

Civilian Casualties Resulting
from ROLLING THUNDER Program
in North Vietnam

16 Jan 67

Helms to The President memo re Bombing Casualties in North Vietnam

Attachments: Effectiveness of Bombing in North Vietnam
Casualties Resulting from the Bombing of North Vietnam
Methodology for Estimating Casualties
Applicability of the Nam Dinh Claims
Evidence of the General Accuracy of US Air Strikes on North Vietnam

1 Feb 67

TOP SECRET DDI to Director memo re Estimates of Casualties in North Vietnam

Attachments: Methodology for Estimating Casualties
Carver to DCI memo, dated 4 Apr 67, re NVN Civilian Casualty Figures and Methodology
Blind Memo, dated 4 Apr 67, re Casualties in North Vietnam

1 Feb 67

TOP SECRET DDI to Director memo re Estimates of Casualties in North Vietnam

Attachments: Blind Memo, dated 4 Apr 67, re Casualties in North Vietnam
Backstopper for Briefings, dated 13 Feb 67 re Communist Aid to North Vietnam
Fulbright Briefing Notes re shipping to North Vietnam, how many Russians are in DRV and what they are doing, estimate of US dollar aid to SVN that winds up in French Hands, how many dollars sent to SVN wind up in Swiss and French banks, what proportions of supplies sent to VC are infiltrated by sea and land, what percentage of South Vietnamese imports end up in hands of the VC

USAF review(s) completed.

Civilian Casualties Resulting
from ROLLING THUNDER Program
in North Vietnam
(Continued)

TOP SECRET DDI to Director memo re Estimates of Casualties
in North Vietnam

Attachments: The ROLLING THUNDER Program (charts on 25X1
(Continued) economic damage, military damage, sorties
flown, ordnance delivered; map of Laos
with inset of Mu Gia Pass: [redacted] 25X1
[redacted] chart on 25X1
effectiveness of bombing JCS targeted
bridges in North Vietnam, Feb 1965-Jan 196

Ed Allen to DDI Blue Note forwarding tables
on seaborne exports and imports of North
Vietnam (tables attached)

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1 February 1967

MEMORANDUM FOR: Director

SUBJECT : Estimates of Casualties in North Vietnam

1. This memorandum is for your information. It shows that the estimates of casualties in North Vietnam in the latest study prepared for Secretary McNamara are consistent with those in the previous study and in other papers derived from it; i.e., memoranda to the President and to Senator Russell and the proposed press release.

2. The casualty tables from the two studies are attached. A comparison of these tables shows the following:

a. The estimates for 1965 are identical.

b. The estimates for 1966 are higher because the latest study (Table 1) covers the full year while the earlier study (Table 2) covered only the first nine months.

c. The 1966 estimates in the latest study are given as a range, based on alternate methodologies. The lower end of the range is derived from exactly the same methodology used in the earlier study. The upper end of the range is based on a new method which takes into account the tons of ordnance dropped and affects only the estimate of civilian casualties inflicted by armed reconnaissance attacks (marked in red). Because we are not yet certain which method yields more accurate results, we have included both and labelled the 1966 column in Table 1 preliminary.

3 - ORIGINAL (OBB) 4/1/67
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3 - ENCL 4/1/67

/s/ R. J. Smith

R. J. SMITH

Deputy Director for Intelligence

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Attachment

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Estimated Casualties from Rolling Thunder

Table 1

Study Dated January 1967

	<u>1965</u>	<u>1966^{a/}</u>	<u>Total</u>
<u>Civilians</u>	6,000	17,900 to 20,200	23,900 to 28,200
Fixed targets	2,000	900	2,900
Armed reconnaissance	4,000	17,000 to 19,300	21,000 to 23,300
<u>Military</u>	7,200	4,650	11,850
Fixed targets	4,300	400	4,700
Armed reconnaissance	2,900	4,250	7,150
TOTAL	<u>13,200</u>	<u>22,550 to 24,850</u>	<u>35,750 to 38,050</u>

^{a/} Preliminary estimates

Table 2

Study Dated December 1966

	<u>1965</u>	<u>Jan-Sep 1966</u>	<u>Total</u>
<u>Civilians</u>	6,000	11,900	17,900
Fixed targets	2,000	700	2,700
Armed reconnaissance	4,000	11,200	15,200
<u>Military</u>	7,200	3,800	11,000
Fixed targets	4,300	400	4,700
Armed reconnaissance	2,900	3,400	6,300
TOTAL	<u>13,200</u>	<u>15,700</u>	<u>28,900</u>

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1 FEB 1967

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2 February 1967

MEMORANDUM FOR THE RECORD

SUBJECT: Statistics on Casualties in North Vietnam

This morning the following statistics on casualties in North Vietnam were given by telephone to Senator Symington by R. J. Smith:

1. Total Casualties:
 - Fixed Targets - 1/3 civilian
 - Armed Reconnaissance - 3/4 civilian
2. The range of truly innocent bystanders is from 15% - 30% of total casualties.
3. Total civilian casualties in 1966: 18,000-20,000. Forty percent of these casualties were killed.
4. The number of innocent casualties killed in 1966 was less than 2,000.

[Redacted Signature]

EDWARD W. PROCTOR
Assistant Deputy Director for Intelligence

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O/DDI [Redacted]

Distribution:

- Original - Mr. Smith
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28 1967

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TOP SECRET**CENTRAL INTELLIGENCE AGENCY
OFFICE OF RESEARCH AND REPORTS**

4 April 1967

MEMORANDUM FOR:**SUBJECT: Casualties in North Vietnam**

The air campaign against North Vietnam had accounted for an estimated 36,000-38,000 casualties by the end of 1966 as shown in the table. Civilians accounted for over two-thirds of total casualties. The preponderance of civilian casualties are workers at military installations or workers directly engaged in the repair, maintenance and operation of the logistics system which moves military supplies and personnel into Laos and South Vietnam.

**Estimated Casualties Resulting from the Bombing of North Vietnam,
1965-1966**

	<u>1965</u>	<u>1966</u>	<u>Total</u>
<u>Civilians</u>	<u>6,000</u>	<u>17,900-20,200</u>	<u>23,900-26,200</u>
Fixed target strikes	2,000	900	2,900
Armed reconnaissance strikes	4,000	17,000-19,300	21,000-23,300
<u>Military</u>	<u>7,200</u>	<u>4,650</u>	<u>11,850</u>
Fixed target strikes	4,300	400	4,700
Armed reconnaissance strikes	2,900	4,250	7,150
<u>Total</u>	<u>13,200</u>	<u>22,550-24,850</u>	<u>35,750-38,050</u>

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Although civilians have accounted for just over two-thirds of cumulative casualties since the bombing campaigns began, the composition of the casualties has changed radically over time. In 1966, for example, civilians accounted for about 80 percent of the casualties, compared with 45 percent in 1965. Similarly, casualties resulting from armed reconnaissance against military supply routes accounted for 94 percent of the total in 1966, compared with only 52 percent in 1965.

The increase in casualties during 1966 is a function of the growing scale of the air campaign, the greater emphasis on armed reconnaissance against lines of communication and the selection of a few fixed targets located in more heavily populated areas. Despite the increase in casualties, however, the number per mission has remained about stable.

The changing nature of the air campaign is also apparent in the statistics on civilian casualties. Estimated civilian casualties in 1966 are about three times those in 1965. In 1966, however, just over 5 percent of civilian casualties resulted from attacks on fixed targets, whereas in 1965 attacks on fixed targets accounted for one-third of civilian casualties.

