers that would be required to support varying numbers of MRDs under combat conditions where all supplies have to be brought in by sea from Soviet Black Sea ports:

THOUSAND DEAD WEIGHT TONS

NUMBER OF MOTORIZED RIFLE DIVISIONS	1,100 N.M. (EGYPT)		6,000 N.M. (CUBA)		14,200 N.M. (NORTH VIETNAM)	
	DRY CARGO	TANKER	DRY CARGO	TANKER	DRY CARGO	TANKER
1	14	3	40	13	85	29
10	140	31	400	128	849	293
20	280	62	801	255	1,698	587
30	420	93	1,201	383	2,546	880
40	560	123	1,602	510	3,400	1,173
50	700	154	2,002	638	4,244	1,466

Cape of Good Hope would require 9.7 of the 12,500 DWT freighters (121,250 DWT) and 1.9 of the 49,000 DWT tankers (93,100 DWT).

12. Just as important as the distance factor is the rate in tons per day at which deliveries are required. This depends on the number of military units being supplied, the nature of their activity (whether they are in combat or merely on training or standby duty), the pre-positioning of supplies such as tankers and the feasibility and desirability of obtaining supplies locally. In a combat situation where all supplies are brought in by sea, estimated requirements for a Soviet motorized rifle division (MRD) (with air support) are 700 tons per day of dry cargo and 315 tons per day of

13. Under the most extreme situation illustrated—hardly a likely scenario—a lift of 14,200 n.m. for 50 MRDs would require dry cargo tonnage of 4.2 million DWT, an amount comparable to the entire block of tonnage best adapted for a supply lift. This same lift would require almost 1.5 million DWT of tanker tonnage, half of the 3.3 million DWT block of tankers best suited in terms of size and age for a long-haul lift of petroleum.

14. In an actual situation the Soviets might attempt to obtain some supplies locally, would probably supplement sealift with airlift for certain urgent items, and most likely use more than one port for embarkation and debarkation for very large lifts.

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TABLE I
CHARACTERISTICS OF SELECTED CLASSES OF SOVIET DRY CARGO SHIPS *

CLASS	UNITS	DWT/ UNIT	TOTAL DWT *	SPEED (KNOTS)	DRAFT (FEET)	RANGE (N.M.)
Amguema ^b	10	8,700	87,000	14.5	29	8,000
Arkhangel'sk	16	8,290	132,640	14.0	26	16,240
Belomorskles	66	6,036	398,376	16.0	23	6,000
Beloretsk	6	14,150	84,900	17.5	32	22,000
Bezhitsa/Poltava	21	12,650	265,650	15.5	30	16,700
Dneproges	6	7,215	43,290	16.0	27	11,000
Irkutsk ^b	17	12,500	212,500	17.7	29	12,000
Kapitan Kushnarenko	3	15,800	47,400	18.0	32	12,000
Kommunist	20	12,500	250,000	17.5	29	14,000
Krasnograd	23	12,200	280,600	17.0	30	18,200
Lena	5	7,430	37,150	15.0	27	13,500
Leninogorsk	9	11,050	99,450	16.0	29	12,500
Leninskiy Komsomol	25	16,040	401,000	17.0	30	12,000
Murom	30	12,500	375,000	17.0	30	10,000
Novgorod	13	12,500	162,500	18.0	30	12,000
Omsk	8	12,000	96,000	17.5	30	10,100
Pavlin Vinogradov	6	5,400	32,400	14.0	23	6,000
Pula ^b	29	14,000	406,000	17.0	32	19,000
Simferopol	7	12,030	84,210	16.0	29	14,000
Slavyansk	20	12,680	253,600	17.5	30	12,000
Stanislavskiy	5	5,676	28,380	14.0	22	7,630
Tiksi	2	12,050	24,100	17.0	30	10,000
Volgoles	16	6,205	99,280	14.5	23	10,400
Vyborg	17	12,300	209,100	16.5	29	13,200
TOTAL	380		4,110,526			

* For estimated cargo carrying capacity, reduce DWT by 16 percent. Capabilities of each class for loading specific types of military equipment have not been developed.

^b Construction continuing.

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TABLE II
SOVIET LARGE HATCH SHIPS

CLASS	WHERE BUILT	NUMBER OF SHIPS	UNIT DWT	LARGE HATCH LOCATION DIMENSIONS (IN FEET)
Poltava/Bezhitsa	USSR	21	12,650	No. 4 79 x 20 (Twin)
Omsk	Japan	8	12,000	No. 3 76 x 36
Krasnograd	Finland	23	12,200	No. 3 74 x 35
Pula *	Yugoslavia	29	14,000	No. 3 67 x 37
Murom	Poland	30	12,500	No. 3 66 x 36
Vyborg	East Germany	17	12,300	No. 3 62 x 36
Simferopol	Poland	7	12,030	No. 3 55 x 29
Stanislavskiy	Belgium	5	5,676	No. 2 55 x 22
Beloretsk	Denmark	6	14,150	No. 4 53 x 36
TOTAL		146 of over 1.8 million DWT		

* Construction continuing. The Soviet Union embarked on the acquisition of large hatch ships in 1956 with the building of the Stanislavskiy Class in Belgium. Since 1956, the Soviets have added eight additional large hatch classes of ships; the Yugoslav-built Pula Class is the only one presently under construction.

TABLE III
SELECTED CHARACTERISTICS OF SOVIET TANKERS
15,000 DEAD WEIGHT TONS AND LARGER

CLASS	UNITS	DWT/ UNIT	TOTAL DWT	SPEED (KNOTS)	CAPACITY (BARRELS)	DRAFT LOADED (FEET)	RANGE (N.M.)
Adler	2	25,250	50,500	14.7	214,000	33	12,000
Bauska	11	18,189	200,079	15.5	154,000	30	17,000
Druzhba	1	40,715	40,715	16.5	346,000	36	15,975
Dzhuzeppe Garibaldi	1	32,017	32,017	15.5	368,000	34	11,000
International *	9	20,000	180,000	16.0	197,000	31	15,000
Leonardo Da-Vinchi	6	48,933	293,598	17.5	368,000	39	30,000
Lisichansk	10	34,643	346,430	17.0	298,000	35	14,980
Lugansk	8	34,985	279,880	16.7	298,000	35	15,000
Mir	1	39,719	39,719	16.0	340,000	36	20,400
Pekin	7	30,900	216,300	17.5	183,000	35	10,500
Sofiya	20	49,370	987,400	17.0	302,000	38	10,000
Split *	24	20,493	491,832	17.0	188,000	30	16,500
Trud	1	25,330	25,330	16.0	224,000	32	6,000
Velikiy Oktyabr	5	15,200	76,000	16.7	134,000	28	15,000
TOTAL	106		3,259,800				

* Construction continuing.

