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Intelligence Memorandum

Communist Military Aid Deliveries to North Vietnam in 1972

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COMMUNIST MILITARY AID DELIVERIES TO NORTH VIETNAM IN 1972

Overview

- 1. Estimates of North Vietnam's military aid receipts¹ show a sharp jump in 1972, reflecting the massive deployment of weapons and extensive losses attending Hanoi's spring offensive. Last year, deliveries probably totaled about US \$575 million, more than double the previous year's level but still below the 1967 peak (see Table 1).
- 2. Most of the military supplies came from two traditional sources, China and the USSR, and both countries stepped up deliveries in almost every major category of combat materiel (see Table 2). Soviet assistance was concentrated in air defense equipment but also included some of the newer and more sophisticated ground forces hardware. As in the past, China remained the dominant supplier of ground forces equipment, including tanks, small arms, and other infantry weapons.
- 3. During the latter part of 1971 and early 1972, North Vietnam received a number of new weapons that were deployed for the first time in South Vietnam during the spring offensive. Among these were Soviet and Chinese 130-mm field guns, Chinese 122-mm field guns (Type 60), Soviet SA-7 (Grail) antiaircraft missiles, Soviet AT-3 (Sagger) wire-guided antitank missiles, Soviet 160-mm mortars, Chinese 82-mm recoilless rifles, and Chinese Type 68 automatic rifles the most modern rifle in the Chinese inventory. Specific details of various imported weapons systems are presented in Tables 3 and 4.
- 4. Commitments from the Communist allies in 1972 reflected continuing Soviet and Chinese support for Hanoi throughout the period of intense combat activity, April-December. Hanoi had obtained commitments from both Moscow and Peking in the fall of 1971 for military and economic aid deliveries in 1972. Supplementary agreements covering both military and economic aid were obtained from the USSR in December 1971 and from China in January 1972. Moscow sent Marshall Pavel Batitsky, commander-in-chief of Soviet Air Defense Forces, in March, probably to

Note: Comments and queries regarding this memorandum, prepared jointly by the Central Intelligence Agency and the Defense Intelligence Agency, are welcomed. They may be directed to

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1. For a brief discussion of the nature and method of estimating military aid to North Vietnam, see the Appendix.

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Table 1

Communist Military Deliveries to North Vietnam

		Million 19								
:	1955-64	1965	1966	1967	1968	1969	1970	1971	1972	1955-72
Total ¹	140	365	610	830	530	315	190	275	575	3,835
USSR	70	310	500	675	415	175	90	160	355	2,750
China	70	55	110	155	115	140	100	110	215	1,070
Other	Negl.	Negl.	Negl.	Negi.	Negl.	Negl.	Negl.	. 5	5	15

^{1.} Because of rounding, components may not add to the totals shown.

Table 2

Soviet and Chinese Military Aid Deliveries to North Vietnam, by Major Type of Equipment

Million 1970 US \$

•	1970		1	971	1972		
	USSR	China	USSR	China	USSR	China	
Total ¹	90	100	160	110	355	215	
Air defense					,		
equipment	10	8	65	6	132	29	
Missiles	6	••••	15	••••	104	••••	
Ground forces							
equipment	12	32	36	42	22	80	
Ammunition	49	53	37	45	74	.90	
Naval craft		••••	••••	8	8	2	
Other	13	8	8	7	15	12	

^{1.} Totals are rounded to the nearest \$5 million.

Table 3

Chinese Military Aid Deliveries to North Vietnam

	Quantity (Units)				Value ¹ (Million 1970 US \$)			
,	1969	1970	1971	1972 ²	1969	1970	1971	1972 ²
Total ³	••••	••••	••••	••••	140	100	110	215
Air defense equipment ³	••••	••••	••••	••••	41	8	6	29
Antiaircraft artillery ³	••••	••••	••••		' '9	6	6	6
57-mm	35	40	30	20	2	3	2	2
37-mm	210	110	120	140	6	3	4	4
14.5-mm	120	40	60	10	1	Negl.	Negl.	Negi.
Radar	22	13		45	2	2	_	140gr. 8
Jet fighter aircraft	32		****	17	30		****	15
Ammunition (metric tons)	9,000	13,000	11,000	22,000	37	53	 45	90
Ground forces equipment ³	•	•	-	-	60	32	42	80
Field artillery (75-mm	****	****	****	****	00	32	42	90
to 152-mm)	110	45	60	110	2	1	1	
Armor ³			-	110	2	1 4	1 11	6
T-59	 15	25	50	200			-	40
T-62/63	15	25 15	30 30	200	2	3	7	28
Armored personnel	13	12	30	120	1	1	3	11
carriers			. 16	10				
Mortars ³	••••	****	16	18	••••		1	1
Rocket launchers ³	****	****	••••	••••	15	3	3	6
	****	••••	••••	••••	Negl.	Negl.	1	Negl.
Small arms and other								
infantry weapons ³	••••	****		••••	40	24	26	28
Naval craft	• • • • • • • • • • • • • • • • • • • •		8	4	••••	••••	8	2
Trucks	300	1,200	1,000	1,700	2	8	7	12