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- [REDACTED]
- II. North Vietnam produces virtually none of its military hardware. It is equipped with Soviet weapons, or Chinese copies of Soviet weapons.
- A. The Soviets have the principal responsibility for supplying the more sophisticated weapons--the surface-to-air missile system and most of North Vietnam's aircraft and helicopters.
1. The Chinese supplied the first regiment of jet fighters sent to Hanoi when the bombardment of the North began. These were the older MIG-15s or 17s. Since then jet fighters have come from the Soviet Union, including super-sonic MIG-21s.
 2. The Soviets have supplied ^{over 75} ~~about 65~~ older MIGs, and at least 34 MIG-21s--possibly more which are still in shipping crates.
 3. The Soviets have supplied the bulk of the ^{6,500} ~~5,000~~ anti-aircraft guns in North Vietnam.
- B. Chinese military aid consists primarily of small arms and ammunition---along with some military manpower for logistics, construction, and engineering, and two to four anti-aircraft artillery divisions.

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[Complete shipping & cargo info, "Foreign Shipping to NVN in Dec., 1966, ORR IM 67-5]

Ocean Shipping in 1966

III. Foreign ocean shipping to North Vietnamese ports dropped sharply, to 379 arrivals in 1966 compared to 530 in 1965.

A. There was a 71 percent decline in calls by ships flying Free World flags, attributable in part to restrictions imposed by Free World governments as a result of U.S. diplomatic demarches, and in part to shortages of Hanoi's principal exports.

1. Average monthly calls by Free World flags dropped from 21 in 1965 to about six a month in 1966.
2. Of the 74 Free World arrivals last year, 50 flew the British flag, 12 had Cypriot registry, 7 Greek, 4 Maltese, and 1 Italian. Most of these were under charter by Communist nations.
3. Most of the British-flag ships in North Vietnamese trade are under Hong Kong registry. Some of them are operated or even owned by Hong Kong shipping firms known to be controlled by Chinese Communists.

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B. Soviet port calls rose by more than 50 percent, from 79 to 122. There were 138 ships under Chinese Communist flag; 44 from Eastern Europe--mainly Poland; and one Cuban ship.

Imports and Exports

IV. North Vietnam imported about 1.5 million tons of cargo in 1966.

A. Slightly more than a million tons came by sea--and about 90 percent of this came from Communist countries. Some small arms and ammunition may have come by sea, and six helicopters came as deck cargo, but otherwise sea shipments were commercial. Items like petroleum products and vehicles, of course, contribute to the military effort.

1. Major bulk deliveries were 220,000 tons of fertilizer, 200,000 tons of P.O.L., and 90,000 tons of foodstuffs and timber.
2. The remaining 570,000 tons consisted of coal for Vietnamese steel production, metal products, machinery, and transportation and construction equipment.

B. About 115,000 tons of the seaborne shipments originated in Free World countries.

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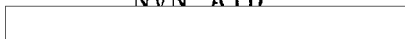
1. Japan led with about 50,000 tons, more than one-third fertilizer. The rest was mainly metal products for construction, and miscellaneous manufactured goods.
2. Cambodian foodstuffs and French metal products, fertilizer, and spare parts for vehicles accounted for most of the remaining shipments of Free World origin.

C. All of the 420,000 tons that came in by rail probably originated in Communist countries.

1. Soviet transshipments across China-- about 60,000 tons last year--probably consisted almost entirely of military equipment.
2. Chinese rail shipments of about 360,000 tons included large quantities of coal, as well as other economic aid and military shipments.
3. For the past two years the Soviets have been flying in air cargo at a rate of about one transport aircraft every two weeks. These probably carry critical spare parts and other high-priority small items.

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D. Seaborne exports from North Vietnam were down sharply in 1966.

1. The principal export, coal, fell off about 20 percent in 1966, to a little more than 900,000 tons. More than half went to China; about 350,000 tons to Japan, and 60,000 tons to West Europe.
2. Apatite ore, normally the second biggest export, was down to a mere 10,000 tons, because of the disruption of rail transport from northwestern North Vietnam to the ports.
3. Total exports by sea dropped from 1,700,000 tons in 1965 to 1,150,000 tons in 1966.

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(Re import and export of coal: DRV imports soft coal for steel mill, exports hard coal.)

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FULBRIGHT BRIEFING NOTES

1. SHIPPING TO NORTH VIETNAM

(See attached #1, relevant charts from D/RR briefing notes, plus a new statement on the role of UK flag ships.) [Redacted]

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Related questions: (a) What strategic goods are being shipped into DRV? See chart 8A included in above briefing notes. It contains a complete breakdown of all cargoes delivered by sea, both bloc and free world. [Redacted]

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(b) Estimate relative proportion of deliveries to DRV by ship and by rail. Overland deliveries (almost all by rail) are estimated to have totaled 310,000 tons in 1965. Overland deliveries accounted for one-third and sea shipment two-thirds of all deliveries. About 160,000 tons of coal was delivered by rail, and military shipments (all arriving by land) are estimated at about 100,000 tons last year, including SAMs, AA, FA, tanks, ammo and spares. (This data from the ORR study being prepared for Secretary McNamara)

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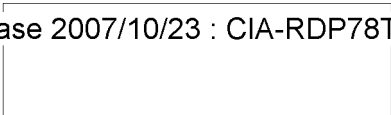
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(c) What aid is USSR providing DRV?
 Military aid is believed to have totaled about \$150 million in 1965. The USSR provided about forty jet aircraft (more than 30 MIG fighters and 8 jet light bombers), equipment for some 15-20 SAM sites, artillery, radar and several thousand trucks. About three-fourths of the estimated \$100 million in bloc economic aid was extended by the USSR. Moscow is continuing economic development projects under its long-term aid (see tables appended, attachment #2), but aid extended in 1965 probably covers materials and equipment related to the war--the restoration and maintenance of transport, power and construction efforts.



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transports have flown to DRV from USSR since the outbreak of hostilities last year. No cargo details are available, but their total cargo capacity is limited to less than 100 tons.

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2. HOW MANY RUSSIANS ARE IN DRV AND WHAT ARE THEY DOING?

In addition to the estimated 1,500 Soviet military technicians in DRV, some 800 Soviet civilian personnel are estimated there working on a variety of economic programs.

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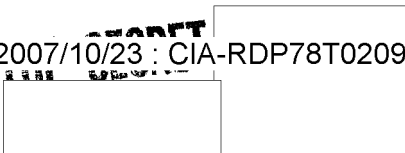
7. ESTIMATE OF US DOLLAR AID TO SVN THAT WINDS UP IN FRENCH HANDS. HOW MANY DOLLARS SENT TO SVN WIND UP IN SWISS AND FRENCH BANKS?

France is not an eligible source of procurement for US aid commodities supplied to South Vietnam, and trade between the two countries is small--about \$30 million in 1965. France has a small unfavorable balance of trade with South Vietnam, but probably more than covers this by legal capital repatriation from French investments. This trade and capital repatriation is financed by the GVN from its own foreign exchange and does not involve AID financing. Imported commodities can, of course, be purchased by French nationals in South Vietnam.


Probably the greatest source of US dollars going to French or Swiss banks are dollars exchanged by US personnel on the black market. These dollars are then used for illegal capital flight and for illegal gold or smuggling transactions. The destination of these funds cannot be determined, but apparently include France, Switzerland, Hong Kong, Singapore, and New York.

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10. WHAT PROPORTIONS OF SUPPLIES SENT TO VC ARE INFILTRATED BY SEA AND BY LAND RESPECTIVELY?

Only a small trickle of supplies appear to be arriving from sea. Overland deliveries, the great majority through Laos and a little through Cambodia, account for most of the supplies reaching the VC. 