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ANNEX H

CAPABILITIES OF MILITARY AND CIVIL AIRLIFT TO SUPPORT DISTANT OPERATIONS

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CAPABILITIES OF MILITARY AND CIVIL AIRLIFT TO SUPPORT DISTANT OPERATIONS

I. GENERAL

A. Military Airlift

1. The Soviet Union's military airlift capability has increased in recent years to satisfy expanded objectives and missions. Still, the force has no large all-jet transports and only a few large turboprop aircraft in service. A jet-powered aircraft similar to the US C-141 is, however, being flight tested. Compared with the US military airlift, Soviet forces have about one-half the capacity, less ability to fly extremely long distances, and cannot react as rapidly and effectively to situations in the Third World because they lack an overseas support infrastructure.

2. The Military Transport Aviation (VTA) is currently considered to be capable of airlifting two airborne divisions with all supporting equipment to a radius of approximately 850 nautical miles (n.m.) or to a range of approximately 1,650 n.m. The range can be extended by reducing the size of the airborne force and by using only the most improved aircraft. One airborne division could, for example, be carried to a radius of at least 1,150 n.m. or a range of up to 2,300 n.m. This tactical airlift capability would not be suitable for operations to southern Asia, South America and the Caribbean, or Africa without staging bases or transit agreements.

B. Civil Airlift

3. Some portion of Aeroflot, the Soviet civil aviation flag carrier, can be mobilized for military purposes. If all serviceable heavy and medium transports in Aeroflot were made available, an unlikely event due to competing requirements, cargo airlift capability would increase about 25 percent and troop airlift would more than double. Operational equipment for these troops, such as military vehicles, would have to be transported by other means. Aeroflot's military potential is enhanced by the fact that some of the different types of Soviet-manufactured transport aircraft are in use by both military and civil aviation.

4. Transition by Aeroflot from a civil to a military role would require minor modifications. With the exception of AN-12s, however, the transports are not the rear-loading military type, but have a rather small conventional cabin opening which would limit the quantity and size of equipment which could be carried. Also, many of the medium and all of the heavy transports would have to use airfields with longer and more durable runways than required for assault-type transports such as the AN-12. On the other hand, a substantial number of Aeroflot flight personnel are believed to be reservists in the air forces and hold mobilization assignments. The Minister of Civil Aviation and several of his deputies are

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military officers. Personnel and equipment of civil airfields, air traffic control centers, and aircraft maintenance and overhaul bases are readily available and provide equipped installations capable of rapid conversion to military use.

II. FORCES AVAILABLE

A. Military Forces

5. A program to re-equip Soviet military transport units with more modern aircraft began in 1959 with the assignment of the first AN-12 Cub medium transports to VTA. As of mid-year 1971, there are now 820 of these aircraft in military service with about 740 of them providing the main inter-theater and long-range airlift. One measure of the progress the Soviets have made in increasing lift capabilities is the growth in the payload and range characteristics of the AN-12. The first version with a full fuel load could carry a payload of 21,100 pounds to a range of only 1,700 n.m. Two newer versions can carry the same load about 2,800 n.m. Reducing the payload to 9,500 pounds allows one of the new AN-12s to fly 3,800 n.m.

6. The improved range and payload characteristics of the AN-12 have enhanced the Soviets' ability to deliver and support their forces and to deliver military aid in Europe, the Middle East and North Africa. Large-scale airlift to more distant areas, however, is restricted by the small payloads which can be carried by the AN-12 and the availability of only a few heavy transports.

7. Heretofore the Soviets have not placed the same emphasis on heavy military air transport as has the US. Although the large four-turboprop AN-22 aircraft first flew in 1965, less than 15 are now in service. Two AN-22s were lost in international relief work, one in

the airlift to Peru and the other in the airlift to Pakistan. According to published Soviet data, the AN-22 can carry 99,000 pounds to 5,100 n.m. or 176,000 pounds to 2,800 n.m. A jet-powered cargo aircraft designated IL-76 which first flew in March 1971 could enter service in 1974. The Soviets claim that the IL-76 can carry almost 90,000 pounds to 2,700 n.m.

B. Civil Forces

8. The Ministry of Civil Aviation has a multi-engine transport (20-passenger or greater) inventory of some 2,650-2,700 aircraft. Over 2,000 of these have a range of at least 1,000 n.m. when carrying a normal payload. About 200 of these transports are allocated for training, research and support roles and the remainder are assigned to Aeroflot's operating fleet. The larger jet and turboprop transports (IL-18, IL-62, TU-104 and TU-114) are used on long haul international and domestic services; the IL-18 is the most widely used and essentially the backbone of the civil transport operation. The medium- and light-transport (AN-12, AN-10, AN-24, IL-14, LI-2, TU-124, TU-134, and Yak-40) are employed primarily on domestic trunk and local routes. AN-24s and TU-134s are also utilized for short haul international services. The AN-22 has not been assigned to scheduled services, but has been used on non-scheduled international and domestic cargo operations. The AN-12 is used primarily for cargo transport and the IL-14 for utility and logistic services (see Table I, page 66, for characteristics and performance of civil and military aircraft).

III. THEORETICAL AIRLIFT CAPABILITIES

9. The main Soviet airlift capacity is provided by about 740 AN-12s. Assuming a serviceability rate of 85 percent after a standdown of 10 days, some 630 aircraft would be avail-

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able. Most of the aircraft would consist of improved variants of AN-12s which have greater range and payload capacity than the early versions had.

10. A force consisting of 350 of the improved variants could carry an airborne division prepared for airdrop with supporting equipment to a distance of at least 1,150 n.m. and return, or a one-way range of up to 2,300 n.m. The force could be augmented by six AN-22s to assist in lifting the division's heavy equipment. Flying direct routes from bases on the southern periphery of the USSR, the force on a one-way mission could reach all of the Middle East, much of Africa, all of South Asia, and much of Southeast Asia. The remaining serviceable AN-12s could carry additional airborne elements shorter distances. For maximum fuel economy the AN-12 would have to fly at up to 32,000 feet altitude to reach a range of 3,800 n.m. Since the main cabin of the AN-12 is not pressurized, the troops being transported would have to wear oxygen masks. Long flights—in excess of 12 hours—under these conditions would temporarily limit troop effectiveness.

11. For airlifting military supplies and equipment only, a force of 630 AN-12s theoretically could be serviceable at any time to deliver at least 1,000 metric tons (mt) to a distance of 3,800 n.m. or 12,100 mt a distance of 500 n.m. The following tabulation relates the maximum cargo lift capacity of this force to varying radius and range requirements. The number of serviceable aircraft would decrease depending on time and opposition.

A. Mid-East Region

12. Of the various areas of the Third World, the Mid-East and North Africa are the easiest areas for a Soviet military airlift and they have already carried out several major airlifts to the Middle East. One proven peacetime route utilizing international air routes is through Hungary and Yugoslavia and then down the Adriatic. Flight times would be shortened to the eastern Mediterranean area if overflight rights were secured from Iran, Turkey, or Greece. Limited maintenance facilities and Soviet technicians for support of AN-12 operations are located in Egypt, Syria, Algeria, and South Yemen. During the first week of operation a task force of about 150 AN-12s and 5 AN-22s could lift three and one-half paratroop regiments with all of their weapons, most of their combat support equipment, and necessary consumables.

