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A SYSTEMS ANALYSIS VIEW OF THE VIETNAM WAR 1965-1972

Editor: Thomas C. Thayer

Volume 6

CASUALTIES AND LOSSES

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SEA Analysis Report	SE Asia Air Operations
VC/NVA	SE Asia Deployments
Pacification	SE Asia Logistics/Construction

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This twelve volume set includes every article printed in the fifty issue series of the Southeast Asia Analysis Report. The SEA Analysis Report represented a month-by-month analysis of Vietnam War activity including forces and manpower, VC/NV operations, Allied ground, naval and air operations, RVNAF, casualties and losses, population security, war costs and inflation and construction and port operations in South Vietnam.

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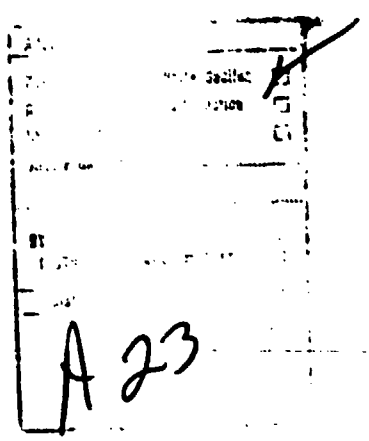

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A SYSTEMS ANALYSIS VIEW OF THE VIETNAM WAR: 1965-1972

Contents of the 12 Volumes

A Systems Analysis View Of The Vietnam War: 1965-1972

Volume 8

CASUALTIES AND LOSSES

A Systems Analysis View Of The Vietnam War: 1965-1972

INTRODUCTION

This volume, plus the other eleven volumes in the series, contains every article ever printed in the Southeast Asia Analysis Report (a few additional papers not printed in the report are occasionally included, too.).

Fifty issues of the Southeast Asia Analysis Report were published from January 1967 through January 1972 by the Southeast Asia office under the Assistant Secretary of Defense (Systems Analysis). The Report had two purposes. First, it served as a vehicle to distribute the analyses produced by Systems Analysis on Southeast Asia. It thus provided other agencies an opportunity to tell us if we were wrong and to help prevent research duplications. We solicited and received frequent rebuttals or comments on our analyses which sharpened our studies and stimulated better analysis by other agencies. Second, it was a useful management tool for getting more good work from our staff -- they knew they must regularly produce studies which would be read critically throughout the Executive Branch.

The first page of the Report stated that it "is not an official publication of the Department of Defense, and does not necessarily reflect the views of the Secretary of Defense, Assistant Secretary of Defense (Systems Analysis), or comparable officials." The intent was solely to improve the quality of analysis on Southeast Asia problems -- and to stimulate further thought and discussion. The report was successful in doing precisely this.

We distributed about 350 copies of the Report each month to OSD (Office of the Secretary of Defense), the Military Departments, CINCPAC, and Saigon, and to other interested agencies such as the Paris Delegation, AID, State Department, CIA and the White House Staff. Most copies circulated outside OSD were in response to specific requests from the individual person or agency. Our readership included many of the key commanders, staff officers, and analysts in Washington and in the field. Their comments were almost always generous and complimentary, even when they disagreed with our conclusions. Some excerpts appear below:

"I believe the 'SEA Analysis Report' serves a useful purpose, and I would like to see its present distribution continued." (Deputy Secretary of Defense, 31 May 1968)

"We used a highly interesting item in your May Analysis Report as the basis for a note to the Secretary, which I've attached." (State Department, 28 June 1967)

"We were all most impressed with your first monthly Southeast Asia Analysis Report. Not only do we wish to continue to receive it, but we would appreciate it if we could receive 4 (four) copies from now on." (White House, 9 February 1967)

"Ambassador _____ has asked me to tell you that he has much appreciated and benefited from the studies and analyses of this publication." (State Department/White House, 24 January 1969)

"Congratulations on your January issue. The 'Situation in South Vietnam' article was especially interesting and provoking." (State Department, 24 January 1969)

"I let Ambassador _____ take a swing at the paper. He made several comments which may be of interest to you. Many thanks for putting us back on distribution for your report. Also, despite the return volley, I hope you will continue sending your products." (MACV-CORDS, 17 June 1968)

"As an avid reader (and user) of the SEA Analysis Report, I see a need for more rounded analyses in the pacification field and fewer simplistic constructs." (MACV-DEPCORDS, 17 April 1968)

"The SEA Programs Division is to be commended for its perceptive analysis of topics that hold the continuing concern of this headquarters... The approach was thoughtfully objective throughout and it was particularly pleasing to note a more incisive recognition of factors that defy quantified expression." (Commander, US Army Vietnam-USARV, 29 November 1967)

"In general, I think it is becoming the best analytical periodical I've seen yet on Vietnam (though there's not much competition)." (MACV-DEPCORDS, 21 April 1967)

"Statistical extrapolations of this type serve an extremely useful purpose in many facets of our daily work." (CIA, 6 February 1967)

"One of the most useful Systems Analysis products we have seen is the monthly Southeast Asia Progress Report.... Indeed it strikes many of us as perhaps the most searching and stimulating periodic analysis put out on Vietnam." (President of The Rand Corporation, 22 October 1969)

In November 1968, 55 addressees answered a questionnaire about the Report: 52 said the report was useful, 2 said it was not, and 1 said, "The report does not meet an essential need of this headquarters;" nonetheless, it desired "to remain on distribution" for 7 copies. From 48 questionnaires with complete responses, we found that an average 4.8 people read each copy -- a projected readership of 500-950, depending on whether we assumed 1 or 2.4 readers of copies for which no questionnaire was returned.

Readers responding to the questionnaire reported using the Report for the following purposes:

Information	42%
Analysis	31%
Policy Making	11%
Briefings	7%
Other	9%
	100%

In addition, readers reported about equal interest in each of the seven subject areas normally covered in the Report.

VC/NVA	18%
Air Operations	20%
RVNAF	17%
Pacification	13%
Friendly Forces	12%
Deployments	12%
Logistics/Construction	8%
	100%

There was some negative reaction to the Report. Concern was expressed about "the distorted impressions" the Report left with the reader and its wide dissemination which "implies its acceptance by the Secretary of Defense, giving the document increased credibility."

Given the way in which the Southeast Asia Analysis Report was used, the important responsibilities of many of its readers, and the controversial aspects of the report, I decided to include in these twelve volumes every article ever published in a Southeast Asia Analysis Report. This will allow the users of these volumes to arrive at their own conclusions.

Thomas C. Thayer
February 18, 1975

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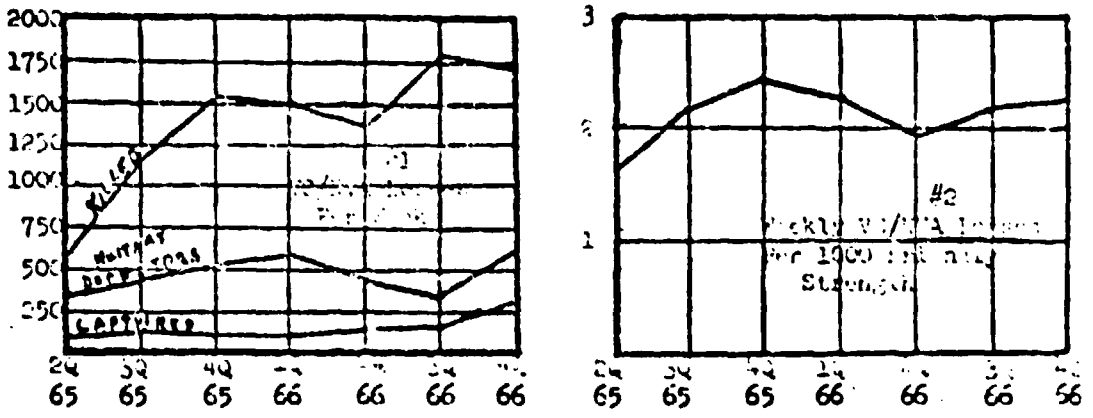
VC/NVA LOSSES



VC/NVA LOSSES - WEEKLY AVERAGE

	1965			1966				
	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total 1966
Estimated Losses								
Killed a/	705	1165	1555	1505	1370	1505	1730	1605
Captured	100	145	135	130	145	170	300	185
Mil Defectors b/	345	435	525	580	430	655	605	560
Est. Total Losses	1150	1745	2215	2215	1945	2330	2635	2250
Average Friendly Strength (000)	689	798	898	954	998	1076	1140	1042
Total Losses/1000 Friendly/Week	1.7	212	2.5	2.3	1.9	2.2	2.3	2.2

a/ 1.5 times recorded "body count."
b/ 2 times recorded military defectors.

The table shows estimates of the average enemy losses per week since April 1965. By 4th quarter 1965, estimated military losses (killed, captured, military defectors) reached 2215 per week. The weekly average for CY 1966 has increased to 2250, primarily due to high losses in 4th quarter.

Enemy losses from wounds are included in the figures (in the killed category) based on the US Intelligence Board estimate of 1.5 enemy wounded for each one killed, with one-third of the wounded put out of action; this results in a loss of .5 for each VC/NVA recorded killed, or about 525 additional average losses per week in CY 1966. (MACV estimates .28 losses for each VC/NVA killed, or an average additional loss of about 300 per week). The military defectors category includes

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deserters who do not turn themselves in to the GVN centers, based on the Board estimate that there is one unrecorded deserter for each recorded defector; this results in another 245 average losses per week in CY 1966.

The enemy loss rate was apparently not affected significantly by the greatly increased friendly activity between 4th quarter CY 1965 and 4th quarter 1966 which included: 90% increase in battalion days of operations; at least 25% increase in battalion sized operations contacting the enemy; a 40% increase in small unit actions accompanied by an 8% increase in contacts. Moreover, armed helicopter sorties in SVN doubled from 14,000 to 28,600 per month. (Attack sorties in SVN also rose slightly, from 12,800 to 13,300 per month.)

Graph #1 indicates that there may be some relationship between the number of VC/NVA killed during a given quarter and the number of VC/NVA defectors and deserters during the following quarter.

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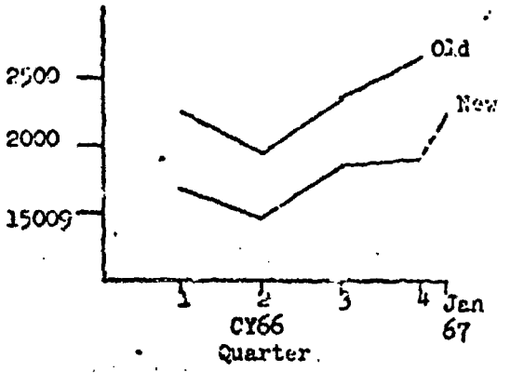
VC/NVA LOSSES-A PREVALUATION

#1
VC/NVA Losses
Per Week



#2
VC/NVA Losses Per
1000 Friendly Strength/Week

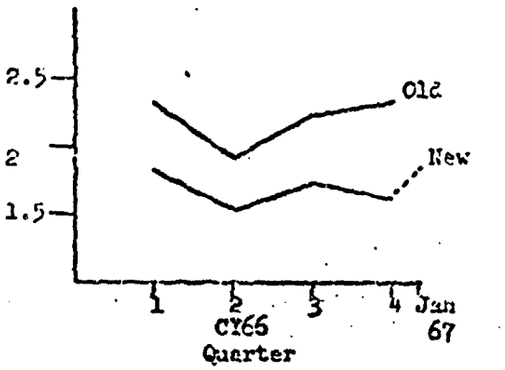


TABLE 1

VC/NVA LOSSES - WEEKLY AVERAGE

	CY 1966 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	CY 1966 Average	CY 1967 January
Estimated Losses						
Killed (Body Count)	1005	915	1200	1150	1070	1370
Died of Wounds a/	350	320	420	405	375	480
Captured b/	40	40	40	40	40	40
Military Defectors	290	220	180	305	245	315
Est. Total Losses	1685	1495	1840	1900	1730	2205
Average Friendly Strength (000)	930	982	1044	1143	1025	1192
Total VC/NVA Losses/ 1000 Friendly Strength/ Week	1.81	1.52	1.76	1.66	1.69	1.85

a/ .35 times recorded "body count." - Revised MACV estimate.
b/ Includes only the POW population in GVN PW camps. The figure was derived by dividing the 1966 total of 2023 by 52.

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The "VC/NVA losses" article in the January 1967 CIA Analysis Report indicated that VC/NVA total losses during CY 1966 averaged 2280 per week. The factors used to develop this estimate were provided by the USIB in MIS 14.3-66. Based on new MACV factors, they have been revised downward, resulting in a new average of 1730 per week, a decrease of 550. Graph #1 contrasts the old and new rates by quarter. Table 2 shows the components of the total loss figure, previous and current weekly averages for CY 1966, and the old and new factors.