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16. WHAT PERCENTAGE OF SOUTH VIETNAMESE IMPORTS END UP IN THE HANDS OF THE VIET CONG?

Viet Cong needs for imported commodities is probably very small in comparison to South Vietnam's total imports of about \$300 million in 1965. VC needs probably do not exceed 1 to 2 percent of these imports, and it is doubtful that they acquire more than this. It consists of such commodities as pharmaceuticals, petroleum products, imported foodstuffs, and such machinery as sewing machines, printing presses, and lathes. The VC acquire these goods by seizure, taxation in kind (during transport), or discreet purchase. 

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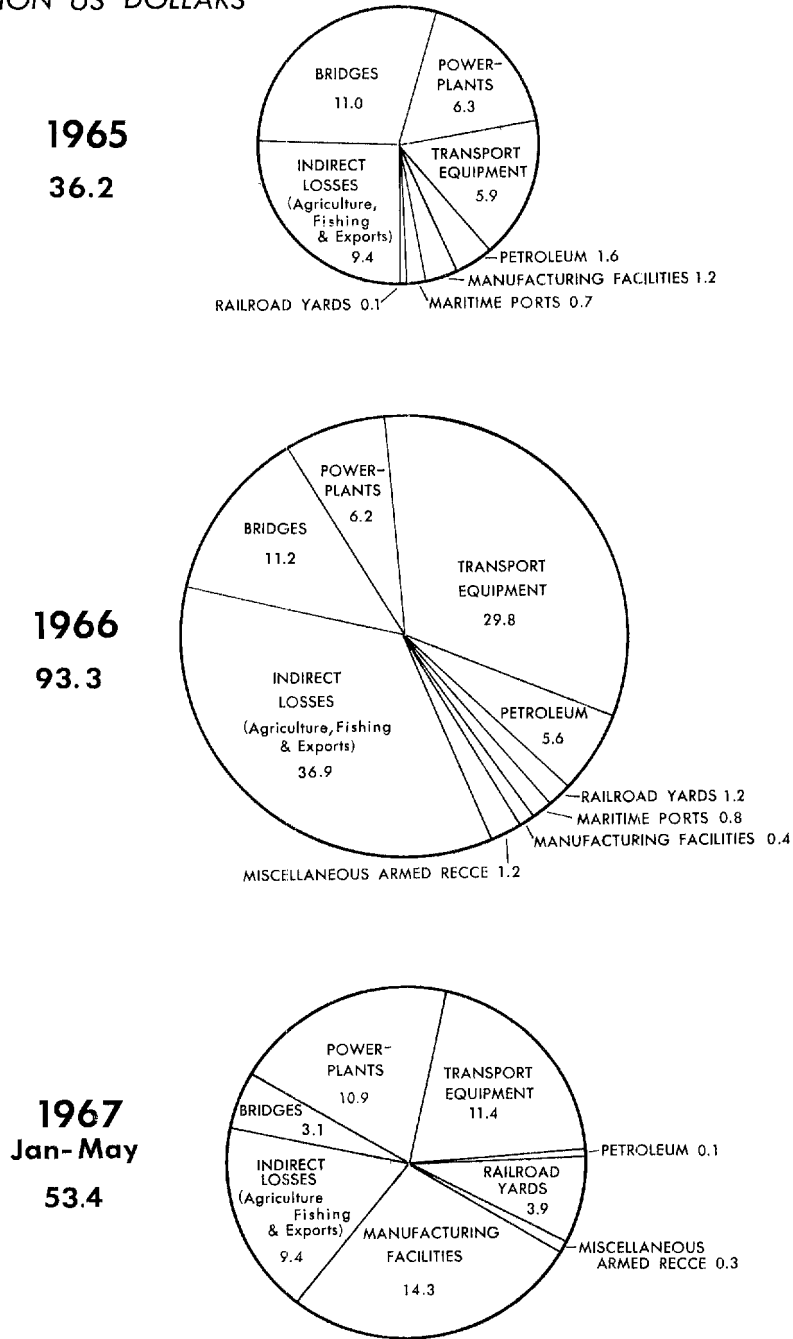
The Rolling Thunder Program

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ECONOMIC DAMAGE

MILLION US DOLLARS



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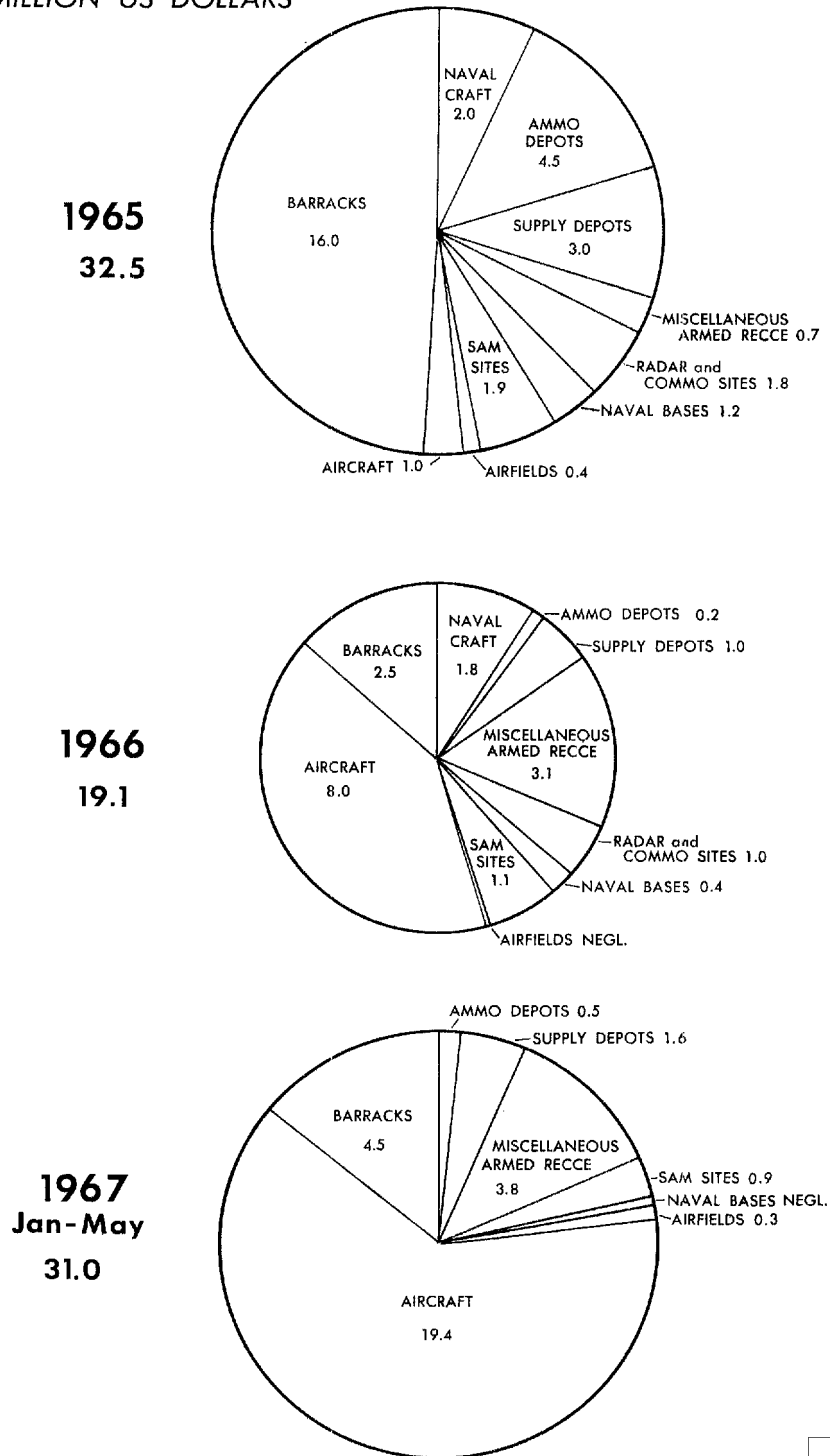