^{1.} Where possible, values are based on comparable US weapons and, alternatively, on Soviet foreign trade prices in 1970 US \$. Individual categories are rounded to the nearest \$1 million; totals are rounded to the nearest \$5 million. Because of rounding, components may not add to the totals shown.

^{2.} Preliminary estimates.

^{3.} In categories that contain non-homogenous types of equipment, no quantitative totals were listed.

Table 4
Soviet Military Aid Deliveries to North Vietnam

	Quantity (Units)					Value ¹ (Million 1970 US \$)				
	1969	1970	1971	19722	1969	1970	1971	1972		
Total ³	••••	1000			175	90	1/0			
Air defense equipment ³	••••	••••	****	••••	103		160	355		
Equipment for SA-2		****	****	****	, 103	10	65	132		
firing battalions ⁴	****	••••	10	10			40	5 0		
Antiaircraft artillery ³	••••			_	1.4		59	59		
85-mm	••••	10	 5	 55	14	7	6	20		
57-mm	65	40	20		••••	1	Negl.	7		
37-mm	350	120		25	4	3	2	2		
14.5-mm	135	120	140	80	9	3.	4	2		
23-mm	133	****	25	185	1	••••	Negl.	2		
23-mm, self-propelled	****	****	****	190	****	••••	••••	7		
quads, ZSU										
Radar		****	••••	8	••••	••••	****	1		
Jet fighter aircraft	35	19	5	20	6	3	Negl.	8		
Other aircraft	55	****	****	30	83	••••	4111	45		
L-29 trainer	1	6	****	••••	1	3	****			
	••••	4	••••	••••	••••	1	••••	••••		
AN-24 transport	1	2	••••	••••	1	2	••••	****		
Replacement missiles	200	100	250	1,800	12	- 6	15	104		
Ammunition (metric tons)	9,000	12,000	9,000	18,000	37	49	37	74		
Ground force equipment ³	••••	****	****	****	10	12	36	22		
Field artillery (75-mm							50	22		
to 152-mm)	40	30	25	110	1	1	1	6		
Armor ³	****	••••			4	7	. 32			
T-54	15	45	190	65	2	6	26	14		
PT-76	40	20	55	15	2	1		9		
Armored personnel				15	4	1	4	1		
carriers	15	••••	45	115	Mant		_			
SU-76 assault guns	••••		,-	4	Negl.	****	2	4		
JSU-122 assault guns	3	****	••••	4	1111 NT1	••••	••••	Negi.		
Mortars ³		****	••••	****	Negl.		••••	••••		
Rocket launchers ³	****	****	****	****	Negl.	Negl.	Negl.	Negl.		
Small arms and other	****	****	****	****	2	2	1	Negl.		
infantry weapons ³										
laval craft	1	••••	••••	••••	3	2	2	2		
rucks and other vehicles	15		••••	4	3	••••	••••	8		
iucks and other venicles	1,200	1,400	1,100	2,200	8	10	8	15		

^{1.} Where possible, values are based on comparable US weapons and, alternatively, on Soviet foreign trade prices in 1970 US \$. Individual categories are rounded to the nearest \$1 million; totals are rounded to the nearest \$5 million. Because of rounding, components may not add to the totals shown.

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^{2.} Preliminary estimates.

^{3.} In categories that contain non-homogenous types of equipment, no quantitative totals were listed.

^{4.} Equipment includes an estimated 50 missiles per battalion - 20 missiles on site, plus 30 held in strategic reserve.

inspect North Vietnamese air defense.² Shortly thereafter, Hanoi launched its attack on South Vietnam. The United States responded by resuming the bombing over North Vietnam after a lapse of more than three years and by mining North Vietnam's ports for the first time. The resulting cutoff in seaborne imports forced North Vietnam to undertake a massive shift to overland transport to maintain the flow of essential imports and military supplies. Both Communist allies reaffirmed their support, as Peking signed another supplementary military and economic aid agreement in June and Moscow later reported that Soviet assistance had been increased following the resumption of the bombing and the mining. The timing of events in 1972 and the unprecedented commitment of weaponry to the battlefield suggest that large-scale military aid deliveries probably extended well back into 1971.