TABLE 2

COMPARISON OF FACTORS AND DATA
(Weekly Average - CY 1966)

	USIB		MACV	
Killed	(Body Count)	1070	(Body Count)	1070
Died of Wounds	(.5 time body count)	535	(.35 times body count)	375
Captured	(All Detainees)	185	(POW in camps)	40
Military Defectors	(2 times recorded defectors)	490	(Recorded defectors)	245
Total		2280		1730

The recent CINCPAC intelligence conference agreed that the "VC/NVA" died of wounds" figure is most accurately estimated (on the basis of a MACV study) by using a factor of .35 times the "body count", rather than the previous factor of .5 times "body count." In addition, MACV has reported that the average figure of 185 per week for VC/NVA captured included all persons detained in operations before they were screened. It therefore included persons who, after screening, were classified as Chieu Hoi returnees, prisoners of war (POW), criminal defendents, and innocent civilians. The CINCPAC intelligence conference agreed that only the POW in camps should should be counted as long term losses (Chieu Hoi are counted in the defector category); this figure amounts to around 2000 persons for CY 1966, and we have divided it by 52 weeks to yield the new weekly average of 40 captured, a reduction of 145 from the previous weekly average. The CINCPAC conference also agreed that the previous practice of counting an additional deserter for each military defector to the GVN was not warranted by the evidence; thus, the previous weekly average is reduced from 490 to the present level of 245, pending a new MACV study on the subject.

The revised data indicate that the VC/NVA lost 1.7 personnel per week during CY 1966 for every 1000 friendly forces; the previous estimate was 2.2. Graph #2 indicates the differences by quarter.

ESTIMATES OF VC/NVA COMBAT DEATHS

Two methods have been used for estimating enemy combat deaths in South Vietnam: body counts and intelligence reports. The latter include agent reports, prisoner interrogations and captured enemy documents.

Official reports of enemy combat deaths (KIA) are supposed to be based on body counts of enemy dead by combat units; these numbered 55,524 for CY 66. Vigorous efforts are made (at least by US forces) to keep the body counts as honest as possible. However, there are so many difficulties and dangers involved in accurate body counting that the accuracy of the "body count" is constantly being questioned. Among the problems are:

(1) The enemy places a high priority on reclaiming bodies from the battlefield, so that in most combat situations all enemy dead are not there to be counted.

(2) The terrain in much of Vietnam makes it difficult to find all of the bodies, particularly in the jungles and swamps.

(3) Continuing combat or sniper fire may make it too hazardous to do more than estimate enemy losses.

(4) Some number of the enemy are killed by our artillery, tactical air and B-52 strikes in areas where we can't count the bodies.

(5) In cases where the body count makes the battle result look unfavorable, the tendency and pressures to estimate and perhaps exaggerate the body count are very strong.

MACV 70 Document Study

An alternative method of estimating enemy combat deaths is from intelligence reports of enemy losses. The conceptual and procedural problems in producing good estimates based on these materials are complex, but one effort has received widespread attention and is worthy of review. Early this year, MACV studied 70 documents which mentioned unit strengths and unit gains and losses. We do not know what criteria MACV used to select the documents, so we do not know whether they are a representative sample. The 70 documents, covering units with 18,792 assigned personnel, mentioned 395 KIA (in 24 of the documents). Annex 1 abstracts the significant portions of 17 of the documents that contain information about enemy losses. These documents consist of account books, notebooks, food supply records, mess registers and medical activity reports. Some are periodic reports, others after-action reports, and still others simply notations telling of enemy strengths and losses. With each abstract we have summarized the information derived about enemy assigned strength, KIA losses and the time period of the strength/loss information.

MACV's method of estimating enemy KIA from this data is quite complex. For each document the ratio of KIA losses to total losses - deserters, DOW, KIA, MIA, WIA, school, etc., - is computed. These ratios are averaged, over all 70 documents, and a KIA factor of 1.93% of assigned strength per month is derived. This factor is further refined to 2.13% of assigned strength per month by adjusting for persons missing in action that can be presumed KIA. Losses are then assessed against enemy strength by multiplying the man-months of the reported (not retrospective) CY 66 enemy order of battle by .0213. MACV's method produces an estimate of about 58,000 KIA for CY 66, or about 4.5% above the official body count.

There are many serious conceptual problems with the MACV study. Using the same methodology but the retrospective military order of battle (i.e., reconstructed later with the benefit of more data), you get 63,600 KIA or 13% more than the official KIA estimate. Moreover, some of the documents refer to KIA over several months (whereas MACV assumed they all covered 1 month). Thus the KIA in the documents should be divided by the assigned strength times the period covered. (For example, reference 50 refers to an assigned strength of 596 and 67 KIA over a six month period. MACV would compute the attrition rate to be 11.2% (67/596). The rate should be divided by the 6 month time period giving a KIA rate of 1.87% of assigned strength per month.) The average period covered in the 70 documents was about 1½ months, resulting in a KIA factor of 1.48% per month and a total KIA against the retrospective OB of 44,300 for CY 66 or 20% below the body count.

MACV also assumes that Combat, Administrative Service, and Irregular units all suffer the same percentage killed each month. However, the documents with loss data refer only to combat units, and combat units account for only 46% of the strength in the CY 66 retrospective enemy order of battle. We suspect that irregulars and possibly administrative service forces fight less and thereby lose fewer men per year than do combat units. Unfortunately, we don't have enough documents to make a valid estimate of the relative kill ratios of these other categories. Moreover, the OB data on the numbers of irregular forces is so soft that even if we had loss factors, good projections would be very difficult.

Estimated Combat Unit Losses and Gains

In order to get a rough feel for the validity of the approach of using captured documents to estimate enemy losses, we did a crude personnel loss and gain table (see Table 1) for the combat unit portion of the enemy order of battle (i.e., VC/NVA main and local combat and combat support units). The table uses the MACV attrition factor, as corrected for the time period of the documents as noted above. This factor of 1.48% per month is the applied to the retrospective combat OB. On this basis we would estimate that 20,400 enemy combat unit personnel were KIA in CY 66. We include generous estimates of other categories of VC/NVA personnel losses and estimate a total of 44,900 combat unit losses in CY 1966. The Combat OB increased 20,600 during CY 1966 implying a total required personnel input of 65,500 persons. Against these input requirements we assume all of the accepted infiltration (55,300) is applied to the combat OB, leaving only 10,200 persons or about 850 a month to be supplied from recruits in the south.

TABLE 1
AN APPROACH AT ESTIMATING
1966 VC/NVA COMBAT UNIT GAINS AND LOSSES

	1965 Dec	1966 Mar	1966 June	1966 Sept	1966 Dec	Total
COMBAT OB (000) a/						
NVA	26.6	39.1	53.4	54.7	46.9	
VC	65.7	69.1	69.4	71.2	66.0	
Total	92.3	108.2	122.8	125.9	112.9	
OB INCREASE		15,900	14,600	3,100	-13,000	20,600
COMBAT UNIT LOSSES						
KIA b/		4,588	5,099	5,563	5,147	20,397
DOW c/		1,606	1,785	1,947	1,802	7,140
POW d/		300	417	582	811	2,110
Military Chieu Hoi e/		831	631	508	867	2,837
Deserters f/		3,101	3,128	3,183	3,038	12,450
Total		10,426	11,060	11,783	11,665	44,934
PERSONNEL INPUT REQUIRED		26,326	25,660	14,883	(1,335)	65,534
ACCEPTED INFILTRATION g/		28,200	25,400	9,000	2,700	55,300
REQUIRED RECRUITMENT		(1,874)	10,260	5,883	(4,035)	10,234

a/ Source: OSD STAT SUMMARY, 14 November 1967.
b/ Based on 1.48% attrition per month - see text.
c/ MACV .35 per KIA factor.
d/ 84% of PW's are from combat units.
e/ 22% of Military Chicu Hoi are from combat units.
f/ Assumes zero desertions for NVN and one-half the ARVN rate of 10 per 1,000 per month for VC.
g/ OSD STAT SUMMARY, 7 November 1967.

While we hold no brief for any one number in the table above, it indicates that the order of magnitude of the estimated losses for combat unit personnel is roughly right. It also seems to support recent evidence that VC combat units are receiving large numbers of NVA replacement personnel. Table 2 estimates the input and uses of the NVA personnel infiltrated into SVN during 1966.

TABLE 2

ESTIMATED NVA PERSONNEL INPUT AND USES - 1966

Accepted Infiltration	55,300
NVA Unit Requirements	
NVA Losses	
KIA a/	15,000
Died of Wounds	5,000
POW's	1,000
Total Losses	21,000
NVA OB Increase	20,300
Total NVA unit requirement	41,300
Excess NVA Personnel Input	14,000

a/ Based on estimate of ratios of NVA and VC personnel KIA. See August SEA Analysis Report, page 17.

The above calculation indicates that about 14,000 NVA personnel during 1966 could have been used as replacements in VC units. This would amount to 21% of the VC combat OB at end 1966. (The precise number of NVA personnel in VC units at the end of 1966 has not been estimated by MACV J-2, as far as we know.)

Final Caveats

A few words of caution. As was pointed out previously, it would be a serious mistake to apply these combat unit attrition rates to the other portions of the order of battle. We do not have adequate data now to estimate attrition in irregular and administrative units. Until we have this data we are unable to confirm or deny the validity of the reported 55,000 KIA (body count) for 1966.

In addition, the calculations on Table 1 and 2 are very rough. They are built on a pyramid of unsubstantiated assumptions. But they appear reasonable based on available data. They are suggestive of further work that can and should be done. We are beginning to do it, and will report our findings as they become available.

ANNEX I

CAPTURED DOCUMENT ABSTRACTS

Reference

2 Accounts Book - In complete and partially unintelligible accounts book of the 195th battalion, kept by Luu Cong Vien.

- Casualties on 16 and 19 November 1965: two members of the second company KIA.
- One desertion.

- Strength in November 1965: 447 men.
- Strength in early December 1965: 439 men.

- Casualties in December 1965: two men of second company KIA.
- Desertions: three men of the 2d company and one more of the 3d.
- 13 December 1965: No rice left since his evening: 10 KIA. Nothing recovered.

Information derived: 447a/ 2KIA 1 mo
439 12KIA 1 mo

6 Personal Notebook - Personal notebook of an unidentified individual continuing information on a counter-sweep operation sometime in late December 1965.

a. Units participating in the operation:
- D85: 69 men (unit strength 89 men)
- D87: 42 men (unit strength 75 men)
- D83: 82 men (unit strength 92 men)
- D8 : 46 men (unit strength 66 men)
- "E" Headquarters: 30 men (unit strength 30 men)

b. Casualties
- D8 : 11 killed, 27 wounded
- D83: 4 killed, 6 wounded
- D85: 5 killed, 9 wounded
- D87: 2 killed

Only two rifles and one cartine lost. One (1) MG, 5 AR's and a number of rifles were damaged by air strikes and artillery fire.

a/ Strength of unit according to the captured document.

c. Enemy Casualties: 484 US and Korean soldiers were put out of action; 16 aircraft downed and 7 others damaged.

Two individuals, Thinh Vu Long and Cu defected from their units on 26 December 1965.

Information derived: 352 22 KIA 1 mo

13 Medical Activity Report

Medical activity report of VC Detachment 204, Inter Detachment 200, covering period 26 November - December 1965.

- Assigned strength: 117. Present for duty 115.
- 4 WIA and 3 KIA due to air raids.
- 12.8% of strength is sick and in convalescence.
- 6% malaria stricken.
- 83.8% in good physical condition.

Information derived: 117 3 KIA 1 mo

15 Notebook - Notebook of a battalion medic containing the following information:

I. Sick call status
II. Status of casualties (suffered in the attack on Minh Long District HQ on 30 December 1965).
1. Percentage of WIA's: 2.5%
7 slightly wounded, 2 moderately wounded, 4 seriously wounded.
2. Number of KIA's: 6 (four bodies recovered and two bodies missing).
III. Strength status
- Personnel assigned: 519.
- Left behind at An Lao District, Binh Dinh: 39 men.
- Personnel hospitalized at Binh Dinh Hospital (detachment 700 Group Quyet Tam): 23 men.
IV. Other information.

Information derived: 519 6 KIA 1 mo

30 Report on Wounded Personnel of Quyet Tam Regiment

Name of Battle	Date	No. of Wounded	Degree of Wound		
			Light	Medium	Serious
NUI THU	21 Nov 65	170	69	88	13

Small Arms Fire	Shrapnel	Chemical	Other
45	113	--	8

Percentage of military strength wounded: 6.59%
Light: 2.67%
Medium: 3.41%
Serious: .51%
Wounded in combat: 1.32%
Wounded while withdrawing: 5.272%
Died as a result of wounds: 2%

Information derived: 2580 58 KIA 1 mo

33 Food supply records and reports, financial statement and strength of (AA Company) C1.

An evaluation (by CDEC) of several documents from C1 reveals the following information:

Company C1 was equipped with 12.7mm heavy anti-aircraft machineguns. Its strength was 131 men from Jan to June 1965. Three men were killed at the end of July 1965 and the strength was only 128 men at that time. The strength dropped down to 125 at the end of August 1965 since 3 more men were killed in combat.

Information derived: 128 3 KIA 1 mo
125 3 KIA 1 mo

35 VC Notebook

1. Morale of the unit.
2. Roster of cadre of the company.
3. Strength.
   The initial strength was 132 as follows: 8 officers, 42 NCO's and 82 EM's. It was cut down to only 95, including 2 personnel newly assigned to the company: 7 officers, 29 NCO's and 59 EM. The decrease in strength was the result of desertions (22), deaths (8*), etc. during the period 25 August 1965 to 25 May 1966.