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Figure 1. Value of Economic Damage in North Vietnam, by Sector, 1965, 1966, and January - May 1967

MILITARY DAMAGE

MILLION US DOLLARS

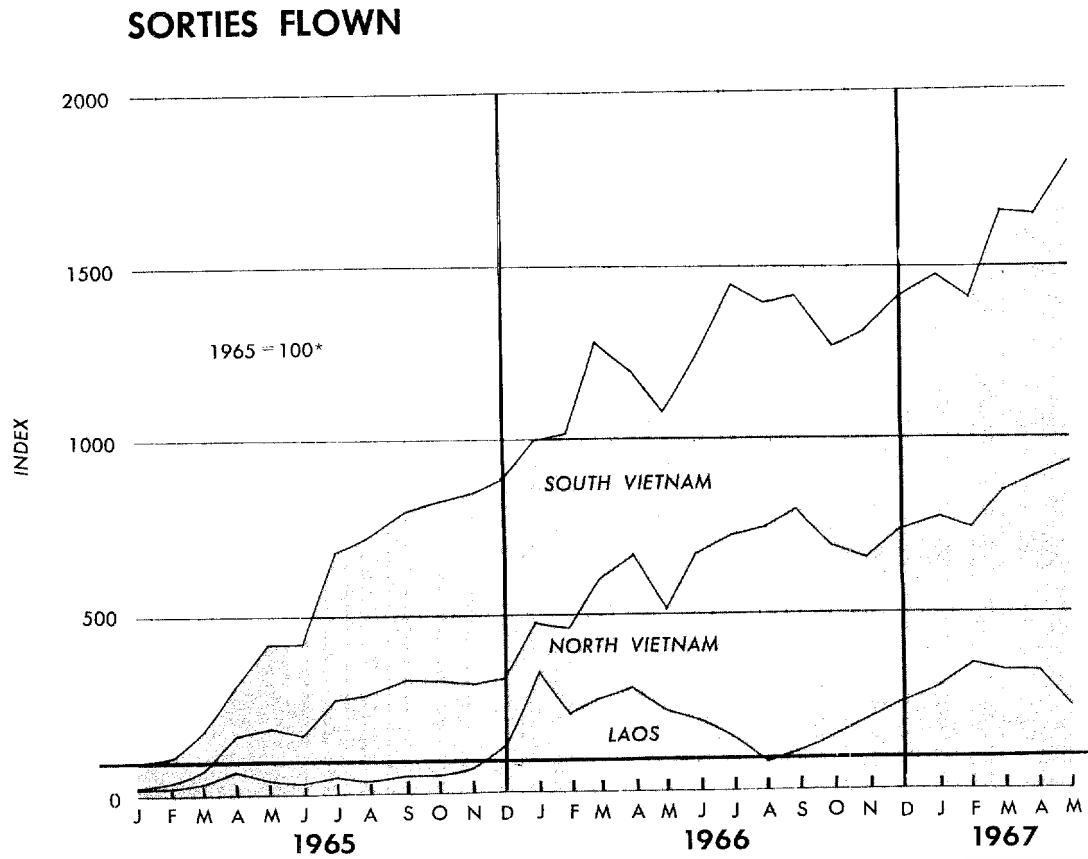


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Figure 2. Value of Military Damage in North Vietnam by Sector 1965, 1966, and January - May 1967



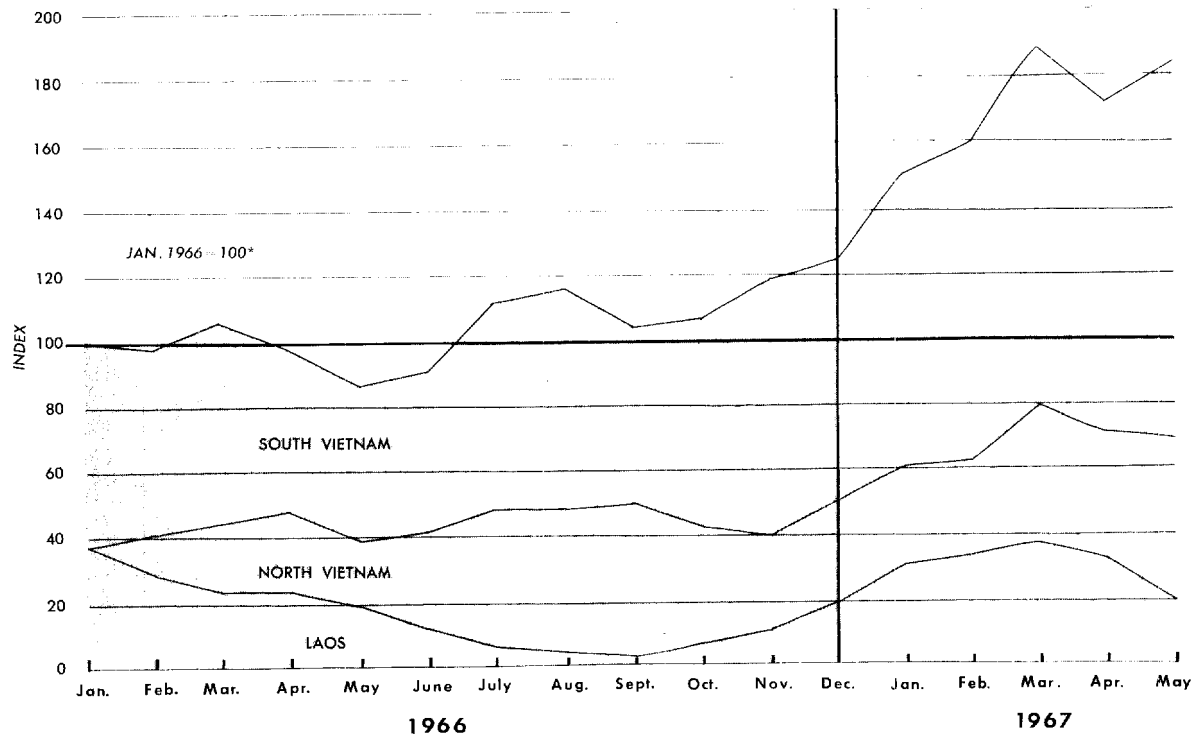
*January 1965 total for Laos, North Vietnam, and South Vietnam

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Figure 3. Index of Sorties Flown in Southeast Asia and Relative Amounts in Each Area, 1965, 1966, and First Five Months 1967