13. The aircraft could stage through Soviet bases in Hungary for refueling before proceeding to Egypt. At least 24 hours probably would be required for the initial force to move from the USSR to Egypt if civil flight schedules, routes, and aircraft separation requirements were followed. This time could be shortened if the Soviets elected to violate some en route restrictions, but they probably would not do so to minimize the risk of confrontation with other nations. After refueling and possibly a short crew rest in Egypt, the group could depart for an assault against objectives in about 12 hours. If only troops or cargo are carried, about 20,000 troops or 3,500 mt of cargo could be delivered in one week in support of local operations.

		NAUTICAL MILES							
Payload (cargo) in metric tons, with given distance		500	1,000	1,500	2,000	2,500	3,000	3,500	3,800
		METRIC TONS							
as a radius		11,600	8,000	4,100					
as a range		12,100	11,000	9,400	7,300	5,000	4,000	2,900	1,000

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~~SECRET~~**B. Africa**

14. Using facilities in Egypt and Algeria the USSR could institute a military airlift throughout most of central Africa to northern Angola, the Congo, and Mozambique. An estimated two regiments of airborne troops could be air-landed within the first week of such an operation. An average of about 7,300 troops or about 1,600 mt of cargo could be brought in during this period.

C. Asia

15. Airlift operations into South and South-east Asia are dependent upon securing over-flight and landing rights from India or China. Assuming that the necessary rights could be secured, slightly more than two regiments of airborne troops could be airlifted. Either 12,000 troops or 2,250 mt of cargo could be airlifted within the first week after the initiation of the lift.

16. The Soviets could reach Southeast Asia without overflying other countries by using a circuitous route from the southern Primorskiy Kray through the Sea of Japan, the East China Sea, the Formosa Straits, and the South China Sea. Such missions, however, would be to extreme distances which would place serious limitations on the loads of troops, equipment, and support weapons that could be carried.

D. Latin America

17. Airlift support of military operations in the Caribbean or Latin America would pose many problems for the Soviet Union. A long flight over water would be involved whether the operation was staged through the North Atlantic via Cuba or by way of Africa and Brazil. Maintenance facilities to support air transport operations in this area are lacking. Unless substantial stocks are prepositioned at intermediate stops, the airlift would probably

encounter major maintenance problems. Over-flight and landing rights would have to be secured from a number of countries, not an easy matter. Cuba is barely within non-stop range of the AN-22 from the USSR, making a stopover point for refueling almost mandatory. Assuming that all problems have been overcome, about two regiments of airborne troops, or 1,600 mt of cargo could be airlifted to this area within the first week.

E. Aeroflot Capabilities

18. The Soviet civil air fleet has some 750 four-engine transports which could provide airlift to distant areas. The fleet includes 70 heavy (IL-62, TU-114 and AN-22 transports) and 680 medium (AN-10, AN-12 and IL-18 transports). The 200 or so AN-12s would be useful for delivery of heavy equipment because this aircraft has large rear-loading doors. The other Aeroflot aircraft have small conventional cabin openings which limit the size of equipment which can be carried. Such aircraft would be suitable only for ferrying troops to well-developed airfields, delivering small cargo, and evacuating casualties.

19. In a military airlift, Aeroflot's contribution would be primarily to transport personnel and parcel-type baggage. The cargo-carrying capability of Aeroflot would provide an increase of about one-fourth over what VTA can carry by itself. In a troop-carrying role, however, the addition of Aeroflot aircraft would increase the total theoretical lift capability from under 40,000 to nearly 100,000 men over a range of 1,400 n.m.

20. Assuming a serviceability rate of 85 percent, some 170 AN-12 cargo transports would be available. These could deliver at least 850 mt to a range of 3,300 n.m. or 2,600 mt to a range of 730 n.m. Used solely to move a maximum number of personnel without supporting equipment the approximately 640

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serviceable medium and heavy transports of Aeroflot could lift a total of over 64,000 troops to a range of 1,400 n.m. Elements of this force could be carried to varying distances up to 3,600 n.m. depending on the type aircraft involved.

21. Delivery of troops by Aeroflot aircraft to the maximum possible distance on a non-stop flight would require use of IL-62, AN-22, and TU-114 heavy transports. Again assuming that 85 percent of these were serviceable some 34 IL-62s, 24 TU-114s and two AN-22s would be available. Translating the normal payload capacity of the TU-114 to troop lift, the aircraft could carry 141 troops to 5,500 n.m. The number of passengers which could be carried on TU-114 flights from Murmansk to Cuba, however, is about one-half that number. It is believed, therefore, that a maximum of some 70 troops per aircraft or 1,700 for the force could be carried to the TU-114 maximum range. The IL-62s could carry about 3,800 troops to 4,950 n.m.

22. While some supporting equipment for these troops could be carried non-stop by the few AN-22s in Aeroflot service, much equipment would have to be prepositioned, carried by surface transportation, or carried by other civil or military aircraft. The Soviets would need permission to land and refuel in other countries along the route.

F. Helicopter Airlift Support

23. Soviet helicopters (MI-4, MI-6, and MI-8) which support the ground forces are assigned to Frontal Aviation (tactical), but are under the operational control of the front commander. The number of helicopters available for airlift has steadily grown and there are now about 1,000 airlift-capable helicopters in Frontal Aviation. They are used mainly for general support, but are allocated for the airlift of ground force elements as required. All Soviet transport helicopters are land based.

24. Assuming that the Soviet Union obtained an adequate staging area near the objective, the helicopters might be employed in short-range airlift. A typical deployed unit might consist of some 60 helicopters. With a 75 percent serviceability rate after a standdown of 10 days, a representative force of 44 helicopters (17 MI-6s, 21 MI-8s and 6 MI-4s) would be available for the operation.

25. They could, for example, carry up to 500 troops—the equivalent of a reinforced battalion—to a radius of about 120 n.m. or a range of 235 n.m. providing the heavy supporting weapons—such as howitzers and towing vehicles were carried internally. Some of the helicopters would be available to carry combat service and support elements. A mission on which the weapons are carried externally by sling would have to be flown to shorter distances as external loading increases fuel consumption over a given distance due to the increased drag. In this case up to 700 troops could be lifted providing no towing vehicles are carried.

26. On some missions the Soviets probably would reduce the number of combat troops in order to carry additional supporting weapons, extra ammunition and supplies, and to have a larger number of helicopters equipped with weapons to provide ground fire suppression. Lifting troops without supporting equipment, the helicopter unit could carry over 1,500 troops with their personal equipment.

IV. PRACTICAL ASPECTS OF AIRLIFT OPERATIONS

27. The previous discussion of the theoretical airlift capacity of the total force provides a convenient yardstick for illustrative purposes only. The observed lift capacity of a transport force over an extended period of

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time and under varying operating conditions is, however, a more realistic measure of force limitations.