* The document does not indicate whether the 8 personnel were KIA's.

Information derived: 132 8 KIA 9 mos

40 Strength and Equipment Reports for July 1966 of D800

Strength report for July 1966 of D800, dtd 25 July 1966 and signed by Son, Personnel Officer of the Battalion.

Total assigned strength: 454 men.
KIA (in anti-sweep operation at Can Bong): 1 sqd ldr.
Absent (sent to school): 11.
Present for duty: 443 men.

Information derived: 454 1 KIA 1 mo

43 Miscellaneous documents concerning the Quyet Chien Regiment

Personnel status of 1st company in 1965

Assigned:	94	
Replacements:	14	(2 new recruits)
	108	
Transferred to friendly unit		7
Deserted		5
Dead (1 at dispensary, 1 by bombs)		2
Discharged		2
School		3
Went to NVN		1
Wounded and not returned to unit		1
Convalescing		3
		24

Information derived: 108 2 KIA 12 mos

48 Strength of the 7th Bn, Quyet ThangRegt - Mess Account Statement

- Strength of Lien Doi 4 (7th Bn) was 608 in June 1965, 594 in September 1965, 585 in October 1965, 517 in January 1966 and 516 in February 1966.
- 4 personnel of Lien Doi 4 were killed in action and 3 deserted in February 1966.

Information derived: 516 4 KIA 1 mo

50 Strength Report of Lien Doi 5, Quyet Thang Regiment

1. February 1966 strength report of Lien Doi 5, Quyet Thang Regt, dtd 24 February 1966, signed by Ngoc Danh, reveals the following information:

Unit	Jan Strength	Feb Strength
51 (1st Co)	127	113
52 (2d Co)	127	120
53 (3d Co)	124	120
54 (4th Co)	113	113
55 (Bn Hq)	53	59
56 (Signal Unit)	52	53
Total	596	578

2. Casualties report for the first 6 months of 1966, undated and unsigned:

KIA: 67
WIA: 74

Information derived: 596 67 KIA 6 mos

51 Personal Notebook, belonging to Phan Sinh Duyen, a member of an unidentified company of the Song Huong Regt, 304 B Div, contains information on the strength, weapons, combat losses of the company, operation plans and critiques on operations conducted by units K1, K2, K3. Entries in the document cover the period from 14 July to 25 September 1966.

The document indicates that the strength of this company was 168 men equipped with 33 CKC, 42 AK, 6 LMG RP-46, 3B40 and 2 K-41. It further reveals that the unit had sustained 22 KIA's, 26 WIA's, 6 MIA's and 11 deserters in an engagement with US troops at Cu Dinh, Quang Tri on 18 July 1966.

Information derived: 168 22 KIA 1 mo

54 Monthly Strength Report from Unit C1, undated.

Strength in previous month 105.
Increase - asst plt leaders returning from training 3.
Decrease - plt leader reassigned to a new unit 1.
Current strength 107.

Information derived: 105 OKIA 1 mo

58 Mess Register

1. Strength

105 men from 1 through 15 July
89 men as of 16 July
71 men as of 26 July
58 men as of 1 August
59 men as of 11 August
69 men as of 31 August

2. Losses during the period 1 July - 31 August

KIA	WIA	DESERTERS
5	15	14

Information derived: 105 5 KIA 2 mos

68 Strength of 3d Co, 9 Bn

October 1966 account settlement report of Thou 3 (3d Co) Xom 6 (9th Bn) Lien Gia 4 (Quyet Thang Regt), reveals that this unit had 92 men in September and 88 men in October 1966.

Gains - Three officers from unit 577 (Aspirants Vuong Dinh Hung, Vu Khanh Thinh and Phan Van Du).

Losses - 1 KIA (Aspirant Ha Xuan Hoa)
1 MIA, 2 transferred, 1 gone to school and 2 deserters.

Information derived: 92 1 KIA 1 mo

69 Mess Account Settlement Reports of Thon 61

Mess Account Settlement Report, dtd 24 Oct 66, signed by Van Ngo, Doi 61 Adjutant, authenticated by Ngoc Khiem, Unit commander, records the following information:

Strength as of Sept 66		96 individuals
Increase		4
Returned from Recruit School	3	
Returned from 577 School	1	
Decrease		22
KIA at My-Hiep	3	
Missing	2	
Wounded	7	
Sick, sent to C.28	6	
Going to school at F	3	
Returned to group	1	
Strength as of Oct 66		78 individuals

Information derived: 96 3 KIA 1 mo

70 Report of food expenditures for the month of June 1966 of Unit 525 (9 Bn, Quyet Thang Regt, Sao Vang) is as follows:

Strength as of May 1966	446
Gains in June	13
Losses in June	15
Strength	444

The following is a breakdown of personnel gains

a.	Returning from MR School	1
b.	Stragglers	3
c.	Released from dispensary	5
d.	From Unit 577	4
	Total	13

The following is a breakdown of personnel losses

a.	Sent to school at MR	2
b.	KIA	3
c.	Sent to C.27	6
d.	Admitted to dispensary	2
e.	Returned to Engineer	1
f.	Unidentified	1
	Total	15

Information derived: 446 3 KIA 1 mo

VC/NVA PERSONNEL LOSSES: A NEW ESTIMATE FROM CAPTURED DOCUMENTS

We have completed a preliminary study of total enemy losses based on 84 captured documents. More work on more documents needs to be done. Nevertheless, we estimate that total VC/NVA losses for 1965 through 1967 were on the order of 386,000 enemy losses compared to the official estimate of 289,000. We estimate only 127,000 enemy were killed in action against the official body count of 179,000; and 19,000 enemy died and were permanently disabled from wounds compared to MACV's estimate of 63,000. But we estimate 96,000 died or were permanently disabled from disease (MACV does not estimate losses due to disease): and that there were a net of 134,000 deserters and defectors (against 38,000 military Chieu Hoi).

TABLE 1

ESTIMATED AND OFFICIAL DATA COMPARED
(000)

	1965		1966		1967		Total 1965-67	
	Est	Off	Est	Off	Est	Off	Est	Off
Killed In Action	26.2	35.5	43.2	55.5	58.0	88.1	127.4	179.1
Died & Disabled of Wounds	3.0	12.3	9.2	19.7	7.2	30.8	19.4	62.8
Died & Disabled of Disease	27.0	--	36.1	--	33.4	--	96.5	--
Desertion & Defection	42.1	7.9	50.9	12.8	40.8	17.7	133.8	38.4
Prisoners of War	.4	.4	2.7	2.7	6.0	6.0	9.1	9.1
Total	98.7	56.1	142.1	90.7	145.4	142.6	386.2	289.4

Our estimates of enemy losses result from our applying monthly attrition factors (developed from 84 captured enemy documents) to the retrospective MACV VC/NVA Order of Battle for 1965 through 1967, Annex 1. The captured documents used are listed in Annex 2. The methodology for deriving the attrition factors, a sample derivation, and details of all factor are summarized in Annex 3.

We have reservations about some aspects of our methodology. First, our KIA and desertion estimates may be too high because we built them on only those documents showing KIA or desertions. If a document gave no indication of KIA or desertion, we excluded it, even if the context of the report suggested that all losses were reported. Second, we have no documentary basis for a factor for deserters who return to their units; we used a factor of 30% as did MACV in his study, VC/NVA Losses, but this is based on a misreading of FM-101-[illegible]. Third, our data sample was too small to permit year-by-year estimates of administrative service and guerrilla force attrition, or to develop

death and disablement factors by year and unit type. Fourth, the estimates of losses to disease are based on a torturing of the data. Fifth, we are not sure that our documents provide adequate geographical coverage -- with a particularly small sample from IV CTZ. Nonetheless, we suspect that our final assessment of enemy losses in 1965-67 will be in the range of 300,000 to 400,000.

Enemy Killed In Action

Our estimates of enemy killed in action are 29% lower than the official body count overall and 38% less in 1967. The difference could be the result of double counting, occasional faulty counts, or the civilians (personnel pressed into service by the VC to carry ammunition and supplies) killed during a battle.

TABLE 2

ENEMY KIA

	1965	1966	1967	Total 1965-67
FACTORS (Times Monthly OB)				
Combat	1.35%	1.88%	3.06%	N/A
Administrative Service	.18%	.18%	.18%	N/A
Guerrilla	1.24%	1.24%	1.24%	N/A
DEATHS (Thousands)				
Combat	11.8	26.1	42.9	80.8
Administrative Service	.9	1.0	.9	2.8
Guerrilla	13.5	16.1	14.2	43.8
Total	26.2	43.2	58.0	127.4

We feel that our estimates of enemy killed are fairly good. The attrition factors for combat units were based on 47 documents, and while our guerrilla estimate rides on only 7 documents, various methods suggest that the estimate is reasonable. The administrative service factor is the weakest, but since administrative service personnel account for less than 15% of the total OB, this should not affect our estimates significantly.

In the November SEA Analysis Report we estimated, from the 70 MACV documents, that approximately 1.48% of the enemy combat force were killed

each month. Since the majority of the 70 documents referred to 1965 and 1966 losses, our new estimates seem to be consistent with our previous effort.

The increasing attrition of combat unit personnel over the period (1.35% in 1965, 1.88% in 1966 and 3.06% in 1967) is indicative of the increasing tempo of the war, and is also reflected in the average US Army and Marine losses which were 100 per month in 1965, 400 per month in 1966 and 740 per month in 1967.

Deaths and Permanent Disability Due to Wounds

To determine how many enemy died or are disabled due to wounds, we first had to determine how many were wounded. MACV estimates that for each 100 VC/NVA killed in action, an additional 150 are wounded. Our data suggests that this rate averaged 270 during 1965-67: about 172 in 1965, 319 in 1966 and 186 in 1967. We feel that our estimate of wounded to killed is fairly good.

TABLE 3

ENEMY WOUNDED IN ACTION

	1965	1966	1967	Total
FACTORS (Times KIA)				
Wounded In Action	1.72	3.19	1.86	N/A
PERSONS WOUNDED				
Enemy KIA (From Table 2)	26.2	43.2	58.0	127.4
Total Enemy Wounded	45.1	137.8	107.9	290.8

These factors are similar to those experienced by GVN forces as indicated in the table below:

	2nd Half 1965	1966	1967
Regular	2.26	3.10	3.29
RF/PF	1.86	1.70	2.20

A recent MACV/CICV Study of medical causes of VC/NVA non-effectiveness a/ provides the key to translate wounded to dead/disabled. This study reports

a/ ST 67-804, Medical Causes of Non-Effectiveness Among VC/NVA Troops, Second Update, Combined Intelligence Center, Vietnam, 17 November 1967.

that nine captured medical reports show 107 of 5437 (or 1.97%) wounded VC/NVA died following admission to hospitals. Many of the more seriously wounded die prior to reaching a hospital, and they are probably included in the enemy's reports of his KIA and thus are counted in our estimated KIA. (Assuming they do die before reaching hospitals, and are left or buried near the scene of the battle, they are, in the most part, included in the US official body count.)

In addition, the study says that captured annual medical reports indicate that 8.6% of the hospitalized wounded are placed in convalescent status; of the convalescent patients 54.6% are considered permanently disabled. Thus, about 4.7% (54.6% of 3.6%) of the wounded are permanently disabled.

Applying these factor to our estimates of enemy wounded gives the following result:

	1965	1966	1967	Total
FACTORS (Times Wounded)				
Died of Wounds	1.97%	1.97%	1.97%	1.97%
Perm Disabled, Wounds	4.7%	4.7%	4.7%	4.7%
Total	6.7%	6.7%	6.7%	6.7%
PERSONS DIED OR DISABLED (Thousands)				
Total Wounded	45.1	137.8	107.9	290.8
Died of Wounds	.9	2.7	2.1	5.7
Perm Disabled by Wounds	2.1	6.5	5.1	13.7
Total Losses to Wounds	3.0	9.2	7.2	19.4

Thus we find that for each 1000 KIA in 1965, 115 additional persons die or are permanently disabled due to wounds; in 1966 its 213 per 1000 KIA and in 1967, 124 per 1000 KIA. These results are lower than the factor of 350 per 1000 KIA used by the intelligence community.

Died and Permanently Disabled for Disease

Data from the MACV/CICV Study cited above suggests that 1.11% per month of the VC/NVA force dies or becomes permanently disabled from disease. We have used this factor, with the following results:

	1965	1966	1967	Total 1965-67
FACTORS (Times Monthly OB)				
Died of Disease	.23%	.23%	.23%	.23%
Permanently Disabled From Disease	.88%	.88%	.88%	.88%
Total	1.11%	1.11%	1.11%	1.11%
PERSONS DEAD OR DISABLED (Thousands)				
Dead of Disease	5.6	7.5	6.9	20.0
Perm Disabled from Disease	21.4	28.6	26.5	76.5
Total Losses to Disease	27.0	36.1	33.4	96.5

The derivation of the 1.11% factor is so devious that we do not consider the factor to be firm. We derived it as follows: incidence of malaria for all VC/NVA forces in South Vietnam during 1966 was 15.5% per month. 66.9% of these individuals were non-effective, i.e., hospitalized, granted sick leave, or otherwise put on a non-duty status because of malaria. If we assume that all of the non-effectives were hospitalized, 10.4% (15.5% x 66.9%) of the enemy were hospitalized each month with malaria. The documents also show that only about half (48.5%) of the hospitalized are due to malaria: i.e., the total hospitalized by disease is slightly more than twice (2.06 times) the 10.4% of the force hospitalized by malaria, or 21.5% of the force. b/

Knowing that 21.5% of the enemy force is hospitalized each month with disease, we now can determine how many die or are disabled by disease. Five captured medical reports show that 1.09% (72 of 6,583) sick VC/NVA died while they were hospitalized. Thus 1.09% die each month of the 21.5% of the force hospitalized each month or 0.23% of the force dies each month of disease.