ORDNANCE DELIVERED



*January 1966 total for Laos, North Vietnam, and South Vietnam

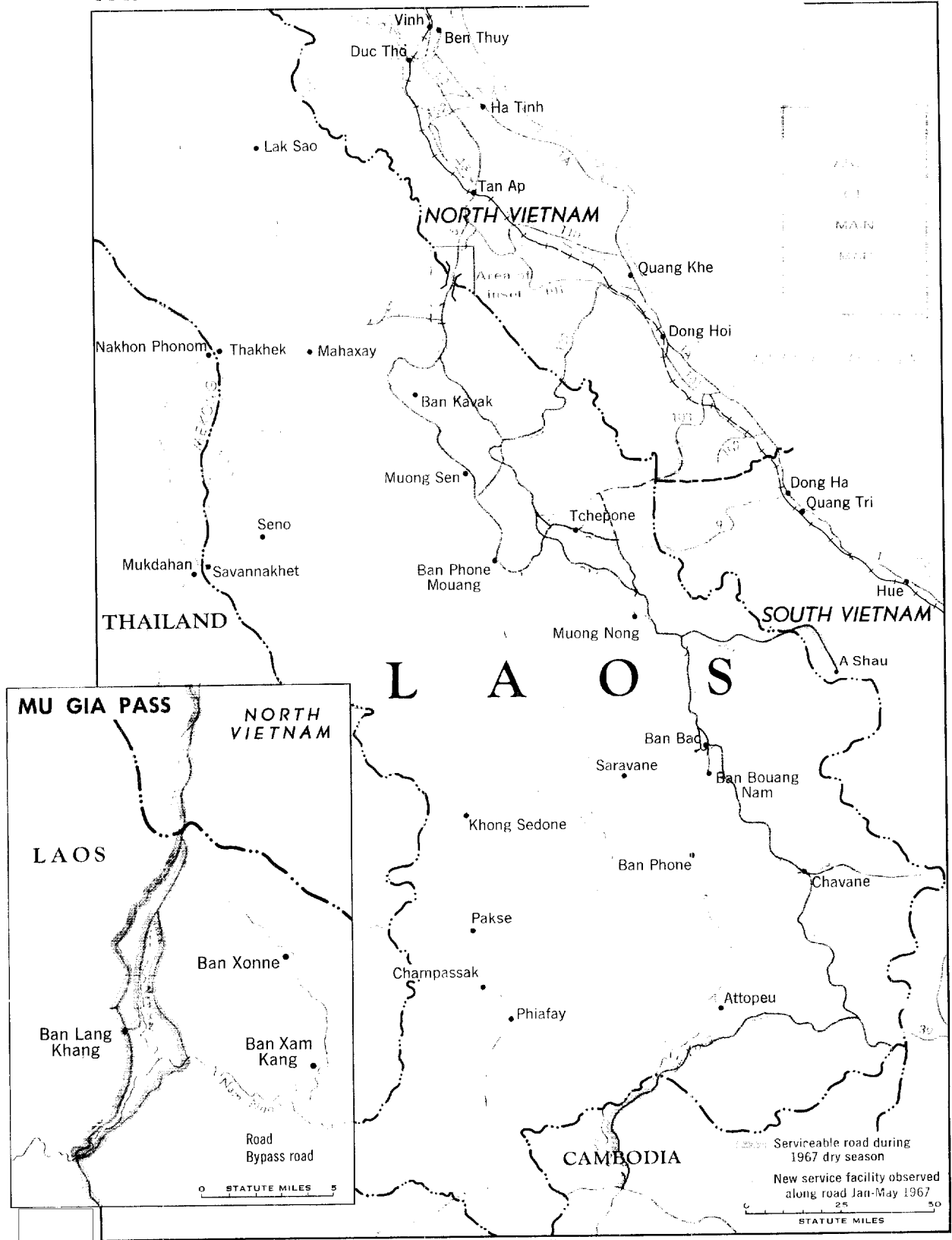
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Figure 4. Index of Ordnance Delivered in Southeast Asia and Relative Amounts in Each Area, 1966 and First Five Months 1967

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THE LAOS PANHANDLE

Figure 5



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EFFECTIVENESS OF BOMBING JCS TARGETED BRIDGES IN NORTH VIETNAM - FEB. 1965-JAN. 67

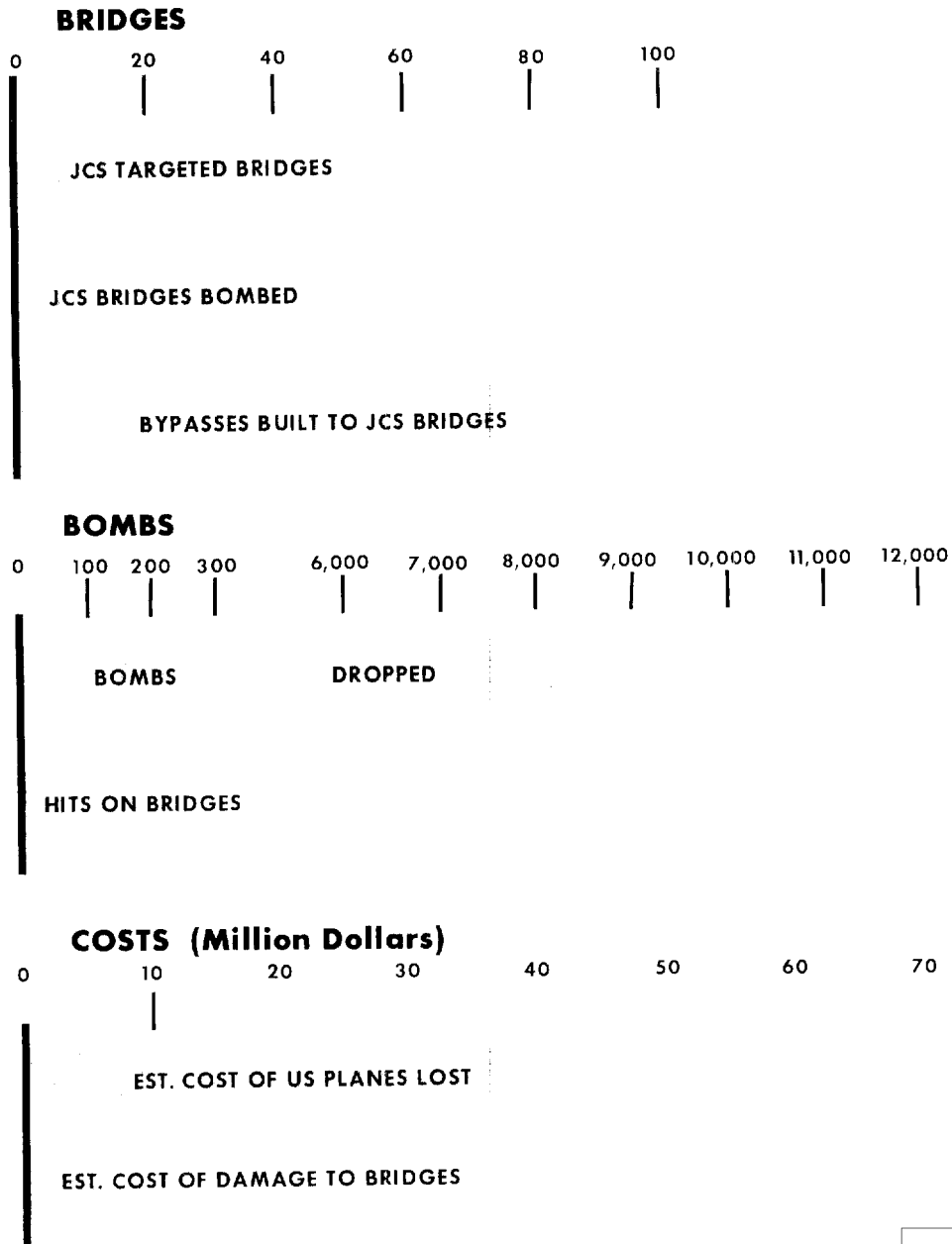


Figure 7. Effectiveness of Bombing JCS Targeted Bridges in North Vietnam - February 1965 - January 1967

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DDI

The attached tables give the details on seaborne exports and imports of North Vietnam, all of which are economic. Military goods, we believe, all come overland. In 1967, we estimate the USSR supplied about \$520 million of military supplies and China about \$140 million, or a total of \$660 million. The value of economic goods supplied in 1967 was about \$340 million in total; of this, \$200 million came from the USSR, \$80 million from China, and \$60 million from Eastern Europe, which supplied virtually no military aid.