A. Restrictions and Limitations

28. Many factors must be considered in translating theoretical airlift capabilities into a measure of the military force the Soviets can actually apply. The most important factor limiting the size of the force to be employed would be the number of transport aircraft which must be held in the USSR to meet other national objectives, including various war contingencies. Previous out-of-country airlift operations have commonly used about one-fifth of the AN-12 strength; thus, it is reasonable to assume that some 150 AN-12s could be made available quickly for special contingency operations. Next, the Soviets must know that in a crisis few countries are likely to grant overflight rights to the Soviets to carry out any intervention against another country which is friendly to the one being overflown. The Soviets must also consider the existence and location of opposing defenses in a hostile situation. Flying over or staging through friendly countries can reduce the chance of opposition en route, but valuable time can be lost in obtaining overflight or landing permission, refueling, and flying indirect routes. The problems of maintaining the airlift force are also magnified. Nevertheless, this is the type of air movement the Soviets would probably undertake in an intervention under conditions other than general war.

B. Egypt and Yemen Support Operations

29. The Soviet airlift of military supplies to the Middle East in 1967 and to Yemen in 1967-1968, although not analogous to sending an intervention force to these areas, provides some insight into Soviet out-of-country airlift practices. In June and July 1967, about

125 aircraft made at least 350 flights to the Middle East with about 200 to Egypt, 90 to Algeria, 40 to Syria, and 25 to Iraq.

30. In the airlift to Yemen, some 250 flights were made during the period November 1967 through February 1968. Most of the aircraft staged through Budapest, Cairo, and Aswan.

C. Support to North Vietnam

31. Soviet airlift capabilities to Southeast Asia are difficult to judge since military and civil transport aircraft have made few special flights to that area. Past activity does, however, point out the difficulties which the Soviets can encounter in obtaining permission to land in or to overfly neighboring countries even when not involved directly in military operations.

32. Since the mid-1960s, the Soviets have encountered resistance in overflying Communist China. In late 1968 the USSR began securing landing and beyond rights from India and overflight rights from Laos in order to establish a route to Hanoi that avoided flying over China. Existing civil air agreements with Afghanistan, Pakistan, and Burma provided the remaining rights necessary for this route. Soviet transport agreements with India and Burma, and probably the one with Laos as well, contain the standard bilateral air agreement provision that no troops or military equipment can be carried into or over the countries concerned.

D. The Peruvian Debacle

33. More insight into the capabilities and limitations of Soviet airlift forces in operating to distant areas has been gained from the recent airlift to Peru following the disastrous earthquakes on 31 May 1970. The Soviets advertised it as a massive airlift to consist of 65 flights, to be completed during the period

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3-21 July. The first flight—an AN-12 carrying about 6 mt of cargo—left the USSR 6 days late on 9 July and arrived in Lima on 12 July. There were 14 additional flights over the next 6 days, including 10 AN-12s and 4 AN-22s. On 18 July an AN-22 reportedly carrying equipment and supplies for a hospital was lost over the Labrador Sea. Further Soviet flights to Peru were canceled for one week. They were resumed on 25 July, and by the end of the month, 6 more AN-12s flew in supplies. A two-week pause ended with the final cancellation of the airlift on 15 August. Only 22 of the 65 scheduled flights had been completed. The Soviets explained that the remainder of the supplies would arrive by ship.

34. There are a number of reasons for the failure of the Peruvian airlift. First, the preparations for the airlift were too hasty and ultimately inadequate. Extensive preparations are required to ensure the smooth operation of a long-distance airlift, such as positioning aircraft maintenance personnel and spare parts along the proposed route to take care of equipment failures and other technical problems. Apparently such advance preparations by the Soviets were inadequate. Moreover, the distance to be covered—more than 7,000 miles, much of it over unfamiliar routes—undoubtedly compounded Soviet difficulties.

35. The payloads carried by the aircraft on the Peruvian airlift appear to have fallen far short of those that could have been carried. Preliminary assessments suggest that the average load carried by the AN-12s was on the order of 15,000 pounds. The longest leg of the trip—Halifax to Havana—was 1,840 n.m. The AN-12 probably could have carried from 25,000 to 31,000 pounds of cargo and still have had sufficient fuel reserves. One probable reason for the light overall load is that some AN-12s carried bulky, but relatively light cargo. The carrying of light loads also suggests that

large fuel reserves were carried in the event adverse weather conditions and navigational difficulties were encountered.

36. The AN-22s loads ranged from 64,000 to 70,000 pounds, considerably less than what we believe could have been carried. This was due in part to the fact that the items carried were bulky, including MI-8 helicopters, vehicles, and a field hospital.

37. One shortcoming demonstrated by the Soviets which could adversely affect future missions to distant areas was a general lack of airmanship by AN-12 crews. Numerous violations of international flight regulations occurred which could have caused denial of future operations were it not for the humanitarian nature of the flight. The crews navigated poorly, did not maintain assigned altitudes and routes, and failed to follow air traffic controllers' instructions. Although each aircraft carried an interpreter and the aircrews could speak some English, there were several incidents involving air traffic control at Halifax which indicated a lack of understanding of international procedures, poor comprehension of English or perhaps a disregard for the correct procedures.

38. The Peruvian venture demonstrates that currently Soviet airlift forces are ill-prepared for large-scale operations over the Atlantic or Pacific.

39. But in other areas where the Soviets have previously had extensive operational experience—in the Middle East, Africa, and South Asia—the Soviets have conducted well planned and executed airlifts of arms to many countries. This was particularly evident in 1967 when they made over 600 flights out of the area to Algeria, to Yemen, and to Egypt after the June war. In 1970 and 1971 they again demonstrated their flexibility in responding to

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crises by airlifting most of the Soviet-manned air defense fighters to Egypt and in delivering aid to India in response to the latter's request for assistance.

V. OTHER FORMS OF SUPPORT FROM CIVIL AVIATION

40. Civil aviation in the USSR facilitates administrative and political contact throughout the world. Priority of this function has shifted with fluctuating Soviet economic, political, and military objectives.

41. The Ministry of Civil Aviation (MGA) is responsible for all civil aviation activities in the Soviet Union. In its international air transport operations, Aeroflot's air route network is estimated to cover approximately 90,000 route-miles. Scheduled services connect the Soviet Union with 66 foreign cities—14 in Communist nations and 52 in the Free World.

42. Formal bilateral air transport agreements with other nations frequently have been the method employed by the Soviet Union to gain access to new areas. Immediate future objectives of Aeroflot in the Third World are believed to be centered on Australia and Cambodia with continuing efforts to expand African services and to gain access to South American points.

43. All Aeroflot international services permit free movement of Soviet personnel abroad for whatever mission Moscow may dictate including penetration, espionage, and subversion. A large percentage of the airline's officials assigned outside the USSR are believed to be staff officers of the Soviet intelligence services. In addition to scheduled services, Aeroflot conducts the so-called "special air missions" undertaken ostensibly for cultural, diplomatic, philanthropic, or propaganda purposes.

A. Special Aeroflot Operations

44. During the period December 1960 to October 1962, Soviet transport aircraft with Aeroflot markings conducted airdrops in support of the Communist Pathet Lao and North Vietnamese Army forces in Laos.

45. Soviet military transports fly "Special Task" missions outside the USSR and East European countries using callsigns which allow them to travel as Aeroflot aircraft. They follow established international civil flight routes and communicate on both international civil and Soviet MGA communications facilities. Their use of civil facilities at foreign airfields lends a peaceful air to the operation of military aircraft. The use of the special callsigns also permits the overflight of non-Communist countries which would not otherwise grant passage of "known" military aircraft.