Two captured medical reports reveal that 7.5% of those hospitalized due to disease were placed in a convalescent status. If 54.6% of the convalescents are permanently disabled, then 0.88% (21.5% x 7.5% x 54.6% = 0.88%) of the total enemy force will be permanently disabled as a result of disease. Adding the deaths (0.23%) to the disabled (0.88%) gives a total loss factor due to disease of 1.11%.

Obviously our estimates of deaths and disability from disease are tenuous. We have not examined carefully the documents concerned, and we have no feel for the difference in illness rates between VC and NVA or between regular forces and guerrilla forces. We suspect that the NVA, being less accustomed to the southern environment, may suffer a significantly greater incidence of malaria. If they do, and if the documents refer mainly to NVA medical experience, which we suspect they do, we are exaggerating the death and disablement from disease.

Desertions and Defections

We estimate that 42,100 enemy defected or deserted in 1965, 50,900 in 1966 and 40,800 in 1967.

b/ The average hospital stay appears to be roughly 15 days; thus 10% of the force is hospitalized for disease at any one time.

TABLE 4

DESERTIONS AND DEFECTIONS

	1965	1966	1967	Total 1965-67
FACTORS (X Monthly OB)				
Combat	.87%	.74%	.23%	
Administrative Service	.64%	.64%	.64%	
Guerrilla	4.54%	4.54%	4.54%	
DESERTERS & DEFECTORS (Thousands)				
Combat	7.6	10.3	3.2	21.1
Administrative Service	3.0	3.6	3.0	9.6
Guerrilla	49.5	58.8	52.2	160.5
Total	60.1	72.7	58.4	191.2
ADJUSTED DESERTERS & DEFECTORS * (Thousands)				
Combat	5.3	7.2	2.2	14.7
Administrative Service	2.1	2.5	2.1	6.7
Guerrilla	34.7	41.2	36.5	112.4
Total	42.1	50.9	40.8	133.8

* Assumes 30% of deserters return to units.

Captured documents indicate that some of the deserters return to their units, and the practice of carrying deserters on the rolls for a number of months suostantiates this. We have followed MACV c/ in using a factor of 30% to estimate the number of deserters returring to their units. MACV derived this factor from FM-101-10 which states that, "the return to duty from captured and missing status are approximated by assuming that 30% of the personnel losses in this category during any given month are recovered for duty within the theater during the same month."

The very great majority of the deserters and defectors come from guerrilla units. MACV has found that approximately 78% of the Hoi Chanh are from guerrilla units. Our results show about 84% of the desertions from the guerrilla forces.

While these enemy desertions may at first blush appear large, they are not unreasonable. During 1967 MACV estimates that guerrilla strength has declined from 126,200 to 71,700 or 54,500. We estimate that the guerrillas have suffered 65,126 losses; 14,200 KIA; 1,633 from wounds and 12,753 from disease and 36,540 desertions. MACV estimates the enemy has been able to recruit 42,000 (3500 per month) during 1967. If the guerrillas received enough recruits to make up the difference between the OB decline and their losses, there would

c/ VC NVA Losses, MACV J-2, 3 January 1967

still be some 31,374 recruits available for VC combat and administrative service units.

Surprisingly, the 21 documents used in developing these estimates indicate equal desertion rates for VC and NVA combat units. Chieu Hoi rates show only 150 NVA returnees (of 17,700) for 1967. The possibility exists that many of these deserters in NVA units are "southerners," or VC fillers, but MACV has given no indication that the numbers of VC in NVA units are sufficient to support the order of magnitude indicated above. Lacking data to the contrary, we assume that VC and NVA combat units suffer the same desertion rates. For comparison, during 1966 the ARVN suffered a monthly rate of 1.76%, about twice our computed VC/NVA combat force desertion rate. During 1967 the ARVN rate dropped to 1.22% a month.

Consistency Check

How well do our estimated enemy loss check against MACV estimates of enemy recruitment and infiltration? Table 5 shows that we may be overestimating enemy losses by 62,000 for 1965-66 and underestimating enemy losses by 36,000 for 1967, assuming that the changes in the Order of Battle, infiltration and recruitment are correct. Overall, then, we may be 26,000 too high in our estimate of 386,000 losses, or about 7%.

TABLE 5

ENEMY LOSS ESTIMATE - CONSISTENCY CHECK
(In Thousands)

	1965	1966	1967	Total 1965-67
Total Input Required				
Enemy OB (End of Year) a/	224.8	283.9	224.6	
Net Change	+53.6	+59.1	-59.3	+53.6
Loss Estimates	98.7	142.1	145.4	386.2
Calculated Input Requirement	152.5	201.2	86.1	439.8
Total MACV Est Input				
Total Infiltration b/	35.3	88.5	80.0 c/	203.8
MACV Recruitment Estimate	84.0	84.0	42.0	210.0
Total Input	119.3	172.5	122.0	413.8
Difference d/	-33.2	-28.7	+35.9	-26.0

a/ From MACV OB Summary 31 October 1967, Updating Change 67-11-3, 67-11-7.
b/ Includes confirmed, probable and possible infiltration.
c/ Based on twice the Jan-June total infiltration of 40,000 since July-Dec 67 data is considered incomplete.
d/ A minus indicates that recruitment/infiltration were less than "personnel requirements," if loss computations and OB changes are correct.

However, if our calculations are correct, MACV may have (1) underestimated VC recruitment and/or NVA infiltration in 1965/66 and overestimated recruitment/infiltration in 1967; or (2) overestimated the rise and fall of the VC/NVA Order of Battle. For instance, if the enemy forces increased 20,000 in 1965 and 30,000 in 1966, and then dropped 23,000 in 1967, the table would balance using our losses and MACV's estimate of infiltration/recruitment.

Our present knowledge is so limited that we cannot now say which of the above combinations is most likely. We are continuing our analyses.

Annex 1

VC/NVA OB - 1965-1967

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1965												
Combat												
VC	53.6	52.8	56.5	56.3	60.7	61.4	61.4	62.8	64.0	64.3	65.9	67.1
NVA	4.4	6.2	6.2	8.2	9.2	9.2	9.5	10.2	14.7	21.0	25.1	26.5
Total	58.0	59.0	61.7	65.1	69.9	70.6	70.9	73.0	78.7	85.3	90.6	93.6
Admin Svcs	36.8	37.1	37.2	37.6	38.1	38.5	38.8	39.0	39.2	40.1	40.9	41.3
Guerrilla	82.4	87.9	89.5	91.0	88.2	90.3	92.7	92.7	95.7	96.4	91.9	91.2
Total	177.2	184.0	188.4	193.7	196.2	199.4	202.4	204.7	213.6	221.8	223.4	226.1
1966												
Combat												
VC	68.6	69.0	69.4	70.2	69.5	69.7	70.8	70.9	72.0	69.7	68.0	66.9
NVA	28.9	35.1	39.0	40.8	41.7	53.9	54.6	55.4	55.2	51.6	47.9	49.1
Total	97.5	104.1	108.4	111.0	111.2	123.6	125.4	126.3	127.2	121.3	115.9	116.0
Admin Svcs	42.8	44.3	45.8	46.9	47.5	50.1	50.1	50.1	50.5	47.9	45.1	41.7
Guerrilla	95.1	96.2	103.7	101.3	104.8	102.2	106.9	109.0	109.0	118.7	123.1	126.2
Total	235.4	244.6	257.9	259.2	263.5	275.9	282.4	285.4	286.7	287.9	284.1	283.9
1967												
Combat												
VC	66.4	65.9	64.0	63.6	63.9	63.3	63.5	63.9	63.5	62.8	60.3	59.8
NVA	48.5	48.4	52.8	56.4	54.8	54.8	54.7	54.0	53.8	53.7	54.3	55.4
Total	114.9	114.3	116.8	120.0	118.7	118.1	118.2	117.9	117.3	116.5	114.6	115.2
Admin Svcs	41.6	40.9	39.7	39.0	38.1	37.8	37.3	37.6	38.0	38.0	37.6	37.7
Guerrilla	124.8	120.2	113.1	104.5	99.0	94.7	89.2	86.8	82.8	81.3	81.3	71.7
Total	281.3	275.4	269.6	263.5	255.8	250.6	244.7	241.8	238.1	235.8	233.5	224.6

Source: Jan 65-Oct 67 - MACV OB Summary, 31 Oct 67: Nov 67 - MACV OB updating change 67-11-3: Dec 67 - MACV OB updating change 67-11-7.

Annex 2

Captured Documents Used In Factor Derivation

1.	12-1409-65*	22.	10-1347-66	43.	03-3015-67	64.	06-3517-67
2.	12-2527-66*	23.	10-1434-66*	44.	06-2884-67	65.	11-1638-67
3.	12-3854-66*	24.	10-2029-66	45.	10-1330-67	66.	07-3174-67
4.	12-3866-66*	25.	10-2136-66*	46.	06-4054-67	67.	06-1899-67
5.	12-1966-66*	26.	11-1051-66*	47.	07-2496-67	68.	11-2139-67
6.	12-1997-66*	27.	12-1979-66*	48.	10-1585-67	69.	11-2222-67
7.	01-1533-66*	28.	04-1722-67	49.	06-3924-67	70.	08-2312-67
8.	01-1559-66*	29.	08-3492-67	50.	10-1692-67	71.	06-1753-67
9.	02-1252-66*	30.	IR 6027-4775-67	51.	10-1868-67	72.	01-1040-67*
10.	02-1324-66*	31.	09-1346-67	52.	10-1961-67	73.	01-1041-67*
11.	02-1369-66*	32.	09-1534-67	53.	09-0014-67	74.	01-1047-67*
12.	02-1408-66*	33.	09-1550-67	54.	09-0038-67	75.	01-1738-67*
13.	06-1201-66*	34.	09-1706-67	55.	10-2153-67	76.	01-1910-67*
14.	06-1232-66*	35.	09-1706-67	56.	07-3458-67	77.	01-2233-67*
15.	07-1150-66*	36.	09-1927-67	57.	07-3458-67	78.	01-2338-67*
16.	07-1174-66	37.	09-2116-67	58.	10-2398-67	79.	01-2828-67*
17.	07-1436-66	38.	04-3273-67	59.	08-2595-67	80.	01-2873-67*
18.	08-1165-66*	39.	09-2139-67	60.	11-1127-67	81.	01-2986-67*
19.	09-1498-66	40.	09-2188-67	61.	11-1140-67	82.	02-1681-67*
20.	09-2804-66*	41.	09-2226-67	62.	11-1190-67	83.	02-1753-67*
21.	10-1342-66*	42.	03-3015-67	63.	11-1480-67	84.	02-1759-67*

* Also used by MACV in 70 and 120 document studies.

NOTE: Some of these documents were deleted from the final study for reasons outlined in the text.

Annex 3

DATA DESCRIPTION AND STUDY METHODOLOGY

Captured Documents Used in Study

This study uses 84 captured enemy documents, translated at the Combined Document Exploitation Center, CDEC, in Vietnam. Some of these documents were also used by MACV J-2 in its two studies of VC/NVA losses based on samples of 70 and 120 documents respectively. The additional documents we used are similar to those summarized in the November report. (See the November SEA Analysis Report, pp 2-12.) The documents used are all that we have reviewed over the past three months, including the MACV studies' documents that met the criteria for this exercise.

Two kinds of documents are used: after-action reports of VC/NVA KIA and WIA which are useful for computing wounded to killed factors; and documents showing a unit's strength and losses suffered over a period of time. Almost all of these latter documents referred to a unit's killed in action during the period, and better than half listed other losses, such as WIA, desertions, sick and those attending school.

Whenever possible, documents were classified by the year of the information and the type of unit (combat, administrative services or guerrilla). In several cases, the type of unit was identified from the context of the documents rather than an explicit identification within the document. If identification of year and unit type were not possible, the document was not used.

Methodology

First, the data is normalized to a one month period. That is, if the document covers a three month period for a unit with a strength of 300 and 12 KIA during the quarter, we divide the number of KIA by 3 months and use 4 as the average monthly KIA for the 300-man unit. This provides a monthly attrition factor of 1.33 per 100 strength for this unit.

After the attrition factor was computed for each loss cause for each document, three differing methods were used to calculate the annual attrition rate. Table 1 provides a sample set of calculations. The first method takes the sum of the reported monthly KIA and divides by the sum of the assigned strengths for all units. We then divide the sum of the monthly KIAs, 27.875, by the sum of the assigned strengths, 1923, to get an attrition factor of 1.45%. (See Table 1).