Air Defense Equipment

5. Moscow and Peking provided substantial assistance to North Vietnam's air defense during 1972 by increasing deliveries of fighter aircraft, antiaircraft artillery, radar, and equipment for surface-to-air missile (SAM) battalions. These deliveries were used effectively both to support the offensive in South Vietnam and to bolster defenses against the intensive bombing of North Vietnam. The following sections discuss imports of air defense equipment, by major category.

Jet Fighter Aircraft

6. During 1972, North Vietnam received 17 MIG-19s from China and 30 MIG-21J Fishbeds from the USSR, valued at \$15 million and \$45 million, respectively. These were intended to help offset losses of some 90 aircraft during 1972 and were the first deliveries since 1969, when 87 jets were received. So far during 1973 there have been no new deliveries of jet fighter aircraft, although 22 MIG-17s, already included in Hanoi's inventory, were recently transferred back from China in an apparent attempt to boost in-country air defenses further.

Antiaircraft Artillery (AAA) and Associated Radar

7. US bombing during 1972 also caused a sharp increase in AAA and radar deliveries to North Vietnam. About 700 AAA weapons were delivered, including for the first time the Soviet self-propelled ZSU 23-mm piece. These weapons were needed to replace losses sustained from the

^{2.} There is some controversy over the actual purpose of Batitsky's visit. On the surface, timing of the mission seemed to represent last-minute Soviet participation in Hanoi's military offensive. A subsequent display of Soviet embarrassment over the episode, however, suggested that Batitsky was not privy to Hanoi's military plans.

bombing in North Vietnam and also to support the deployment of some 20 AAA regiments out-of-country. In addition to their normal armament,³ these units were also equipped with SA-7 missiles, which were responsible for downing 54 known aircraft. Soviet deliveries of antiaircraft artillery and radar for the year are estimated at \$28 million, roughly double the Chinese contribution for that category of equipment.

SAMs

- 8. Imports of equipment for at least ten SA-2 battalions are also estimated to have arrived in North Vietnam in 1972 from the USSR. Unlike 1971 deliveries, which augmented North Vietnam's SAM strength, imports in 1972 were needed to replace losses and also to support the deployment of several SAM regiments out-of-country. Ten SA-2 sites were destroyed and possibly 12 more were damaged. Hanoi maintained its missile strength at about 45-50 battalions throughout the year, however, enabling the North Vietnamese, to provide missile defenses against air attack both for troops in the field and for the major industrial centers of Hanoi and Haiphong.
- 9. Moscow remained the sole supplier of replacement SAMs in 1972. Shipments from the USSR permitted the North Vietnamese to fire an estimated 4,000 missiles at US aircraft during the course of the year. In addition, some missiles must have been lost before firing at destroyed or damaged SAM sites. Deliveries of replacement missiles during 1972 to accommodate these uses are estimated at about 1,800, reflecting in part an estimated drawdown in stocks and in part lags in delivery to North Vietnam. The rate of missile firings during December probably was so great more than 1,100 during the bombing attacks on Hanoi and Haiphong as to preclude replacements by the end of the year.
- 10. Finally, SA-3 equipment from the Soviet Union was observed in North Vietnam during January 1973, although this equipment may have arrived in late 1972. Addition of this new weapons system to North Vietnam's arsenal will further strengthen its air defenses. The SA-3 which will complement the SA-2 system significantly enhances Hanoi's capability to attack low-flying aircraft with greater accuracy.

Ground Forces Equipment

Armor

11. The 1972 offensive marked a major shift in Communist fighting tactics. For the first time in the war, North Vietnam supported major ground

^{3.} Normal armament varies depending on the unit's mission. Many AAA regiments have a primary mission of striking low-level aircraft. These regiments are equipped with 12.7-mm, 14.5-mm, and 37-mm weapons. All-purpose regiments are equipped with a full complement of weapons, including heavier 57-mm, 85-mm, and 100-mm guns and can strike low-, medium-, and high-altitude targets.

force units with large numbers of tanks and heavy artillery, made possible by record deliveries from its allies. Total deployments to South Vietnam during 1972 and the first four months of 1973 amounted to some 1,100 tanks, substantially more than the number previously deployed during the course of the entire war. Of the 1,100 deployed, about 500 were sent south during the spring offensive, with total tank losses in the early months estimated at about 400. Subsequently, at least another 600 tanks are estimated to have been sent south during the 1972-73 dry season (including about 350 after the January 1973 cease-fire). Presumably a minimum strength of several hundred tanks was maintained in North Vietnam as a contingency reserve and to train new troops in tank tactics.