46. In the Arab-Israeli war of June 1967, Soviet non-military transports, reportedly flying medical supplies to the Middle East, were possibly carrying small arms to the Arabs.

47. In 1968, Aeroflot acted as the vanguard in the Soviet invasion of Czechoslovakia, asking for and receiving permission to operate several Aeroflot charter flights into Prague. The first aircraft carried communications equipment and the second aircraft carried security forces. After these aircraft landed and secured the airfield, troop transports were brought in.

VI. OUTLOOK

48. We expect the Soviets to have somewhat more than 50 large AN-22s and a few IL-76s in operational military service by mid-1975. The AN-22s are able to fly to Cuba non-stop from Murmansk or from North Africa on a shorter route. Probably one-half of the AN-22 force might be available for the delivery of

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military forces or military aid to Cuba or some other country in the Caribbean or South America. The flight from Murmansk to Cuba might be critical, however, since the distance is near the maximum capability of the aircraft.

49. The Soviets should find the AN-22 particularly valuable for carrying heavy and high priority equipment into the Middle East and North African area. Although the AN-12 has been used to meet critical Arab requirements for such items as fighter aircraft, the AN-22 can carry much heavier and bulkier equipment such as tanks, large tactical rockets and launchers, and mobile air defense missiles. The much greater range of the AN-22 also provides the Soviets with more options for delivery of regimental-size intervention forces to these areas and to Southeast Asia.

50. The supersonic transport known as the TU-144 first flew on 31 December 1968, the first supersonic transport to become airborne. It is currently being flight tested. Full commercial service is not expected before 1974. Another aircraft in a more advanced testing stage is the TU-154, a new medium-range jet transport which became operational (for mail service at least) this year and may in time

become the backbone of Aeroflot's passenger carrying fleet. These aircraft have a primarily civilian role, however.

51. There are major restrictions which will continue to affect the Soviets' capability to airlift military forces and deliver aid to distant areas. These restrictions include the need to obtain landing or overflight rights, the relatively small loads which can be carried to long distances by most of their transport aircraft, and the fact that the AN-12 fuselage is not pressurized.

52. Soviet intervention forces might face opposition by hostile forces while en route to their objective and require fighter escort. From the USSR such escort is possible only to a radius of 500 n.m. or less.

53. The Soviets lack jet-powered military transports such as the US C-141 and C-5 for rapid response to high priority airlift requirements. However, the IL-76 will begin to alleviate this shortcoming by the mid-1970s. There are also indications that the Soviets will make a jumbo jet and such an aircraft probably would include a cargo as well as a passenger version.

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ANNEX I

SOVIET MILITARY AID

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TABLE I
SOVIET TRANSPORT AIRCRAFT FOR OUT-OF-COUNTRY AIRLIFT^a
(Characteristics and Performance and Inventory)^b
Mid-Year 1971

	Year Introduced into Service	Number and Types of Engines	Troop Capacity	Normal Payload (pounds) ^c	Normal Radius/Range (n.m.) ^c	Runway Requirement (feet)	Number in VTA	Number in GPTU ^b	Number in Aeroflot
AN-8 Camp.....	1959	2 turboprop	75	15,900	1,440/2,650	4,000	5	0	0
AN-10 Cat.....	1960	4 turboprop	90	20,600	710/1,450	4,000	1	12	80
AN-12 Cub (5 variants)...	1959-1966	4 turboprop	90	9,500-21,060	840-1,900/ 1,670-3,800	5,000	740	0	200
AN-22 Cock.....	1967	4 turboprop	175	99,000	2,820/5,100	10,000	10	1	2
AN-24 Coke.....	1962	2 turboprop	49	8,100	580/1,150	3,000	3	7	600
IL-14 Crate (2 variants)...	1954-1956	2 piston	18/24	4,750-6,350	720/1,600	3,000	10	27	470
IL-18 Coot (3 variants)...	1961-1966	4 turboprop	95	15,000-21,400	1,655-2,180/ 3,120-4,250	5,000	0	9	400
IL-62 Classic.....	1967	4 jet	186	26,250	2,400/4,950	8,000	0	0	40
IL-76 Candid.....	1974	4 jet	.....	30,000	3,050/6,000	.....	.....	.....	.....
TU-104 Camel.....	1960	2 jet	100	18,300	1,000/2,150	8,000	0	0	160
TU-114 Cleat.....	1960	4 turboprop	220	34,000	2,750/5,530	10,000	0	0	29
TU-124 Cookpot.....	1962	2 jet	56	13,000	760/1,580	8,000	9	5	77
TU-134 Crusty (2 variants).....	1967/1969	2 jet	72/76	12,700-14,850	950-1,000/ 1,850-1,950	8,000	0	1	60

^a The aircraft selected are those which have a range of at least 1,000 n.m. when carrying a normal payload and were introduced into service since 1950.

^b The inventory includes those transports assigned to three organizations which have out-of-country operations as one of their main missions. Military Transport Aviation (VTA) is usually referred to as VTA-Airborne, since it has support of the airborne troops as one of its main missions. There are two General Purpose Transport Units (GPTU) which support diverse functions including the transport of VIPs. Airlift provided by these three organizations could be augmented by some 500 transports assigned to other military transport units.

^c Normal payload is the load that can be carried with full internal fuel load at maximum take-off weight. Performance shown is for normal payload with full internal fuel. Generally, additional payload could be carried with less fuel, but to reduced radius/range.

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ANNEX I

SOVIET MILITARY AID

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SOVIET MILITARY AID

1. Because the Soviet military aid program is in great part a response to available opportunities, the annual magnitude and direction of aid has varied widely. During 1955-1958, agreements were largely with Middle Eastern countries. A precipitous decline in 1959 in new agreements was followed by two years of sizable commitments, principally to Indonesia as that country's territorial dispute with the Netherlands intensified. Agreements concluded during 1962-1964 were influenced by Sino-Indian tensions, civil war in Yemen, and Indonesia's confrontation with Malaysia. The bulk of commitments since 1966 reflects the continuing arms buildup in the Arab countries and sizable new extensions to India and Iran.

2. One other factor substantially influences the level of new military aid extensions in certain years—replacement of obsolete and depreciated equipment. The most obvious examples have been the periodic replacement of the various generations of fighter aircraft (Mig-15s and 17s by Mig-19s and 21s), procurement of the TU-16 medium jet bomber after initial purchases of the IL-28 light jet bomber, and more widespread use of the T-54/55 tanks as compared with less advanced and lighter T-34 tanks. Such cycles will continue as an important feature in the Soviet program, because recipient countries continually clamor for more advanced arms. Moreover, as each generation of weapons becomes obsolete for Soviet requirements, the USSR frequently discontinues the manufacture both

of that weapon and its spare parts. There is, however, evidence that the Soviets have continued production of some types of equipment and spare parts for export. (See Table I, page 71, for major military equipment delivered by Communist countries.)