TABLE 1

SAMPLE CALCULATIONS

ASSIGNED STRENGTH	MONTHLY KIA	KIA/ /STR
444	14	.0315
117	3	.0256
191	2	.0105
523	4.7	.0090
132	.889	.0067
245	0	0.0
128	2.5	.0195
143	.778	.0054
1923	27.867	.1082

Method 1: $\frac{27.867}{1923} = 1.45\%$

Method 2: $\frac{.1082}{8} = 1.35\%$

Method 3: 1.25%

The second approach is to compute an average of the KIA ratios for each observation. As shown on Table 1, we sum the KIA/strength ratios for all observations, .1082, and divide it by the number of observations in the sample, 8, to get a monthly attrition factor of 1.35%. This method disregards unit size - i.e., a local force company's loss rate receives the same weight as a main force regiment's.

The third estimate is determined by the regression coefficient of strength, regressing strength (independent variable) against KIA (dependent variable). (Plot strength against KIA and draw a line describing the relation between KIA and strength, using the least squares criterion. The slope of the line is our third estimate.) For the 1965 combat unit KIA factor shown on Table 1, we get 1.25%. This method is very unreliable with small sample sizes.

Good arguments could be offered for each of these methods. But, if there is a relationship between losses and strength, and if the samples were large enough, each of these methods should produce about the same result. Thus, the reliability of our estimates can be measured by how well the results of the three methods agree. Where all three methods provide reasonably similar estimates we feel that our estimate is more reliable than in the case where the methods provide widely divergent results. Because much of the data used in this study (or any similar study) varies in quality, we have arbitrarily chosen to use the middle estimate of the three as our "best" estimate for each factor for each year.

COMPUTATION OF MONTHLY KIA FACTOR - COMBAT TYPE UNITS

	1965	1966	1967	Total All Years
Number of Documents	8	26	13	47
Sum of Unit's Reported Assigned Strength	1903	13640	3331	18,874
Total Number of Reported KIA Per Mo	27.97	254.4	102	385.37
Reported KIA per 100 Assigned Strength Per Month	1.44	1.87	3.06*	2.04
Average KIA per 100 Assigned Strength per Month for Reported Units	1.35*	2.62	3.46	2.64
Least Squares KIA per 100 Assigned Strength per Month	1.25	1.88*	3.00	2.26

*"best" estimate.

COMPUTATION OF MONTHLY KIA FACTOR
ADMINISTRATIVE SERVICE AND GUERRILLA UNITS

	Administrative Service	Guerrillas
Number of Documents	5	7
Sum of Units' Reported Assigned Strength	764	1498
Total Number of Reported KIA	1.356	17.66
Reported KIA Per 100 Assigned Strength Per Month	.18 *	1.17
Average KIA Per 100 Assigned Strength Per Month for Reported Units	.27	1.34 *
Least Squares KIA Per 100 Assigned Strength for Month	.03	1.29

* "Best" estimate.

COMPUTATION OF WOUNDED/KILLED RATIO

	1965	1966	1967	Total All Years
Number of Documents	8	8	12	28
Number of Actions	16	22	12	50
Number of Wounded Reported	1139	1363	277	2779
Number of Killed Reported	661	427	122	1210
Ratio of Total Reported Wounded to Killed	1.72 *	3.19 *	1.86 *	2.26
Average WIA/KIA for Reported Actions	1.55	2.76	2.48	2.31
Least Squares WIA/KIA Estimate	1.93	3.89	1.09	2.39

* "Best" estimate.

COMPUTATION OF MONTHLY DESERTION FACTOR - COMBAT TYPE UNITS

	1965	1966	1967	Total All Years
Number of Documents	3	13	5	21
Sum of Units' Reported Assigned Strength	516	3300	1914	5730
Total Number of Reported Desertions Per Month	4.5	24.44	5.66	34.6
Desertions Per 100 Assigned Strength Per Month	.872*	.74*	.295	.603
Average Desertions Per 100 Assigned Str Per Month for Reported Units	.673	.665	.232*	.563
Least Squares Desertions Per 100 Assigned Str Per Month	3.33	.31	.16	.46

* "Best" estimate.

COMPUTATION OF MONTHLY DESERTION FACTOR
ADMINISTRATIVE SERVICE AND GUERRILLA UNITS

	Administrative Service	Guerrillas
Number of Documents	4	5
Sum of Units' Reported Assigned Strength	633	1378
Total # of Reported Desertions Per Month	5.10	62.66
Desertions Per 100 Assigned Strength Per Month	.81	4.54[a]
Average Desertions Per 100 Assigned Str Per Month for Reported Units	.64[a]	7.27
Least Squares Desertions Per 100 Assigned Str Per Month	.16	.005

[a] "Best" estimate.

VC/NVA PERSONNEL LOSSES ESTIMATED FROM CAPTURED DOCUMENTS

Summary

Analysis of 136 captured enemy documents indicates 221,900 total enemy losses for 1965 through June 1968, or about 53% of the official estimate of 441,000. The documents indicate there were 136,100 enemy KIA, compared to a body count figure of 283,200, and only 18,800 died and disabled from wounds (DOW) compared to 31,700. They also indicate more enemy missing and captured than our POW figures show; 36,900 compared to 14,700 POWs. Finally, estimated deserters and defectors are nearly equal -- 39,100 against 42,400 military Chieu Hoi. Table 1 summarizes the results and compares them with the official data.

The January study estimated total enemy losses for 1965-67 at [illegible], compared to the new estimate of 140,000 (see Table 2). The greatest [illegible] difference between the results of the studies stems from guerrilla [illegible]ions. In January, analysis of the available 7 documents indicated that abo[illegible] of the guerrilla force was deserting each month. The 12 documents now availa-ble indicate that only about 0.5% desert per month. This difference alone reduces the previous estimate by 98,400 deserters, almost the entire difference in the desertion category. The KIA results are about 30% lower in the up-dated study; DOW 40% lower; but missing and captured almost twice as great.

The 50% difference in the overall study results stems in part from changing the criteria for selecting the documents to be used in the study. In the January study, we used only the documents that showed positive losses; for example, if a document clearly indicated that a unit suffered no KIA during a period, it was not used in developing the KIA estimate. This proce-dure had the effect of inflating KIA. In this study we have used all docu-ments judged to be complete periodic reports, including those which clearly and explicitly indicate a unit suffered no losses during the period reported. As in January, we also used fragmentary reports specifically dealing with the type of losses under consideration.

In evaluating the adequacy of the current sample compared to the January sample, we can only say that: (1) it is bigger, (2) it removes some of the inflationary bias in the January sample, (3) we still have no documentary basis for a factor for deserters who return to their units; we simply used a factor of 30% again, (4) we still need more documents on guerrilla attrition, (5) the geographical coverage of the documents is now better.

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* In January 1968 we listed 386,200 losses including 90,500 died and dis-abled from disease. We have dropped this category because we are unable to document losses to disease. Information covered in the 136 documents reviewed in this study indicates only an occasional loss to disease.

TABLE 1

ESTIMATED AND OFFICIAL D/SA COMPARED
(Data in Thousands)

	1965		1966		1967		1st Half 1968		Total 1965-1968	
	Est	Off	Est	Off	Est	Off	Est	Off	Est	Off
Killed in Action	14.7	35.5	32.4	59.5	37.5	88.1	53.5	109.1	138.1	288.2
Died & Disabled of Wounds c/	2.0	12.3	4.4	19.7	5.1	30.8	7.3	32.9	18.8	95.7
MIA & Captured	4.7	.4a/	6.8	2.7a/	8.0	6.0a/	16.4	5.6a/	35.9	14.7a/
Desertion & Defection	7.5	7.9b/	8.6	12.8b/	8.3	17.7b/	14.7	4.0b/	39.1	42.3b/
Total	28.9	56.1	52.2	90.7	58.9	142.6	91.9	151.6	231.9	441.0

a/ POW's only.
b/ Military Chieu Hoi.
c/ Official enemy died and disabled from wounds are estimated at 35% of the body count.

TABLE 2

CAPTURED DOCUMENT ESTIMATES COMPARED
(Thousands)

	1965		1966		1967		Total 1965-1967	
	Jan	Current	Jan	Current	Jan	Current	Jan	Current
Killed in Action	26.2	14.7	43.2	32.4	58.0	37.5	127.4	84.6
Died and Disabled of Wounds	3.0	2.0	9.2	4.4	7.2	5.1	19.4	11.5
MIA/Captured	.4a/	4.7	2.7a/	6.8	6.0a/	8.0	9.1	19.4
Deserters & Defectors	42.1	7.5	50.9	8.6	40.8	8.3	133.8	24.5
Total	71.7	28.9	106.0	52.2	112.0	58.9	289.7	140.0

a/ January study did not attempt to estimate MIA/Captured. It used official POW estimates.

Details of the Analysis

The enemy loss estimates were developed by applying monthly attrition factors derived from the captured enemy documents to the retrospective MACV VC/NVA order of battle strengths for 1965 through first half 1968 (Annex 1). A description of the documents, the methodology for deriving the attrition factors, a sample derivation, and the details of all factors are summarized in Annex 2. A list of the captured documents appears in Annex 3.

Enemy KIA

Analysis of the documents indicates there were 138,000 or 48% of the official body count for 1965 through June 1968. The factors applied to the MACV monthly OB (Annex 1), and the computed enemy KIA for each year are given in Table 3.

The combat unit KIA factors are based on 115 documents, guerrilla factors on 12 documents, and administrative service on 21 documents. Twelve documents are insufficient to develop annual KIA factors for the guerrillas. Instead, the trends in the combat and administrative service categories were used to generate a trend for the guerrillas. Both the administrative service and combat unit factors show a 1968 KIA rate of about twice the 1966-67 rate and the rate for 1965 is about half the 1966-67 rate. This relationship is applied to the 1965-68 guerrilla KIA factor of .815% per month, which was calculated from the 12 documents, and yields the 4 yearly factors (which average .815%) shown in Table 3. The method is not precise, but we believe it gives a better picture of guerrilla losses than reliance on the 12 documents alone.

TABLE 3

ENEMY KIA

	1965	1966	1967	1st Half 1968	Total 1965-1968
MONTHLY FACTORS (%)					
Combat	1.06	1.30	1.72	5.43	n/a
Guerrilla	.36	.72	.72	1.44	n/a
Admin Service	.29	.87	.64	1.88	n/a
DEATHS (Thousands)					
Combat	9.4	18.2	25.2	44.3	97.1
Guerrilla	3.9	9.3	8.4	5.3	26.9
Admin Service	1.4	4.9	3.9	3.9	14.1
Total	14.7	32.4	37.5	53.5	138.1

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Died and Disabled of Wounds

The documents indicate that approximately 18,800 enemy died or were disabled from wounds (DOW) from 1965 through June 1968. MACV estimates enemy DOW at 35% of KIA or 95,700 for the same period. Our computations average out to about 13.7% of KIA.

The factors for DOW listed in Table 4 were derived as follows. A review of the 25 after action reports available yielded an average 2.04 wounded to killed ratio. A MACV study of medical causes of non-effectiveness[1] showed that 1.97% of the wounded die and an additional 4.7% are permanently disabled, for a total of 6.67% DOW. This indicates that 13.7% (2.04 x .067) more people die or are disabled from their wounds as are killed in action. Thus, the DOW factors in Table 4 are 13.7% of the KIA factors in Table 3.

TABLE 4

ENEMY DIED AND DISABLED FROM WOUNDS

	1965	1966	1967	1st Half 1968	Total 1965-1968
MONTHLY FACTORS (%)					
Combat	0.145	0.178	0.235	0.742	n/a
Guerrilla	0.049	0.098	0.098	0.197	n/a
Admin Service	0.040	0.119	0.115	0.257	n/a
DEATHS (000)					
Combat	1.3	2.5	3.4	6.1	13.3
Guerrilla	.5	1.2	1.2	0.7	3.6
Admin Service	.2	.7	.5	.5	1.9
Total	2.0	4.4	5.1	7.3	18.8

For example, 1.06% of the enemy combat force was killed per month in 1965; in addition there were 0.145% DOW (1.06% x .137).

The WIA/KIA ratio may vary slightly over time. The sample has 10 after action reports each for 1965 and 1967, and 5 for 1966. The computed ratios are 1.77 for 1967, 2.74 for 1966 and 2.09 for 1965. Since the differences are not great, and annual data is not available for died and disabled as a result of these wounds, we use the same factor, 2.04 WIA to each KIA, for all years.

1/ ST 67-084, Medical Causes of Non-Effectiveness Among VC/NVA Troops, Second Update, CICV, 17 November 1967.

Enemy Reported Missing and Captured

Table 5 shows the estimates of enemy missing in action (MIA) and captured, derived from 79 documents. Altogether, 35,900 are estimated to have been MIA or captured from 1965 through the first half of 1968. In every case estimated losses exceed the number of POWs reported by allied forces. We do not know the proportion of enemy KIA, deserters and POWs in the figure of 35,900 MIA/captured as reported in the enemy documents.