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EDWARD L. ARDEN

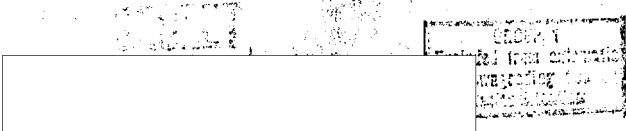
D/OER 30 January 1968

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OD/OER:  (30 Jan 68)

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8 8 JAN 1968

SECRET/North Vietnam: Identified Seaborne Imports and Exports,
By Origin and Destination, 1966 and 1967

Thousand Metric Tons

<u>Origin or Destination</u>	<u>Imports</u>		<u>Exports</u>	
	<u>1966</u>	<u>1967</u>	<u>1966</u>	<u>1967</u>
<u>Total</u>	<u>925</u>	<u>1350</u>	<u>1168</u>	<u>573</u>
<u>Communist Countries</u>	<u>809.6</u>	<u>1,301.0</u>	<u>549.1</u>	<u>214.4</u>
USSR	426.4	628.0	11.6	15.6
E. Europe	84.5	256.6	16.1	14.3
Communist China	155.9	433.9	491.2	174.5
North Korea	61.1	40.9	11.4	4.6
Cuba	21.7	41.6	18.7	5.5
<u>Free World</u>	<u>116.1</u>	<u>48.5</u>	<u>618.9</u>	<u>358.1</u>
Japan	48.0	2.9	425.8	266.0
Cambodia	32.6	28.9	67.2	31.7
HongKong	Engl.	0.9	26.7	30.6
Singapore- Malaysia	9.9	5.0	24.7	19.7
W. Europe	24.2	6.7	64.4	9.2
Other	10.4	4.0	10.0	0.9

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North Vietnam: Identified Imports Carried by Foreign-Flag Ships,
By Origin and Commodity, 1967

(Thousand metric tons)

<u>Origin</u>	<u>Fertilizers</u>	<u>Petroleum</u>	<u>Foodstuffs</u>	<u>Miscellaneous 1/</u>	<u>Total 2/</u>
Total	<u>107.0</u>	<u>246.0</u>	<u>449.0</u>	<u>507.0</u>	<u>1,350</u>
Communist Countries	<u>143.3</u>	<u>246.3</u>	<u>432.3</u>	<u>478.6</u>	<u>1,301</u>
USSR	55.6	187.9	165.4	179.1	628
E. Europe	22.7	2.2	21.4	110.3	157
Communist China	-	56.2	204.5	173.3	434
North Korea	25.1	-	-	15.9	41
Cuba	-	-	41.6	-	42
Free World	<u>4.0</u>	-	<u>16.2</u>	<u>28.2</u>	<u>48</u>
Cambodia	-	-	14.1	14.8	29
Japan	-	-	-	2.9	3
W. Europe	-	-	0.2	6.4	7
Of which:					
United Kingdom	-	-	(0.2)	(4.4)	(5)
Other	4.0	-	1.8	4.1	10

1/ Miscellaneous includes machinery, metal bars and plates, transportation equipment, timber, vehicles and chemicals.

2/ Totals may not add due to rounding.

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North Vietnam: Identified Exports Carried by Foreign-Flag Ships,
by Destination and Commodity, 1967

(Thousand metric tons)

<u>Destination</u>	<u>Coal</u>	<u>Cement</u>	<u>Pig Iron</u>	<u>Miscellaneous 1/</u>	<u>Total 2/</u>
<u>Total</u>	<u>432</u>	<u>32</u>	<u>22</u>	<u>64</u>	<u>558</u>
Communist Countries	171.6	2.0	-	40.8	214
USSR	-	-	-	15.6	15
E. Europe	-	-	-	14.3	14
Communist China	156.6	-	-	5.9	167
North Korea	-	-	-	4.6	5
Cuba	9.0	-	-	0.5	6
Free World	260.3	30.8	21.5	43.5	366
Cambodia	-	23.7	-	3.0	32
Japan	243.3	-	19.6	3.1	266
W. Europe	7.5	-	-	1.7	9
Of which:					
France	(7.5)	-	-	-	(3)
Other	9.5	4.1	2.0	35.6	51

1/ Miscellaneous includes clothing, rug and flooring, various food specialties and household items.
2/ Total may not add due to rounding.

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North Vietnam: Imports from Selected Countries of the Free World

	<u>1965</u>	<u>1966</u>	(Thousand US dollars) <u>Jan-June</u> <u>1967</u>
<u>Japan</u>			
<u>of which:</u>	<u>3,853</u>	<u>5,649</u>	<u>747</u>
Wool top	239	332	214
Iron and steel products	1,013	2,207	13
Wire and cable	40	613	--
<u>Siam</u>			
<u>of which:</u>	<u>2,800</u>	<u>1,853</u>	<u>1,363</u>
Crude rubber	1,876	1,170	907
Copra oil	903	675	--
<u>Cambodia</u>			
<u>of which:</u>	<u>2,161</u>	<u>1,014</u>	<u>557</u>
Rice	1,737	--	E.A.
<u>France</u>			
<u>of which:</u>	<u>2,104</u>	<u>2,200</u>	<u>436</u>
Leather	318	653	--
Chemicals	497	443	57

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United States: Exports to Selected Countries of the Free World

	1966	1966	(thousand US dollars) Jan-June 1967
<u>Total Exports</u>	<u>2086</u>	<u>2066</u>	<u>1097</u>
<u>Items</u> <u>of which:</u>	<u>21,457</u>	<u>9,651</u>	<u>5,163</u>
Coal	7,979	6,300	2,983
Big Iron	2,095	1,700	1,199
<u>Manufactures</u> <u>of which:</u>	<u>1,070</u>	<u>1,631</u>	<u>180</u>
Chemicals	217	301	N.A.
Manufactured goods	854	331	N.A.
<u>Non Iron</u> <u>of which:</u>	<u>2,660</u>	<u>2,002</u>	<u>626</u>
Food products	1,232	1,606	N.A.
Cement	568	514	N.A.
<u>Commodities</u> <u>of which:</u>	<u>1,979</u>	<u>1,592</u>	<u>1,049</u>
Cement	1,059	N.A.	N.A.
Food products	920	N.A.	N.A.
<u>Iron</u> <u>of which:</u>	<u>2,021</u>	<u>2,013</u>	<u>185</u>
Coal	2,007	2,300	300

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16 January 1967

MEMORANDUM FOR: The President

SUBJECT : Bombing Casualties in North Vietnam

1. On 9 January I met with the CIA Subcommittee of the Senate to present one of our regular briefings on current matters of intelligence interest. As you know, Senator Russell invited Senators Mansfield, Fulbright, and Hickenlooper to attend this session.

2. In my presentation, I did not discuss bombing in North Vietnam, but when this subject was raised in the questioning, I spoke from the paper attached as Tab A. This paper is a gist of the conclusions reached jointly by CIA and the Defense Intelligence Agency in the latest of a series of monthly assessments of the bombing prepared for Secretary McNamara.