I. MAGNITUDE AND CHARACTER OF THE PROGRAM

3. The present Soviet approach to military aid found its first expression in 1955 when the USSR, initially using Czechoslovakia as an intermediary, began arms shipments to Egypt. Since then, the USSR has extended some \$6.6 billion in military aid to 26 countries of the Third World. (See Tables II and III, page 74.) Egypt and Indonesia account for about 50 percent of the total Soviet extensions. Six other countries—principally India, Iraq, Syria, Iran, Afghanistan, and Algeria—have received most of the rest. By the end of 1970, an estimated 80 percent of Soviet military aid commitments had been delivered. Drawings in recent years prior to 1970 had averaged about \$400 million annually. In 1970, largely due to the delivery of air defense equipment to Egypt, drawings reached a record annual high of \$900 million. (See Table VI, page 76.)

4. The military aid programs of the East European countries have been relatively modest and are likely to remain so. Of the \$800 million in East European arms extended to 15 less developed countries (LDCs), nearly 60 percent was provided during 1955-1958

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when they were acting primarily as intermediaries for the USSR. (See Tables II and IV, pages 74 and 75.) East European arms commitments subsequently dropped sharply and since 1964 have averaged some \$50 million annually. The major suppliers have been Czechoslovakia and Poland and the primary recipients have been the Arab countries, India, and Indonesia. Their credit terms have been more stringent than those offered by the USSR; they have insisted on shorter repayment periods and payment in hard currency, and have given no discount from list prices.

5. In addition to the Soviet and East European extensions to Third World countries, North Vietnam has received \$1.6 billion and North Korea has received \$0.8 billion. Cuba has also received substantial military aid, amounting to some \$800 million during the period 1960-1970 (see Table V, page 75).

II. MILITARY TECHNICAL ASSISTANCE

6. The rapid influx of large quantities of modern military equipment poses serious problems for the recipients because they lack sufficient trained manpower to absorb this equipment. This requires the USSR to provide a complementary program of technical assistance embracing two activities: the training in the USSR of military personnel from LDCs and the sending of military technicians and advisers to countries receiving military aid. Almost all recipients have received both types of assistance. The costs to these countries of such technical services has totalled at least \$500 million since 1956. Most of this cost has been paid out of current account as only \$40 million is known to be covered by long-term credits.

III. TRAINEES

7. Since 1955 some 30,000 military trainees, largely middle-grade officers, have gone to the USSR for training (see Table VII, page 77). About 85 percent of the trainees have come from Afghanistan, India, Indonesia, and Arab countries. Most trainees generally are sent to the USSR before delivery of the weapons and equipment for which they are to be trained. These training programs run all the way from 6 weeks to 5 years, but most of the trainees are in programs lasting less than a year. The longer programs generally include training at Soviet higher military schools, such as the Frunze Military Academy of the General Staff.

IV. TECHNICIANS

8. Beginning with some 350 military technicians in the LDCs in 1956, the number grew steadily and since 1961 has averaged over 4,500 annually. About 10,000 Soviet military technicians were present in recipient countries (of which about 6,500 were in Egypt) in 1970. (See Table VIII, page 77.) Although some of these technicians deliver, assemble, and service equipment, their most important functions are to train local personnel in the operation and maintenance of equipment and to serve as military advisers. For the larger aid recipients, courses generally are established in the use of the entire range of armaments received. Soviet officers also serve as instructors in the major military academies of these countries. In their advisory capacities, Soviet military officers have played key roles in modernizing and reorganizing the military establishments of the major recipients. Often they are assigned to staff and line units to assist in planning and conducting training exercises in the tactical use of the new military equipment.

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TABLE I
MAJOR COMMUNIST MILITARY EQUIPMENT DELIVERED, BY RECIPIENT *
1955-1970

Type of Equipment	Units													
	Afghan- istan	Alge- ria	Cam- bodia	Congo (B)	Cuba	Cy- prus	Egypt	Ghana	Guinea	India	Indo- nesia	Iran	Iraq	Libya
Land Armaments														
Heavy Tanks.....	..	..	..	..	40	..	60	..	..	..	..	..	..	..
Medium Tanks.....	436	357	..	..	625	32	2,250	..	10	550	..	..	750	130
Light Tanks (amphibious).....	..	..	..	..	16	..	87	..	11	176	155	..	..	..
Self-propelled Assault Guns.....	48	100	..	..	120	..	250	10	5	..	..	..	150	24
Personnel Carriers, Armored and Amphibious.....	300	500	21	19	500	32	1,600	24	29	103	400	600	1,100	100
Artillery Pieces ^b	1,750	950	221	25	2,125	32	2,500	30	79	463	550	575	1,400	90
Naval Ships														
Light Cruisers.....	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Destroyers.....	..	..	..	..	..	..	6 ^c	..	..	..	16	..	..	..
Submarines.....	..	..	..	..	..	..	18 ^c	..	..	4	12	..	..	..
Minesweepers.....	..	2	..	..	..	..	13	..	..	..	6	..	2	..
Submarine Chasers and Escort Vessels.....	..	6	..	..	18	..	12	..	..	5	16	..	3	..
Motor Torpedo and Missile Boats	..	21	..	..	42	6	56	..	2	..	26	..	12	..
Other, Including Auxiliary Vessels and Landing Craft.....	..	3	3	13	21	..	27	4	9	8	57	..	7	..
Aircraft														
Medium Jet Bombers.....	..	..	..	..	..	..	50	..	..	..	26	..	10	..
Light Jet Bombers.....	35	32	..	..	..	..	76	..	..	..	28	..	15	..
Jet Fighters.....	190	128	14	..	192	..	805	..	2	150 ^d	112	..	222	..
Heavy Transports (AN-12).....	1	7	..	..	1	..	28	..	..	40	6	..	11	..
Other, Including non-Jet Combat Aircraft, Trainers, Transports, and Helicopters.....	96	68	15	3	271	..	500	5	23	167	258	..	185	..
Guided Missile Systems ^e														
Air-to-Surface ^f.....	..	..	..	..	..	..	6	..	..	..	12	..	..	..
Air-to-Air ^g	42	22	..	..	69	..	254	..	..	50	26	..	86	..
Surface-to-Air ^h	1	1	..	..	27	..	134	..	..	17	8	..	..	..
Surface-to-Surface ⁱ	9	18	..	23	12
Antitank ^j	24	27	..	100	28	..

Footnotes at end of table.