TABLE 5

ENEMY MISSING AND CAPTURED

	1965	1966	1967	1st Half 1968	Total 1965-1968
MONTHLY FACTORS (%)					
Combat	0.04	0.11	0.23	1.82	n/a
Guerrillas	0.17	0.17	0.17	0.17	n/a
Admin Service	0.33	0.33	0.33	0.33	n/a
MISSING AND CAPTURED (000)					
Combat	0.3	1.5	3.4	14.9	20.1
Guerrillas	3.6	4.3	3.8	1.2	12.9
Admin Service	0.8	1.0	0.8	0.3	2.9
Total	4.7	6.8	8.0	16.4	35.9
POW's (000)[a]	.4	2.7	6.0	5.6	14.7

a/ Official count of POW's in camps.

Enemy Losses to Desertion and Defection

The documents indicate that 7,500 enemy deserted in 1965, 8,600 in 1966, 8,300 in 1967 and 14,700 during the first half of 1968. Official military Chieu Hoi data show 7,900 in 1965, 12,800 in 1966. 17,700 in 1967 and 4,000 in 1968. Except for 1968, the estimates are less than the defectors classified as such by the enemy.

Table 6 provides the detailed desertion and defection factors and results. The combat unit desertion factors are based on a total of 69 documents and indicate that the enemy's desertion rate rose sharply in 1968 to better than 2% a month. Only 16 documents were available for administrative service units and 9 for guerrillas, not enough to develop yearly factors for deserters from these units. Nor is there enough evidence to allow us to force a trend to these data as we did for the guerrilla KIA factors, so we used the same factors for every year.

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TABLE 6

ENEMY DESERTERS

	1965	1966	1967	1st Half 1968	Total 1965-1968
MONTHLY FACTORS (%)					
Combat	0.37	0.25	0.27	2.24	n/a
Guerrilla	0.41	0.41	0.41	0.41	n/a
Admin Service	0.51	0.51	0.51	0.51	n/a
DESERTERS (000) a/					
Combat	2.3	2.4	2.8	12.8	20.3
Guerrilla	3.9	4.6	4.2	1.3	14.0
Admin Service	1.3	1.6	1.3	0.6	4.8
Total	7.5	8.6	8.3	14.7	39.1

a/ In addition, we assume that 30% of the deserters return to their units.

A number of factors could explain the difference between estimated desertions and military Chieu Hoi. Some Chieu Hoi may be carried on the enemy's books as missing or captured. In an earlier section we saw that only 14,700 of the 35,900 MIA/captured can be accounted for as bonafide POWs. If we assume for the moment that all the remaining MIA/CAPT are Chieu Hoi, we would be estimating about 60,300 deserters as shown in Table 7, versus 42,400 military Chieu Hoi.

TABLE 7

DESERTIONS, MIA AND CAPTURED VERSUS MILITARY CHIEU HOI
(Thousands)

	1965	1966	1967	1st Half 1968	Total 1965-1968
Estimated MIA/CAPT over POW's	4.3	4.1	2.0	10.8	21.2
Estimated Deserters and Defectors	7.5	8.6	8.3	14.7	39.1
Subtotal	11.8	12.7	10.3	25.5	60.3
Military Chieu Hoi	7.9	12.8	17.7	4.0	42.4
Difference	+3.9	-0.1	-7.4	+21.5	+17.9

However, the estimated deserters, MIA, and captured for 1967 fall 7,400 short of the 17,700 military Chieu Hoi that year. In 1968 there are 21,500 more deserters than Chieu Hoi. We cannot explain the 1967 discrepancy. But the 1968 discrepancy may stem from the enemy's sizable campaign to counter the Chieu Hoi program in late 1967 and in 1968. His campaign may have been successful in keeping deserters from defecting to the open arms program, but unsuccessful at limiting overall enemy desertions.

Annex 1

VC/NVA OB 1965 - 1968

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1965												
Combat												
VC	52.9	52.1	54.9	55.9	60.4	61.1	61.3	62.7	63.5	63.8	65.4	65.4
NVA	5.9	7.7	8.1	10.7	10.7	10.7	11.0	11.7	16.2	22.5	26.6	28.1
Total	58.8	59.8	63.0	66.6	71.1	71.8	72.3	74.4	79.7	86.3	92.0	93.5
Guerrillas	82.4	87.9	89.5	91.0	88.2	90.3	92.7	92.7	95.7	95.4	90.4	89.9
Admin Svc	36.8	37.1	37.2	37.6	38.1	38.5	38.8	39.0	39.2	40.1	40.9	41.3
Total	178.0	184.8	189.7	195.2	197.4	200.6	203.8	206.1	214.6	221.8	223.3	224.7
1966												
Combat												
VC	68.3	69.5	69.0	66.7	69.0	69.2	70.4	70.4	71.6	68.6	66.8	66.2
NVA	30.5	36.7	40.6	42.4	43.1	55.4	56.1	56.9	56.7	53.8	50.5	51.4
Total	98.8	106.2	109.6	109.1	112.1	124.6	126.5	127.3	128.3	122.4	117.3	117.6
Guerrillas	93.4	93.7	102.0	99.7	103.8	101.5	106.4	108.4	108.3	118.6	122.7	126.1
Admin Svc	43.2	44.7	46.2	47.3	47.9	50.5	50.5	50.5	50.9	48.2	45.4	41.6
Total	235.4	244.6	257.8	256.1	263.8	276.6	283.4	286.2	287.5	289.2	285.4	285.3
1967												
Combat												
VC	66.2	64.4	63.2	63.4	64.3	62.9	63.5	63.5	63.6	62.7	62.0	61.5
NVA	50.8	51.1	55.5	58.6	58.2	59.4	59.2	61.7	61.1	62.9	61.4	63.6
Total	117.0	115.5	118.7	122.0	122.5	122.3	122.7	125.2	124.7	125.6	123.4	125.1
Guerrillas	126.1	122.3	115.3	109.2	102.9	102.1	93.7	91.2	85.1	79.3	76.5	69.8
Admin Svc	41.2	40.4	39.2	38.5	37.6	37.3	36.8	37.1	37.8	37.6	37.6	37.6
Total	284.3	278.2	273.2	269.7	263.0	261.7	253.2	253.5	247.6	242.5	237.5	232.5
1968												
Combat												
VC	62.4	51.8	51.4	51.8	50.8	50.7						
NVA	83.4	80.3	83.9	82.8	82.1	84.0						
Total	145.8	132.1	135.3	134.6	132.9	134.7						
Guerrillas	64.0	70.9	66.0	63.3	53.9	51.2						
Admin Svc	37.6	33.6	33.6	33.6	33.6	33.6						
Total	247.4	236.6	234.9	231.5	220.4	219.5						

Source: OSD Southeast Asia Statistical Summary, Table 105, dtd 3 September 1968.

Annex 2

DATA DESCRIPTION AND STUDY METHODOLOGY

Captured Documents Used in Study

This study used 136 captured enemy documents, translated at the Combined Document Exploitation Center in Vietnam. Many of these documents were used in the previous study, "VC/NVA Losses: A New Estimate From Captured Documents," SEA Analysis Report, January 1968. Some were also used by MACV J-2 in its two studies of VC/NVA losses based on samples of 70 and 120 documents respectively. The documents used are similar to those summarized in the November 1967 SEA Analysis Report, pages 2-12, and are those reviewed over the past nine months, including the MACV studies' documents, that meet the criteria for this analysis.

Two kinds of documents are used: after action reports of VC/NVA KIA and WIA which are useful for computing wounded to killed factors; and documents showing a unit's strength and losses suffered over a period of time. Almost all of these latter documents referred to a unit's killed in action during the period, and better than half listed other losses, such as WIA, desertions, and missing in action or captured.

Documents were classified by the year of the information; the type of unit (combat, administrative service or guerrilla); a complete or fragmentary report; a periodic or after action report; and the period covered by the report. In several cases, identifications were made from the context of the documents rather than an explicit statement within the document. If all these items of identification could not be developed from a document it generally was not used.

Methodology

Selection

A document was selected for use in the derivation of a factor if it referred to the appropriate year and force type; was a periodic report (except for the WIA/KIA ratio computation); and if not a complete report for the unit for the period, it had losses of the type under consideration. After the documents were selected, the factors were computed using three methods.

Computation

First, the data is adjusted to correct for differences in period. That is, if the document covers a three month period for a unit with a strength of

Table 1

SAMPLE CALCULATIONS
KIA - 1968 - COMBAT TYPE UNITS

Assigned Strength	Reported KIA	Period Covered (Mos)	Adjusted Strength	KIA/ Adjusted Str
50	0	1	50	0.0
260	28	1	260	0.108
336	70	1	336	0.208
118	16	4	472	0.034
292	16	1	292	0.055
229	25	1	229	0.109
258	13	3	774	0.017
54	10	3	162	0.062
60	11	2	120	0.092
59	18	1	59	0.305
2299	63	1	2299	0.027
67	3	1	67	0.045
195	31	2	390	0.079
67	12	1	67	0.179
46	2	1	46	0.044
90	0	1	90	0.0
219	5	1	219	0.023
4699	323		5932	1.387

Method #1: $\frac{323}{5932} = 5.43\%$

Method #2: $\frac{1.387}{17} = 8.15\%$

Method #3: 1.53%

300 and 12 KIA during a quarter, we multiply the assigned strength by 3 months to get an adjusted assigned strength of 900 giving a monthly attrition factor of 1.33 per 100 strength for this unit.

Three different methods are used to calculate the annual attrition factors from the adjusted data. Table 1 provides a sample set of calculations. The first method sums the reported monthly KIA and divides by the sum of the adjusted assigned strengths for all units. For combat KIA, 1968, we get an attrition factor of 5.43% (see Table 1).

Method 2 is to compute the average of the KIA per strength ratios of each observation. As shown on Table 1, we average the KIA/adjusted strength ratios, to get a monthly attrition factor of 8.15%. This method disregards unit size, i.e., a local force company's loss rate receives the same weight as a main force regiment's.

The third estimate is determined by the regression coefficient of strength, derived by regressing strength (independent variable) against KIA (dependent variable). (Plot strength against KIA and draw a line describing the relation between KIA and strength, using the least squares criterion. The slope of the line is our third estimate.) For the 1968 combat unit KIA factor shown on Table 1, we get 1.53%. This method is very unreliable with small sample sizes.

Good arguments could be offered for each of these methods. But, if there is a relationship between losses and strength, and if the samples were large enough, each of these methods should produce about the same result. Thus, the reliability of our estimates can be measured by how well the results of the three methods agree. Where all three methods provide similar estimates we are more confident than in the case where the methods provide widely divergent results. Because much of the data used in this study (or any similar study) varies in quality, we have arbitrarily chosen to use the middle estimate of the three as our "best" estimate for each year. Thus for the preceding table, we are not very confident about the 1968 combat KIA factor. The factor computed by the 3 methods are shown in the tables which follow.

COMPUTATION OF MONTHLY KIA FACTOR
ADMINISTRATIVE SERVICE UNITS

	1965	1966	1967	1H 1968	Total All Years
Number of Documents	2	4	10	5	21
Method #1	0.51	0.87[a]	0.78	1.93	0.82[a]
Method #2	0.29[a]	2.18	0.84[a]	1.88[a]	1.29
Method #3	-0.15[b]	0.08[b]	0.93[b]	1.49[b]	0.45[b]

a/ "Best" estimate.
b/ Particularly uncertain estimate.

COMPUTATION OF WOUNDED/KILLED RATIO

Number of after action reports	25
Ratio of total wounded to total killed	2.04[a]
Average WIA/KIA for reported actions	2.09
Least square WIA/KIA estimate	1.81

a/ "Best" estimate.

COMPUTATION OF MONTHLY DESERTION FACTOR
COMBAT TYPE UNITS

	1965	1966	1967	1968	All Years
Number of Documents	14	16	27	10	69[c]
Method #1	0.37[a]	0.25[a]	0.27[a]	3.23	0.34[a]
Method #2	0.59	1.05	0.78	2.24[c]	1.02
Method #3	0.21	0.13	0.0[b]	1.80[b]	0.14[b]

[a] "Best" estimate.
[b] Particularly uncertain estimate.
[c] Two documents in sample are for undetermined years.

COMPUTATION OF MIA/CAPT FACTOR
ADMINISTRATIVE SERVICE TYPE UNITS

	1965	1966	1967	1968	All Years
Number of Documents	1	1	6	4	13
Method #1	1.47[a]	0.0[a]	0.28[a]	0.0[a]	0.26
Method #2	1.47	0.0	0.12	0.0	0.17[a]
Method #3	N/A	N/A	0.43	N/A	0.15[b]

[a] "Best" estimate.
[b] Particularly uncertain estimate.

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COMPUTATION OF MIA/CAPT FACTOR
COMBAT TYPE UNITS

	1965	1966	1967	1968	All Years
Number of Documents	13	9	25	11	60 c/
Method #1	0.04 a/	0.11 a/	0.23 a/	1.82 a/	0.13 a/
Method #2	0.02	0.29	0.66	1.40	0.58
Method #3	0.07	0.08	0.09 b/	4.25	0.06 b/

a/ "Best" estimate.
b/ Particularly uncertain estimate.
c/ Two documents in sample are for undetermined years.

COMPUTATION OF MIA/CAPT FACTOR
GUERRILLAS

	1966
Number of Documents	6
Method #1	0.33 a/
Method #2	2.53
Method #3	0.28

a/ "Best" estimate.