12. Uncertainties concerning delivery dates and North Vietnam's in-country inventory at the beginning of the offensive make a firm judgment on tank imports for the year impossible. Hanoi probably reduced in-country reserves to some extent in order to equip forces in the field with as much firepower as possible, before the one-for-one replacement provision of the cease-fire agreement became effective. For purposes of valuation, it is estimated that at least 725 tanks were imported during 1971-72.

Other Ground Forces Equipment

- light infantry weapons and became Hanoi's largest supplier of armor in 1972. Chinese-built equipment appearing for the first time in South Vietnam included the T-63 amphibious tank (85-mm gun) and the T-59 tank (100-mm gun), the M-1967 armored personnel carrier (APC), the 82-mm recoilless rifle, and the Type 68 automatic rifle. China also supplied more than 40 130-mm guns, more than 30 122-mm howitzers, and lesser numbers of other large field artillery pieces.
- 14. The USSR also provided several types of armor and other equipment, much of which was deployed in South Vietnam for the first time in 1972. Among these items were more than 100 BTR-50 armored personnel carriers and small numbers of ZSU-57-2 tracked vehicles. The Soviet-supplied 160-mm mortar also made its initial appearance outside North Vietnam. North Vietnam's field artillery capability was significantly enhanced by receipt of more than 60 Soviet long-range 122-mm field guns and about 25 130-mm guns, whose range and accuracy make them the most effective field artillery used in Indochina. Another new weapon initially deployed was the AT-3 (Sagger) wire-guided antitank missile from the USSR.

^{4.} These are self-propelled antiaircraft gun carriers designed to deploy with tanks to provide protection against air strikes.

Naval Craft

- damage to North Vietnam's naval assets. Pilots reported destroying hundreds of waterborne logistics craft and also inflicting substantial damage to North Vietnam's port facilities. In an effort to upgrade North Vietnam's naval capability, the USSR delivered four Komar class guided missile patrol boats in late 1972. The boats are normally equipped with two Styx antiship missiles, each of which has a maximum range of 25 miles and which constituted a serious threat to US Navy ships. The craft were attacked by US Navy jets shortly after arriving in North Vietnamese waters; one was reportedly destroyed and two damaged. In addition to Komar patrol boats, four P-6 patrol boats were received in 1972 from China.
- 16. North Vietnam also imported thousands of metric tons of steel barge plates (mainly from East European countries), a major portion of which probably went to the repair or construction of waterborne logistics craft. No attempt has been made to account for these costs in military imports.

Trucks

17. As with most other categories of military hardware, estimates of truck allocations entail a large margin of error. There is little hard evidence to determine whether a truck is intended for military or civilian use, and final assignment becomes somewhat arbitrary. Moreover, total truck imports probably are considerably greater than observed deliveries of 6,500 units.

China is known to have shipped at least 1,700 units, all in the second half of the year, while shipments from East European countries amounted to about 800 units. In view of the Soviet plan for truck deliveries and the lack of shipments from China for the first half of the year, actual truck imports may have reached as high as 10,000 units, of which an estimated 4,500 were assigned to military use. By way of comparison, military truck imports were estimated at 2,100 in 1971 and 2,700 in 1970.

Outlook for 1973

18. Logic would suggest a continuation of military aid, but at a greatly reduced level from the pace of deliveries that characterized the pre-cease-fire period. With the cessation of US bombing, Hanoi's requirements for large amounts of expensive SAM and AAA ordnance have been greatly reduced. Furthermore, a general slackening of the fighting elsewhere in Indochina has reduced other material requirements probably to one of the lowest levels

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of the war. On the other hand, North Vietnam's limited capability to maintain or produce military equipment will necessitate some continuation of foreign military assistance. As a case in point, the deliveries of SA-3 missiles detected just prior to the cease-fire will almost certainly require Soviet participation for training and replacement parts if Hanoi is to make full use of the equipment.

19. Since the cease-fire, there has been virtually no direct information on military imports by North Vietnam except for a few reports on deliveries of new trucks, helicopters, radars, and communications equipment. However, the magnitude of North Vietnam's recently concluded logistical effort to build up military stocks in Laos, Cambodia, and South Vietnam suggests that Hanoi is not hurting for military equipment. Traditionally, such a high level of activity in the military logistics funnel has been accompanied by a correspondingly high level of military imports from the USSR and China, but there is no conclusive proof that such has been the case. On the contrary, there has been a rash of reports,

that these imports have dropped sharply since the cease-fire.

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20. Even so, Hanoi at least has obtained commitments for continued assistance. As of July 1973, aid agreements for 1974 with China, Hungary, Romania, and Poland all contained military aid pacts. Early in July, Moscow agreed in principle to provide aid in 1974, and, although Soviet public statements stress economic assistance, the USSR can be expected to reaffirm military aid as a part of the final agreement.

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