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TABLE I (Continued)

MAJOR COMMUNIST MILITARY EQUIPMENT DELIVERED, BY RECIPIENT •
1955-1970

Type of Equipment	Units										
	Mali	Morocco	Nigeria	Pakistan	Somalia	Southern Yemen	Sudan	Syria	Tanzania	Uganda	Yemen
Land Armaments											
Heavy Tanks.....	..	..	..	..	..	..	..	..	..	..	..
Medium Tanks.....	12	122	..	550	155	42	102	950	10	..	135
Light Tanks (amphibious).....	..	..	..	..	..	..	..	33	14	..	..
Self-propelled Assault Guns.....	..	30	..	..	..	..	..	140	..	..	65
Personnel Carriers, Armored and Amphibious.....	100	80	3	..	244	6	172	600	40	36	155
Artillery Pieces ^b	80	100	90	350	441	55	100	1,200	60	36	460
Naval Ships											
Light Cruisers.....	..	..	..	..	..	..	..	..	..	..	..
Destroyers.....	..	..	..	..	..	..	..	..	..	..	..
Submarines.....	..	..	..	..	..	..	..	..	..	..	..
Minesweepers.....	..	..	..	..	..	..	..	2	..	..	..
Submarine Chasers and Escort Vessels.....	..	..	..	..	..	..	..	..	..	..	..
Motor Torpedo and Missile Boats.....	..	..	..	..	..	..	..	22	..	..	2
Other, Including Auxiliary Vessels and Landing Craft.....	..	..	3	..	8	..	..	..	18	..	3
Aircraft											
Medium Jet Bombers.....	..	..	..	..	..	..	..	..	..	..	..
Light Jet Bombers.....	..	..	..	12	..	..	..	6	..	..	8
Jet Fighters.....	3	12	33	108	25	10	24	291	..	5	18
Heavy Transports (AN-12).....	..	..	..	..	..	..	..	..	..	..	..
Other, Including non-Jet Combat Aircraft, Trainers, Transports, and Helicopters.....	18	5	13	14	3	5	16	141	1	15	55
Guided Missile Systems ^a											
Air-to-Surface ^f.....	..	..	..	..	..	..	..	..	..	..	..
Air-to-Air ^g	3	..	24	111
Surface-to-Air ^h	1	10
Surface-to-Surface ^k	4
Antitank ^l	30

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- ^a Other token deliveries of military materiel have been made by communist countries to Burma, Ethiopia, Laos, and Nepal. These figures do not reflect attrition nor do they show equipment originating in communist countries and transferred from non-communist countries to others.
- ^b Including recoilless cannons and mortars over 100 mm in size. The figure for Egypt also included the delivery of six FROG rocket launchers.
- ^c Including two old destroyers and five old submarines returned to the USSR in exchange for newer models.
- ^d Excluding those Mig-21 fighters assembled at the aircraft assembly plant at Nasik, India.
- ^e Data reflect numbers of aircraft, ships, and vehicles having missile capability.
- ^f Indicating number of TU-16 aircraft equipped with ASMs (two per aircraft).
- ^g Indicating number of fighter aircraft equipped with AAMs (two to four per aircraft).
- ^h Indicating number of SAM firing battalions (sites)—(six launchers per SA-2 site, four dual launchers per SA-3 site).
- ⁱ Algeria has received an undetermined number of SAMs, and now may have an operational capability.
- ^j Equipment for one SAM firing battalion originally delivered to Iraq has been resold to Egypt.
- ^k Indicating number of Komar and Osa-class boats equipped with SSM (two to four per vessel) and three coastal defense missile sites in Egypt.
- ^l Indicating number of vehicles used as launchers (three missiles per vehicle).

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TABLE II

MILITARY AID EXTENDED BY THE USSR
TO LESS DEVELOPED COUNTRIES
1955-1970

Million Current US Dollars	
Year	USSR
1955-1960.....	1,222
1961.....	828
1962.....	416
1963.....	387
1964.....	901
1965.....	257
1966.....	371
1967.....	584
1968.....	395
1969.....	264
1970.....	962 ^a
Total.....	6,587 ^b

^a Includes \$640 million to Egypt.

^b In addition to this total credit extended, cash purchases or cash down payments were made by India (\$249 million), Libya (\$20 million), Nigeria (\$16 million), Indonesia (\$11 million), Sudan (\$9 million), and Iraq (\$2 million).

TABLE III

SOVIET MILITARY AID TO LESS
DEVELOPED COUNTRIES,
EXTENDED AND DRAWN
1955-1970

Recipient Country	Million Current US Dollars	
	Extended	Drawn
	USSR	USSR
Total.....	6,587	5,411
Africa.....	591	448
Algeria.....	295	261
Burundi.....	Negl.	..
Congo (B).....	14	2
Ghana.....	10	10
Guinea.....	10	10
Libya.....	113	30
Mali.....	4	4
Morocco.....	13	13
Nigeria.....	9	9
Somalia.....	45	40
Sudan.....	66	60
Tanzania.....	2	2
Uganda.....	10	7
East Asia.....	1,104	868
Burma.....	N.A.	..
Cambodia.....	12	10
Indonesia.....	1,092	858
Near East and South Asia..	4,892	4,095
Afghanistan.....	280	275
Cyprus.....	26	18
Egypt.....	2,135	2,045
India.....	768	574
Iran.....	310	90
Iraq.....	722	525
Pakistan.....	30	8
Southern Yemen.....	17	10
Syria.....	527	473
Yemen.....	77	77

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TABLE IV

EAST EUROPEAN MILITARY AID TO LESS
DEVELOPED COUNTRIES, EXTENDED
AND DRAWN 1955-1970

Million Current US Dollars

Recipient Country	Extended	Drawn
Total.....	795	706
Africa.....	42	31
Algeria.....	1	1
Guinea.....	1	1
Libya.....	5	0
Morocco.....	20	20
Sudan.....	9	3
Tanzania.....	1	1
Uganda.....	5	5
East Asia.....	199	189
Indonesia.....	199	189
Near East and South Asia..	554	486
Afghanistan.....	13	13
Egypt.....	285	282
Cyprus.....	1	1
India.....	56	51
Iraq.....	77	48
Syria.....	92	62
Yemen.....	30	29

TABLE V

ESTIMATED VALUE OF SOVIET MILITARY
DELIVERIES TO CUBA
1960-1970

Million Current US Dollars

Total.....	800
1960-1962.....	490
1963.....	76
1964.....	34
1965.....	21
1966.....	42
1967.....	81
1968.....	12
1969.....	22
1970.....	22

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TABLE VI
DRAWINGS ON SOVIET MILITARY AID BY LESS DEVELOPED COUNTRIES
1955-1970

Recipient	Million Current US Dollars												
	Total	1955-1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total.....	5,411	441	216	322	786	577	284	321	442	408	366	336	912
Afghanistan.....	275	79	2	..	1	20	3	35	30	25	30	30	20
Algeria.....	261	..	..	..	3	7	60	30	85	40	15	1	20
Cambodia.....	10	..	..	..	..	1	1	..	2	..	4	2	..
Congo (B).....	2	..	..	..	..	..	..	1	..	..	1	..	..
Cyprus.....	18	..	..	..	..	..	..	18	..	..	..	..	..
Egypt.....	2,045	165	150	175	150	150	75	80	100	170	100	90	640
Ghana.....	10	..	..	..	3	3	2	2	..	..	..	..	..
Guinea.....	10	..	3	..	1	..	1	1	2	2	..	..	..
India.....	574	..	..	15	4	54	2	60	165	50	90	84	50
Indonesia.....	858	13	17	55	448	185	90	50	..	..	..	..	..
Iran.....	90	..	..	..	..	..	..	..	..	15	20	30	25
Iraq.....	525	14	26	60	114	96	10	25	28	47	50	30	25
Libya.....	30	..	..	..	..	..	..	..	..	..	..	..	30
Mali.....	4	..	..	2	..	..	..	..	2	..	..	..	..
Morocco.....	13	..	3	..	7	1	..	..	1	1	..	..	..
Nigeria.....	9	..	..	..	..	..	..	..	..	6	3	..	..
Pakistan.....	8	..	..	..	..	..	..	..	..	..	8	..	..
Somalia.....	40	..	..	..	..	..	15	10	4	..	2	3	6
Southern Yemen.....	10	..	..	..	..	..	..	..	..	2	4	4	4
Sudan.....	60	..	..	..	..	..	..	..	..	5	15	40	..
Syria.....	473	170	15	15	35	35	15	5	15	48	35	35	50
Tanzania.....	2	1	1
Uganda.....	7	1	5	..	1
Yemen.....	77	20	25	10	2	2	10	5	1	2