44

COMPUTATION OF MONTHLY DESERTION FACTOR
GUERRILLAS

	1966	1967	All Years
Number of Documents	5	7	12
Method #1	0.20[a]	0.94[a]	0.51[a]
Method #2	3.08	9.41	5.89
Method #3	-0.09[b]	-2.75[b]	-0.51[b]

[a] "Best" estimate.
[b] Particularly uncertain estimate.

COMPUTATION OF MONTHLY DESERTION FACTOR
ADMINISTRATIVE SERVICE TYPE UNITS

	1965	1966	1967	1968	All Years
Number of Documents	1	3	8	4	16
Method #1	2.21[a]	1.00[a]	0.28[a]	0.0[a]	0.41[a]
Method #2	2.21	1.12	0.45	0.0	0.57
Method #3	N/A	0.83	-0.12[b]	0.0	0.41[b]

[a] "Best" estimate.
[b] Particularly uncertain estimate.

45

COMPUTATION OF MONTHLY KIA FACTOR
COMBAT TYPE UNITS

	1965	1966	1967	1968	Total All Years
Number of Documents	18	27	51	17	115 b/
Method #1	1.17	1.30 a/	1.72 a/	5.43 a/	1.53 a/
Method #2	0.82	2.51	2.19	8.15	2.90
Method #3	1.06 a/	0.96	1.57	1.53	1.46

a/ "Best" estimate.
b/ Two documents in the sample have undetermined years.

COMPUTATION OF MONTHLY KIA FACTOR
GUERRILLAS

	1965	1966	1967	1968	All Years
Number of Documents	0	5	7	0	12
Method #1		0.20	0.23		0.23
Method #2		1.67	1.21		1.40
Method #3		0.12	0.01 b/		0.05 b/
Apportional average c/	0.36 a/	0.72 a/	0.72 a/	1.44 a/	0.815 a/

a/ "Best" estimate.
b/ Particularly uncertain estimate.
c/ An examination of the documents indicates that neither 0.23% nor 1.40% per month is an acceptable attrition factor - the result should be somewhere in between. We have averaged these estimates to get an 0.815% factor for all years. Both the combat and administration service factors indicate an increasing trend over time. Therefore we have arbitrarily assumed that KIA rates in 1968 are twice those of 1966 and 1967 and that 1965 rates are half the 1966-1967 rates. The average of these rates, over all years should be 0.815%. The apportioned average rates meet these criteria.

Annex 3

CAPTURED DOCUMENTS USED IN STUDY
(CDEC Log Number)

12-1409-65
1-1533-66
1-1559-66
2-1252-66
2-1369-66
2-1408-66
2-1415-66
6-1201-66
6-1232-66
7-1150-66
8-1165-66
9-2804-66
10-1342-66
10-1434-66
10-2136-66
11-1051-66
12-1979-66
12-1997-66
12-2527-66
12-2866-66
12-3854-66

1-1040-67
1-1047-67
1-1798-67
1-1908-67
1-1910-67
1-2233-67
1-2338-67
1-2828-67
1-2878-67
1-2986-67
1-3015-67
2-1681-67
2-1753-67
2-1759-67
3-3015-67
6-1016-67
6-1753-67
6-1782-67
6-1858-67
6-2884-67
6-3433-67
6-3517-67
6-3924-67
6-4054-67
7-1057-67
7-2496-67
7-3174-67
7-3355-67

8-1319-67
8-2081-67
8-2312-67
8-2584-67
8-2595-67
8-3492-67
9-1181-67
9-1346-67
9-1534-67
9-1550-67
9-1569-67
9-1706-67
9-1927-67
9-2139-67
9-2188-67
9-2226-67
9-2259-67
9-2280-67
10-1330-67
10-1585-67
10-1692-67
10-1868-67
10-1961-67
10-2111-67
10-2153-67
10-2398-67
11-0417-67
11-1127-67
11-1140-67
11-1190-67
11-1480-67
11-1638-67
11-2010-67
11-2139-67
11-2222-67
12-1026-67
12-1511-67
12-1914-67
12-1919-67
12-2138-67
12-2748-67
12-3935-67

1-2030-68
2-1219-68
2-1246-68
2-1249-68
2-1378-68
2-1700-68
2-2134-68

2-2268-68
3-2243-68
3-2398-68
3-2680-68
3-2709-68
3-2785-68
4-1045-68
4-1054-68
4-1135-68
4-1185-68
4-1543-68
4-2384-68
4-2591-68
4-2602-68
4-2607-68
4-2608-68
4-2632-68
4-2692-68
4-2722-68
4-2742-68
4-2837-68
4-2864-68
4-3183-68
5-1239-68
5-1473-68
5-1520-68
5-2503-68
5-2884-68
6-1012-68
6-1054-68
6-1101-68
6-1195-68
6-1638-68
7-1031-68
7-1187-68
7-1337-68
7-1587-68
8-2553-68

NVA/VC PRISONERS OF WAR

Summary. In past wars, analysis of POW statistics provided a valuable insight into the state of enemy morale. In the Korean War, the behavior of POW's while in confinement was a major issue which affected negotiations and strained our relations with the South Koreans. The behavior of POWs in Prisoner of War camps such as KOJE-DO provided a clear indication of enemy intransigence since the prisoners' actions were largely directed by the North Korean/CHICOM high command. It also provided the enemy with a major propaganda weapon.

The available data in Washington on Prisoners of War in South Vietnam are tenuous and fail to show any clear or definite patterns. The total number of enemy captured since 1966 probably reflects the level of enemy and allied activity and the number of enemy troops operating in SVN as much as the state of their morale. Incidents reported in detention facilities also have a random pattern and few incidents could be categorized as well organized attempts at disruption. On the other hand, the detention facilities are overcrowded and could provide a future environment for major altercations. On the basis of available data, it appears that the North Vietnamese are more difficult to capture (or surrender less) than the VC, and the enemy does not prefer to surrender to any particular allied force. About 42% of the POW's were captured by US forces.

Table 1 shows the POW input into South Vietnamese detention facilities. (The South Vietnamese have responsibility for detaining all POWs regardless of the capturing force.) At present, about 33,500 POWs are incarcerated in South Vietnam; 6,968 or 21% of them are North Vietnamese. The remainder are Viet Cong (77%) and Regroupees (1%). (Regroupee is a GVN political terms for South Vietnamese who, as a result of the 1954 Geneva Accord elected to go to North Vietnam but were later captured fighting in the South.)

The largest number of prisoners (12,825) were interned in 1968 and about the same number were interned in 1969 (8,596) as in 1967 (8,253). These annual rates generally follow the pattern of enemy activity during the same period.

Since 1966, NVN personnel averaged 22% of the total enemy captured except for 1967 when the figure was 13%. In 1968 and 1969 the NVN personnel composition was almost identical (23%). A major effort has been made since 1968 to appeal to NVN personnel to surrender rather than Chieu Hoi, since the latter offers no hope of eventual repatriation.

Table 2 shows the 1969 quarterly POW input by capturing force. As in the case of annual rates, the monthly internments show an irregular pattern, but the trend has been downward. The average monthly rate in 1969 was 716. POW inputs were highest in 1st quarter and showed a steady decline from June onward, reaching a low point in December.

TABLE 1[a]

POW INTERNED IN SVN POW CAMPS
(Prior to 1966 through 1969)

	Prior to 1966	% of Yr Total	1966	% of Yr Total	1967	% of Yr Total	1968	% of Yr Total	1969	% of Yr Total	Total	% of Total
NVN	167	37	694	20	1103	13.	2946	23	2058	24	6968	21
VC	205	45	2595	77	6997	85	9683	75	6478	75	25958	77
Regroupee	83	18	105	3	129	1.5	193	1.5	60	1	570	1.5
Unknown	-	-	-	-	24	0.5	3	0.5	-	-	27	0.5
Total	455	100	3394	100	8253	100	12825	100	8596	100	33523	100

a/ COSMUSMACV Report, Vietnamese Detainees/POW reflects inputs into camps, not capture rate.

TABLE 2[a]

POW INTERNED/CAPTURING FORCE
(1969)

	Total	% of Total	1Qtr Mo. Avg	2Qtr Mo. Avg	3Qtr Mo. Avg	4Qtr Mo. Avg	1969 Mo. Avg
RVNAF	5331	62	597	567	417	194	444
US	3093	36	377	343	195	116	258
ROK	125	1.5	15	14	8	4	10
AUS	29	0.3	3	5	1	0	2
THAI	17	0.2	1	1	1	3	1
Total	8595	100	993	930	622	317	715

a/ COMUSMACV Report, Vietnamese Detainees/POW reflects inputs into camps, not capture rate.

Table 3 shows that in 1966 and 1967 the Koreans accounted for more POWs annually per 1000 friendly strength than any other Allied Force. In 1968, the Koreans, RVNAF and US had about the same rate (9.5), but the Korean rate decreased to 2.5 in 1969. The RVNAF and US rates both decreased to about 6.0 in 1969. It appears that the RVNAF are as effective in capturing POW's as US forces and the Koreans were more effective than both of them prior to 1968.

POW Camps. The South Vietnamese administer five regional and one central POW Camp. Da Nang interns POW's captured in I CTZ, and Pleiku holds most of those captured in II CTZ. Qui Nhon interns POW's captured in II CTZ who were not initially confined in Pleiku. It is also the central facility for female POWs. Bien Hoa interns POW's captured in III CTZ and is the central facility for severely wounded POW's and youth (males 17 years or younger). Can Tho interns POW captured in IV CTZ. Phu Quoc Island is a central facility which detains POWs processed through any one of the other five camps.

Table 4 shows that overcrowding exists in all but two of the POW facilities. Ninety three percent of the POWs are confined in facilities which have prisoner populations above their normal capacity; the Bien Hoa camp is operating above its emergency capacity. (We do not know what standards are used in defining the terms normal and emergency.)

A review of available data on incidents reported in the POW camps failed to show a recent increase of major incidents. Most of those reported are spontaneous outbursts without any apparent design. Nevertheless, the overcrowded conditions could provide the environment for more serious altercations in the future.

TABLE 3 a/

POW INTERNED/CAPTURING FORCE
(Rate per 1000 Strength per Year)
(Prior to 1966 through 1969)

Capturing Force	Total No. Captured	Total % of Total	Prior to 1966	1966 Interned	1966 Str. (000)	1966 Rate/ 1000 Str.	1967 Interned	1967 Str. (000
RVNAF	17945	54	303	1971	598.0	3.3	3026	615.6
US	13993	42	145	1198	281.2	4.3	4556	447.7
ROK	1482	4	7	215	30.8	7.0	661	46.9
AUS	84	-	0	10	3.6	2.8	8	5.6
THAI	19	-	0	0	0.4	-	0	1.0
TOTAL	33523 b/	100	455	3394	914.0	3.7	8253	1116.8

a/ COMUSMACV Report - Vietnamese Detainees/POW, February 1970.
b/ Total captured number. For number presently detained see Table 4.

TABLE 4 a/

POW CAMP POPULATION/CAPACITY
(1969)

	Danang Pop	Danang % of Capacity	Pleiku Pop	Pleiku % of Capacity	Cam Ranh Pop	Cam Ranh % of Capacity	Bien Hoa Pop	Bien Hoa % of Capacity	Can Pop	Can C
NVN/VC	1188		1298		1222		4470		2382	
Rated Capacity (Normal)	2000	59	2000	65	1000	122	3000	149	2000	
Rated Capacity (Emer)	2500	48	2500	52	1500	81	3700	121	2500	

a/ COMUSMACV Report - Vietnamese Detainees/POW, February 1970.

1966			1967			1968			1969		
P. (000)	Rate/ 1000 Str.	Interned	Str. (000)	Rate/ 1000 Str.	Interned	Str. (000)	Rate/ 1000 Str.	Interned	Str. (000)	Rate/ 1000 Str.
598.0	3.3	3098	615.6	4.9	7310	757.9	9.6	5333	893.5	6.0
281.2	4.8	4556	447.7	10.2	5062	527.3	9.5	3092	529.9	5.9
30.8	7.0	661	46.9	14.1	474	49.6	9.6	125	49.7	2.5
3.6	2.8	A	5.[illegible]	1.4	37	7.4	5.0	29	7.7	3.8
0.4	-	C	1.0	-	2	4.1	0.5	17	11.2	1.5
914.0	3.7	8253	1116.[illegible]	7.4	12825	1346.3	9.5	8596	1483.0	5.8

D.
Table 4.

Qui Nhon		Bien Hoa		Can Tho		Phu Quoc		Total	
Pop	% of Capacity	Pop	% of Capacity	Pop	% of Capacity	Pop	% of Capacity	Pop	% of Capacity
222	-	4470		2388		21984		32544	
000	122	3000	149	2000	119	16000	137	26000	125
500	81	3700	121	2500	95	28500	77	41200	79

D.