3. Further questions from the Senators attending led to the subject of civilian casualties from bombing in the North. To respond to these questions, we used

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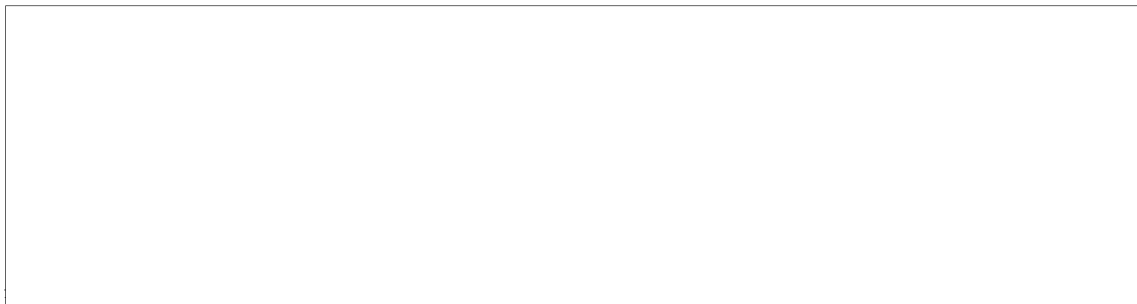
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the findings of several studies produced by CIA at the request of Secretary McNamara. (A detailed account of these findings, the methodology used, and our reasons for thinking them valid is attached as Tab B).

4. In summary, we believe, and told the Russell Subcommittee, that the bombing of North Vietnam had produced about 29,000 total casualties (killed and injured) from the beginning of the Rolling Thunder program in February 1965 through September 1966. About 11,000 were military and 18,000 were logistics workers and other civilians. A large proportion of these 18,000—we judge about two thirds—were males engaged in truck driving, bridge repair, and other war-related activities. The 18,000 figure adds up to about one war-worker or civilian killed or injured per US attack mission, a remarkably low figure. Of the 29,000 total casualties, we think about 45 percent were killed and 53 percent injured.



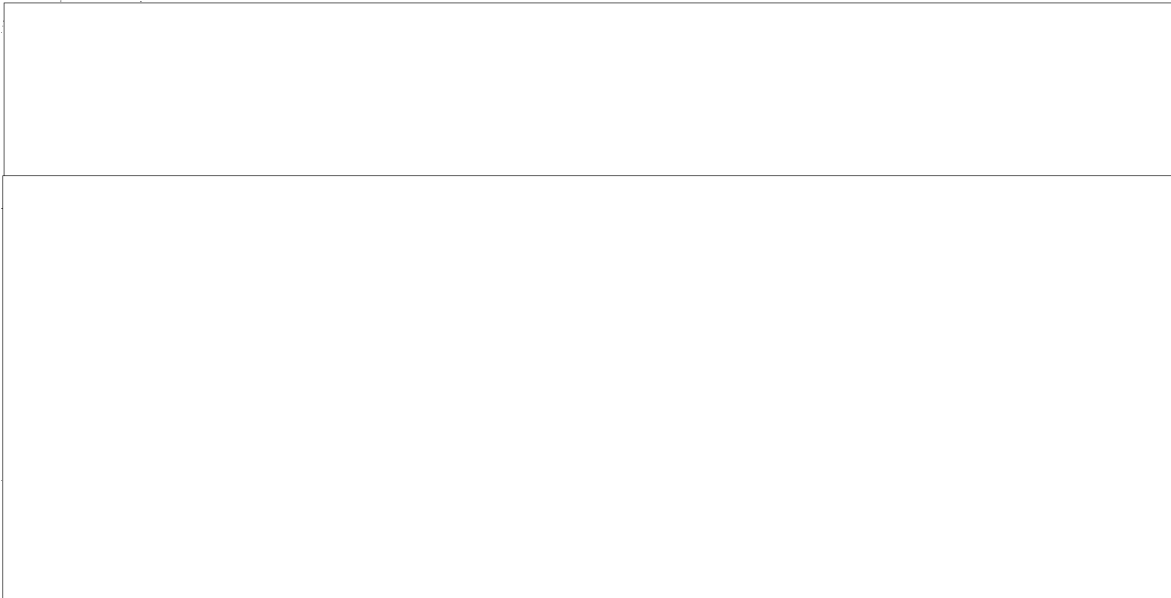
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6. We have considerable confidence that our totals are in the right ball-park, although obviously we cannot claim that they are accurate to the nearest thousand. To put them in perspective there are three factors which should be considered:

a. The figure of 18,000 killed and injured, most of whom were engaged in war-related activities such as transport of personnel and supplies into Laos and South Vietnam, is about one per attack mission (about 17,100 attack missions were flown through September 1968). This low ratio was

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achieved despite the dense population and the concentration of armed reconnaissance missions along heavily populated lines of communication.

b. The figure of 10,000 logistic workers and other civilians must also be compared with statistics on South Vietnamese civilians killed, wounded and kidnaped by Communist terrorism. US authorities in Saigon have reported a minimum of about 2,600 South Vietnamese killed and 41,000 kidnaped since 1957. This gives a rough total of 51,400 plus an unknown but obviously large number of wounded.

c. Much non-official commentary on the war has emphasized bombing damage to non-military objectives. There is, however, a body of evidence from on-the-spot observers, summarized in Tab C, that our attacks in the North have been directed at military objectives and conducted with all the care that a pilot under

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intense antiaircraft fire could hope to exhibit.

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Richard Helms
Director

Attachments: a/s

Concur:

R. J. SMITH
Deputy Director for Intelligence

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Tab A

EFFECTIVENESS OF BOMBING IN NORTH VIETNAM

1. The cumulative effects of the air raids on North Vietnam continue to limit the capability of the North Vietnamese forces for overt aggression, but they have not reduced the ability to support military activity in South Vietnam and Laos, either at present or increased levels of combat and manpower.

2. The bombings appear to be having some deleterious effect on public morale. We have reports of consumer shortages, and the extensive evacuation of civilian personnel has caused some economic difficulties. There is no good evidence, however, that the leadership's resolve to continue the war has been weakened.

3. The bombings have forced the diversion of major resources and work forces to repair damage. North Vietnam has been denied the use of larger coastal carriers, and is severely limited in the use of established port facilities. Measurable losses to the economy and military establishment are estimated at \$184 million.

4. On the other hand, POL supplies have not dropped below 60-day levels since September 1, and attacks on rail, highway and waterway transportation have reduced efficiency but have not stopped movement. Energetic construction of replacement and alternate bridges have rail capabilities at their highest level since the bombing stand-down a year ago.

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NORTH VIETNAMI. Total Casualties

1. The cumulative killed and injured attributable to the bombing of North Vietnam, estimated through September 1966, total about 29,000, of which 18,000 are believed to be logistics workers and other civilian personnel. Some 13,200 of the total casualties occurred in 1965, of which 6,000 were in the "civilian" category. During the first nine months of 1966 we estimate total casualties of 15,700 of which about 11,900 were civilians. (See Table I). On the basis of sample data through September 1966 the total casualties in 1966 are estimated to have been about 40 percent killed and 60 percent injured. This division is based on averages derived from the sample cases for which we have hard evidence.
2. The composition of the casualties resulting from the 1966 air campaign differs notably from that in 1965. Over 75 percent of the casualties in 1966 were logistics workers and other civilians, compared with 45 percent in 1965. Armed reconnaissance against military supply routes, which accounted for only 52 percent of the casualties in 1965 accounted for an estimated 93 percent of the total in 1966.
3. The increase in casualties during 1966 is a function of the growing scale of the air campaign, the greater emphasis on armed reconnaissance against lines of communications and the selection of a few fixed targets located in more heavily populated areas. Despite the increase in casualties, however, the number per mission has remained about stable.