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TABLE VII

MILITARY PERSONNEL FROM LESS
DEVELOPED COUNTRIES TRAINED
IN THE USSR *

Country	Persons		
	Departures to Communist Countries		Being Trained in
	1955- December 1970	January- December 1970	December 1970
	USSR	USSR	USSR
Total.....	26,195	2,200	3,470
Afghanistan.....	1,890	250	500
Algeria.....	1,920	30	480
Cambodia.....	30	..	..
Congo (B).....	320	95	160
Egypt.....	5,045	1,000	300
Ghana.....	180	..	..
Guinea.....	500	..	65
India.....	1,445	150	100
Indonesia.....	7,560	..	..
Iran.....	135	110	110
Iraq.....	1,650	150	370
Mali.....	150	55	55
Morocco.....	..	..	..
Nigeria.....	95	10	35
Pakistan.....	40	..	..
Somalia.....	1,215	300	350
Southern Yemen..	160	..	160
Sudan.....	310	10	150
Syria.....	1,310	25	220
Tanzania.....	250	..	..
Uganda.....	140	15	15
Yemen.....	850	..	400

* Data refer to the estimated minimum number of persons departing for training. Numbers are rounded to the nearest five.

TABLE VIII

SOVIET MILITARY TECHNICIANS IN LESS
DEVELOPED COUNTRIES *
1969-1970

Country	Persons	
	1970	1969
	USSR and Eastern Europe	USSR and Eastern Europe
Total.....	10,170	6,745
Afghanistan.....	160	200
Algeria.....	1,000	1,200
Cambodia.....	..	30
Congo (B).....	15	15
Egypt.....	6,500 ^b	3,000
Ethiopia.....	..	5
Guinea.....	65	65
India.....	300	455
Indonesia.....	..	30
Iran.....	30	15
Iraq.....	320	320
Mali.....	30	105
Morocco.....	20	20
Nigeria.....	50	130
Pakistan.....	10	10
Somalia.....	250	180
Southern Yemen..	120	100
Sudan.....	400	200
Syria.....	750	500
Tanzania.....	5	35
Uganda.....	45	30
Yemen.....	100	100

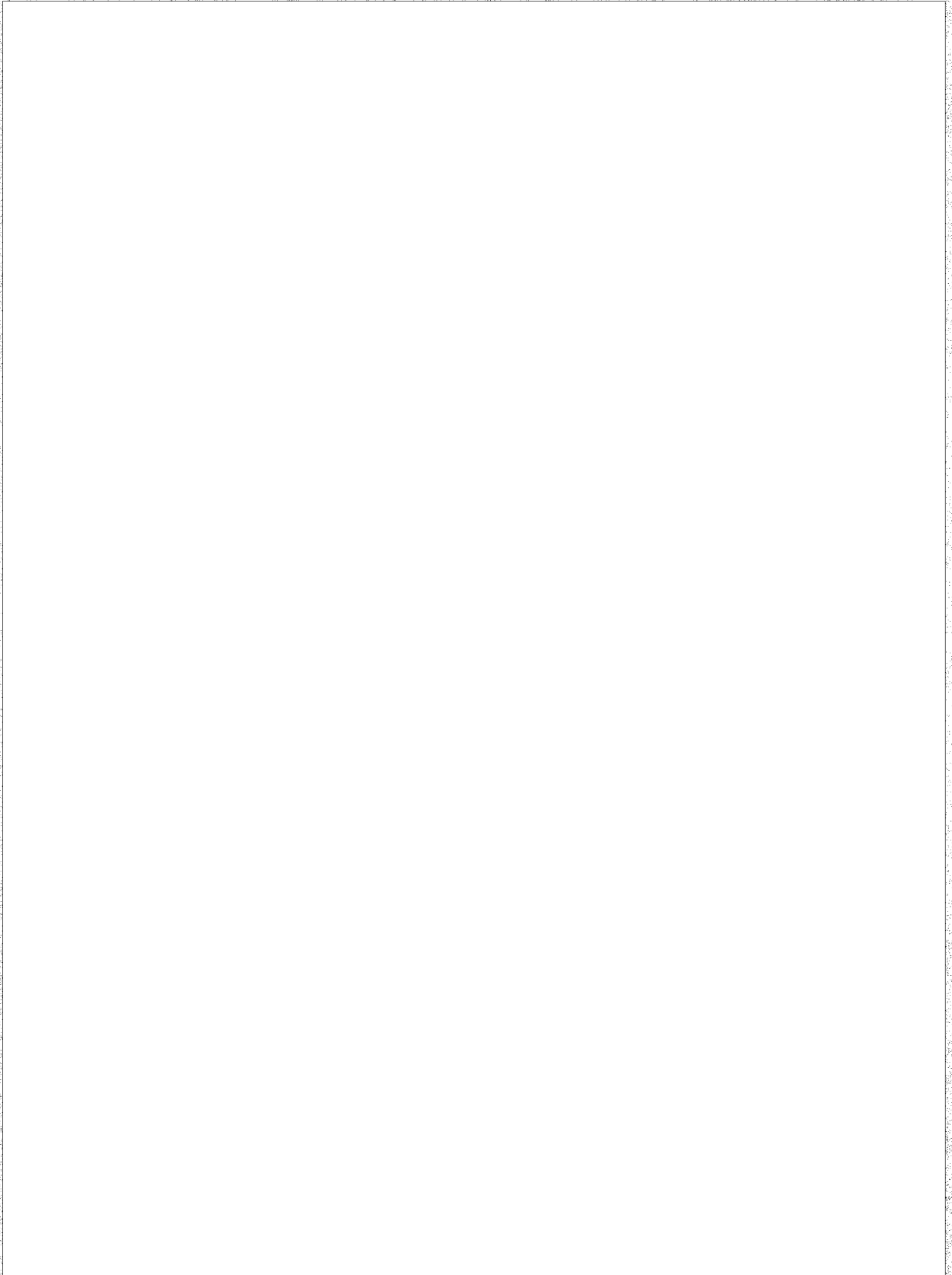
* Minimum estimates of the number of persons present for a period of one month or more. Numbers are rounded to the nearest five.

^b Does not include an estimated 7,000 Soviet military personnel assigned to Soviet operational units in Egypt. The mid-1971 figure for all Soviet military personnel in Egypt was about 16,000.

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