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4. The preponderance of civilian casualties resulting from the acceleration of armed reconnaissance has in large measure involved those civilians working at military targets or directly engaged in the maintenance and operation of the logistics system which moves supplies and personnel into Laos and South Vietnam. Hence, it is heavily weighted with transport repair crews, truck drivers, and personnel operating logistic craft on the rivers. The bombing campaign has generally been quite selective. The few official North Vietnamese statements protesting the extent of civilian casualties, while vigorously presented, actually cite very small numbers of personnel. The May 1966 North Vietnamese letter to the International Red Cross claimed only 239 civilian casualties since 31 January 1966, although implying many more. The Education Ministry in October 1966 stated that 300 students and 30 teachers had been killed since the bombings began. The well-publicized propaganda statement on the attacks against Nam Dinh, where heavy casualties would be expected, indicated that 37 percent of total casualties were innocent victims of the war--women, children and the aged. One would expect this propaganda statement to make the maximum claim possible. Even if the specific casualty claims for Nam Dinh were accurate, this percentage would not seem unduly high. Nam Dinh is a heavily defended population center subjected to heavy attacks and with many of its military targets located in densely populated areas. It is hardly a typical case, and this percentage should probably be regarded as the upper limit for casualties sustained by so-called innocent victims.

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Table I

Casualties Resulting from the Bombing of North Vietnam

	<u>1965</u>	<u>January- September 1966</u>	<u>Total</u>
Civilians	<u>6,000</u>	<u>11,900</u>	<u>17,900</u>
Attacks on fixed targets	2,000	700	2,700
Attacks on armed recon- naissance missions	4,000	11,200	15,200
Military	<u>7,200</u>	<u>3,800</u>	<u>11,000</u>
Attacks on fixed targets	4,300	400	4,700
Attacks on armed recon- naissance missions	2,900	3,400	6,300

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Tab C

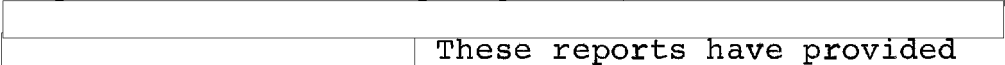
EVIDENCE OF THE GENERAL ACCURACY OF US AIR STRIKES ON NORTH VIETNAM

1. Post-strike photography provides good evidence that US air strikes have generally been accurate. There have been some occasions when ordnance was off target as a result of aircraft being hit and misfiring or because of some other accident, but the evidence indicates that such mishaps are infrequent. Eyewitness reports on the accuracy of US air strikes on North Vietnam are hard to come by because of the relatively few impartial observers in North Vietnam. The foreign diplomatic community is restricted to the Hanoi area, with the exception of an occasional trip to Haiphong  and Hanoi is careful to allow extensive travel only to those foreigners it believes will swallow the official propaganda line.


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2. Despite these limitations, there have been some first-hand reports on the accuracy of the bombings in the Hanoi-Haiphong area 

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 These reports have provided evidence of the generally precise nature of the air strikes as well as information indicating that civilian casualties from these air strikes have been low.



 He has stated that US pilots "were very courageous" in pressing home their attacks and in "not unloading their bombs on civilians by design."

4. Other Westerners who have been in North Vietnam have volunteered similar observations. 

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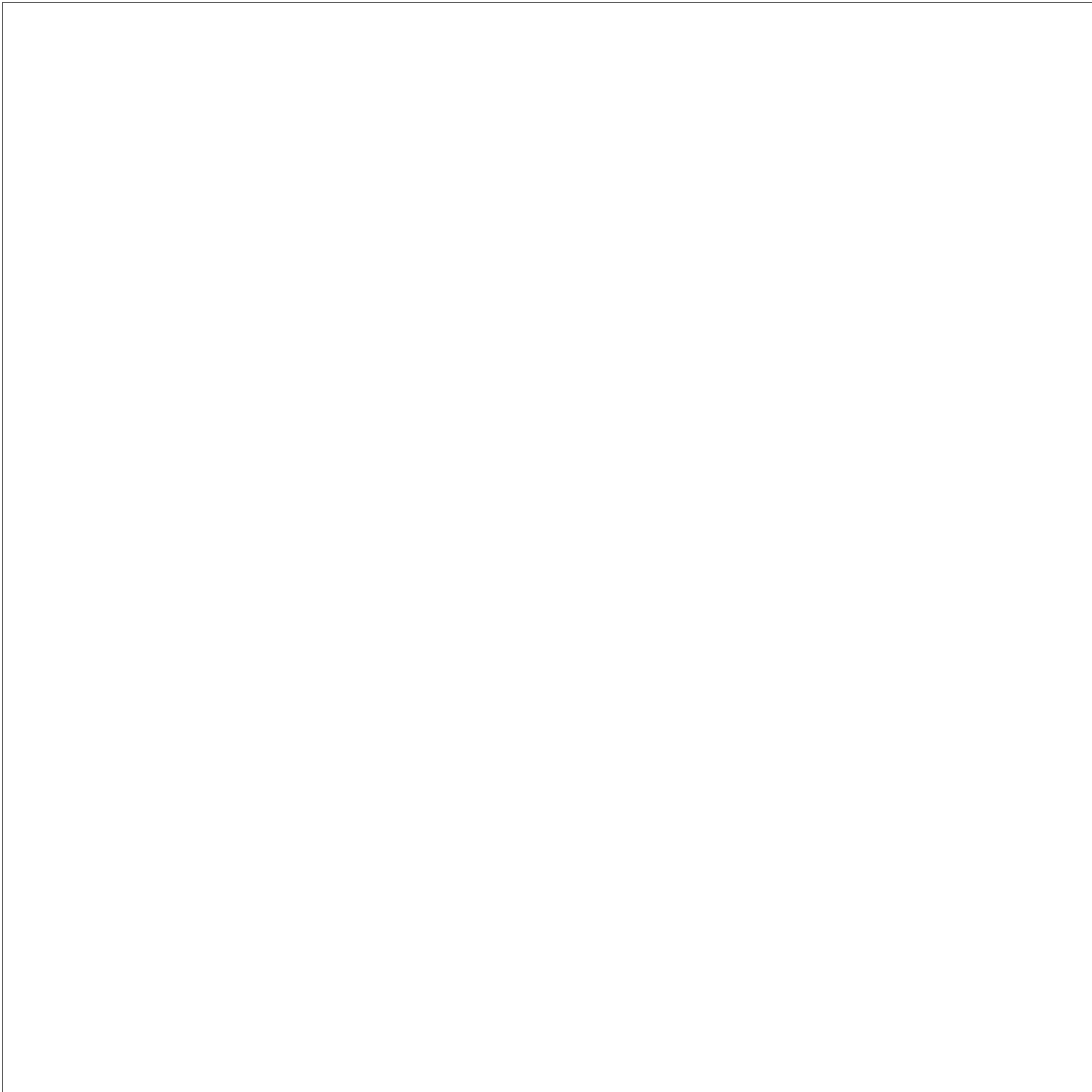
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[redacted] that "Haiphong and its suburbs have been attacked a dozen times since June, but there is no sign of damage in the city center."

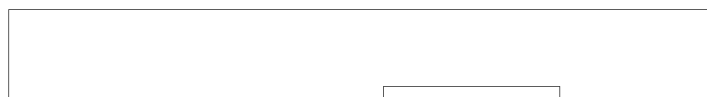
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[redacted] the strike on the Gia Lam petroleum depot reported that the foreign community in North Vietnam regarded that strike as "a technical masterpiece." He noted that "no civilian areas were touched."

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