CONFIDENTIAL

NATIONAL RECONCILIATION

Designed to attract high- and middle-level Viet Cong defectors to the GVN, the National Reconciliation program was announced in the Manilla Communique and scheduled for proclamation in November 1966. Actual promulgation of the campaign will begin in April 1967, according to the most optimistic schedules. Midsummer is a more realistic guess. These delays stem from the lukewarm support National Reconciliation has won from many GVN officials, despite the fervent demands for action from US officials. (An indication of Vietnamese caution toward the National Reconciliation concept is the absence of any funds earmarked for the program in the CY 1967 Chieu Hoi budget of approximately $9.4 million.)

U.S. officials, with GVN assistance, developed a National Reconciliation Action Program along two themes: the promise of civil and political rights to defectors and the offer of GVN civilian and military career positions comparable to those held by defectors in enemy organizations.

GVN officials apparently accept the ideas of extending civil rights to ralliers, attracting high-level VC through individually designed covert operations and instituting a national reward system. But they have not accepted the concept and techniques of an overt campaign to rally middle-level VC. The proposed offer of civilian and military careers to defectors is a major difficulty. Other inducements such as allowing former VC to run for election if they renounce the NLF, granting them identification cards and military security clearances to open job opportunities, forming Hoi Chanh (rallier) units within ARVN or giving them unclaimed land and supplies are less important stumbling blocks. Officials feel qualified individual defectors could and should be given GVN positions and have a chance for other work. But they wonder how a national campaign promising life, liberty and happiness to the enemy will be received by ARVN troops (who might have to serve under former VC), GVN civil servants (whose jobs might be threatened), landless refugees and others.

Further, some Constituent Assembly Representatives are reportly moving toward hard opposition to any participation of the former enemy in political life.

However, some progress is being made. Chieu Hoi Undersecretary Anh hopes to speed clearances for ralliers and in other ways expand GVN employment opportunities for defectors. The Revolutionary Development Ministry plans to hire 2000 ralliers in CY 1967; Anh will publicly name a former VC lieutenant to a senior position in his ministry. And Chieu Hoi Director Tri will launch some covert appeals to already identified Viet Cong, promising them specific military or government jobs if they defect. A future large-scale, overt campaign might be guided by techniques tested by Tri's efforts.

CHIEU HOI DECLINE

The Chieu Hoi rate has dropped sharply from its March 1967 peak of 1109 per week because of (1) increased VC/NVA action against returnees, (2) increased GVN political activity (including rural elections), (3) overcrowding of Chieu Hoi centers and (4) declines in friendly operations in populated areas. The present rate of defectors (460 per week) would result in about 30,000 Hoi Chanh in CY 1967, compared to the objective of 40,000 returnees. If the 1966 pattern repeats, the total would be closer to 35,000.

CHIEU HOI
(Weekly Averages by Quarter)

	1965		1966				1967		
	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	Jul
I Corps	28	34	39	17	33	44	58	50	45
II Corps	39	93	192	138	79	289	239	186	53
III Corps	47	75	83	69	65	69	250	169	152
IV Corps	153	83	105	110	89	136	269	170	212
Total	267	285	419	334	266	538	816	575	462
Military	203	199	291	220	178	303	520	366	347
Political	52	78	116	95	72	202	238	180	98
Other	12	8	12	19	16	33	58	29	17
	267	285	419	334	266	538	816	575	462

The most important factor in influencing the VC to rally appears to be the reputation of the Chieu Hoi center and its program. VC/NVA personnel apparently get very quick and accurate feedback regarding the current treatment of returnees. Military pressure and psychological operations also have an effect, as does a stable political climate. All of these factors were working for us in January-March 1967 when the Chieu Hoi rate went to 816 per week, highest to date. We intensified military operations in populated areas and conducted a massive psywar campaign during February in connection with Tet.

By April, several factors began to reduce the number of returnees and the second quarter rate dropped 30% (to 575 per week): (1) Chieu Hoi centers became overcrowded in the II and III Corps provinces with the highest returnee rates; (2) the enemy began to infiltrate VC cadre as returnees (apparently for the first time); and also began to assassinate ralliers and exert military force against Chieu Hoi centers and resettlement hamlets; (3) GVN political activities and hamlet elections upset the political climate, leading potential ralliers to await the outcome before committing themselves. (Past experience indicates that Chieu Hoi figures can be expected to decline during periods of intense political activity.) Finally, (4) allied military operations in populated areas (which produce Chieu Hoi) apparently declined.

The data by Corps area show that I Corps consistently provides less than 10% of the returnees, probably due to its political instability, the large number of NVA troops there, and the sustained intensity of the conflict both in the coastal areas and in the vicinity of the DMZ. The distribution of Hoi Chanh from the other Corps areas has been fairly even (II CTZ - 29%, III CTZ - 36%, IV - CTZ, 33%) in 1967 to date. All four Corps areas have shown declines from the first quarter 1967 levels.

A comparison between first half 1966 and first half 1967 figures shows that the Chieu Hoi rate doubled in I and IV Corps and almost tripled in III Corps. The II Corps rate increased only 30%. However, in absolute terms, III Corps and IV Corps simply caught up with the II Corps rate.

Treatment of Hoi Chanh is apparently improving. GVN officials claim that provincial officials are giving all Hoi Chanhs (ralliers) relatively standardized treatment in providing for their return to normal life. Hoi Chanh can expect to receive identification cards soon after completing a two-month reorientation program in the provincial Chieu Hoi Centers. These cards must be carried for ralliers to obtain jobs in government controlled areas.

Ralliers previously registered as voters, apply to the district chief in order to vote. Any Hoi Chanh who is interested in running for office is eligible if his name appears on the voters' lists and he receives a clearance from the local police. In areas which have recently come under government control, ralliers are separated into three categories by the police -- "real, occasional, and forced Communist supporters." Ralliers can become candidates if they are classified in the latter two categories. In the recent village and hamlet elections, seven Hoi Chanh -- one village chief, three hamlet chiefs, and three village councilors -- were elected.

No uniform policy exists in dealing with Hoi Chanh who might have violated the law while serving with the Viet Cong -- especially in regard to acts of terrorism. No instructions have been issued by the government. The usual practice has been for allegedly guilty persons to be tried by civil or military tribunals. No one knows how many Hoi Chanh who have been tried for acts committed while they were members of enemy forces.

A number of measures are underway to improve the capability of the Chieu Hoi program both to attract defectors and to make productive use of Hoi Chanh after they come in. To attract more Hoi Chanh, the following actions are being worked out with the GVN Chieu Hoi ministry:

1. Give the U.S. Chieu Hoi Program manager a VN $10 million slush fund.

2. Construct 51 adequate Chieu Hoi centers and make the shoddy national Chieu Hoi center into a model.

3. Double the U.S. Chieu Hoi Province advisors and assign psyops advisors in 20 provinces to develop a better quick reaction capability to exploit Chieu Hoi.

4. Initiate a Tet-like psyops campaign keyed to the elections. (The last Tet campaign was very successful.)

To improve the use of Hoi Chanh, the following actions are underway:

1. Arm and train all Hoi Chanh armed propaganda teams.

2. Quadruple the Hoi Chanh "Kit Carson" scouts to 1800.

3. Increase the use of Hoi Chanh in pacification.

4. Convince the GVN to form Chieu Hoi combat units.

Implementation of the foregoing actions, together with successful elections, may increase the Chieu Hoi rate during fourth quarter 1967. Moreover, the 1966 pattern would indicate that we can expect a 4th quarter rise. In 1966 the rate was high in the first quarter (419 per week) and then dropped 20% in each of the next two quarters, only to rise sharply in the fourth quarter to 538 per week, or double the third quarter rate of 266. The 1967 pattern to date is similar, with a first quarter high of 816 per week, a 30% drop to 575 in second quarter, and a further 20% drop in July.

The 1967 goal for the Chieu Hoi program is 40,000 returnees, twice the actual 1966 number. The program reached 20,120 by the end of July (665 per week). Achievement of the 1967 goal will require an average rate of 850 returnees per week throughout the second half of the year, more than a 20% increase over the first half rate. The rate is about 460 per week at present, which would yield a CY 1967 total of about 30,000. If the September elections and current measures to improve the program are successful, and the 1966 Chieu Hoi pattern repeats, the total could be as high as 36,000.

CHIEU HOI DECLINE

The 27,178 Hoi Chanh in 1967 exceeded the 20,242 in 1966 by 34 percent but fell far short of the 1967 goal of 40,000. The monthly rate of returnees declined steadily from April through December (which produced the fewest Hoi Chanh in any month since July 1965). The 1968 program, based on our 1967 experience, will probably be about 15-20,000, far short of the goal of 60,000. Political stability throughout 1968 could generate a higher figure, but is unlikely to offset the impact of declining VC recruitment.

TABLE 1

TOTAL HOI CHANH

	1965				1966				1967			
	1Qtr	2Qtr	3Qtr	4Qtr	1Qtr	2Qtr	3Qtr	4Qtr	1Qtr	2Qtr	3Qtr	4Qtr
Hoi Chanh	1340	2614	3464	3706	5449	4345	3455	6993	10603	7473	5512	3590
		Total 11,124				Total 20,242				Total 27,178		

Reasons for the Decline

The most pertinent explanations for the decline in the Chieu Hoi rate are: (1) the political activity in 1967, including two election periods and the accompanying feelings of uncertainty throughout the country, (2) the decline in local enemy recruitment and therefore the number of new VC personnel, the prime source of Hoi Chanh, (3) a larger proportion of allied military operations taking place in less populated areas, (4) GVN shortcomings in the treatment of Hoi Chanh, including corruption and a totally inadequate job placement program, and (5) increased enemy propaganda and other actions against the Chieu Hoi program.

Statistical analysis revealed that the gross numbers of enemy KIA and of US air sorties (both reflecting pressure on VC/NVA forces) had little correlation with variations in the Chieu Hoi rate, nor did allied battalion days of operation or US and RVNAF combat deaths correlate with Chieu Hoi shifts. There was a relationship between the harvest period and a decline in Hoi Chanh, but this is unlikely to cause changes in the annual rate, since it probably only affects the timing of defections.

In the past, changes in the GVN government and crisis periods have caused the Chieu Hoi rate to drop, while a restoration of relative stability brought more Hoi Chanh. Table 2 and the associated graph illustrate this pattern. Note the high rates during Tet periods which were boosted in 1966 and 1967 by intensive Chieu Hoi campaigns. In months prior to elections, especially during the campaign periods, the rate declined, perhaps due to uncertainty stemming

HOI CHANH 1965 - 1967

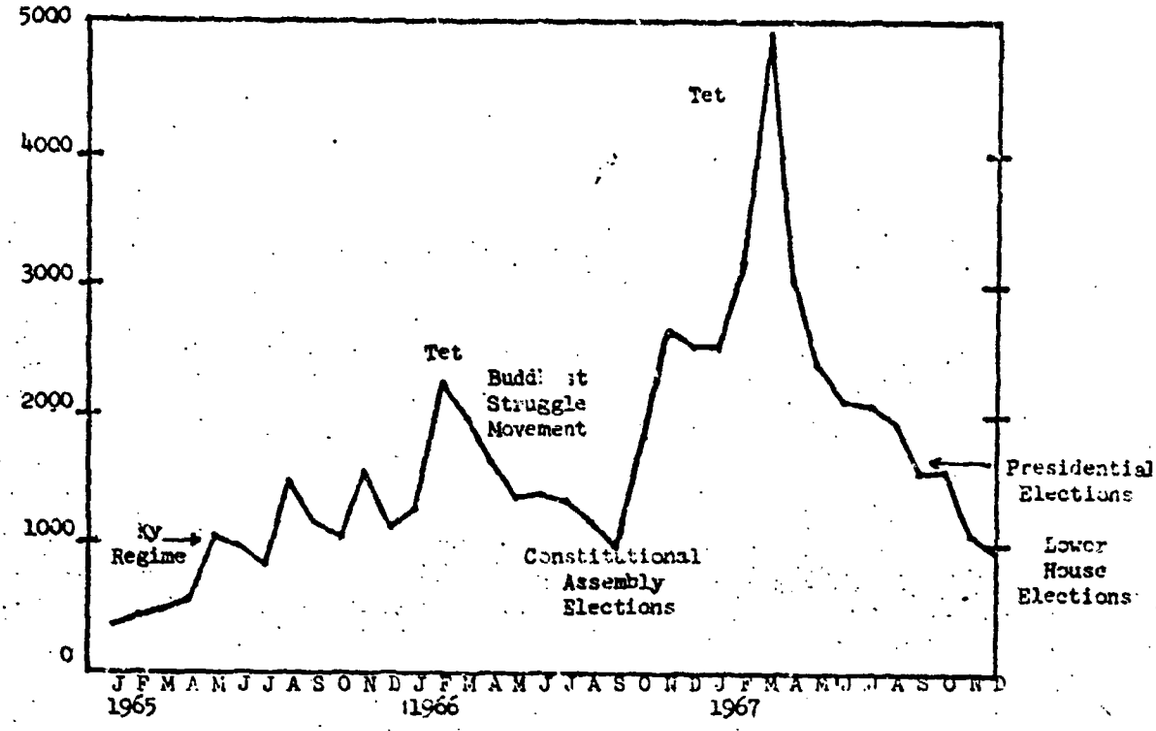

TABLE 2

HOI CHANH BY MONTH (1965 - 1967)

	J	F	M	A	M	J	J	A	S	O	N	D	Total
1965	393	443	504	581	1049	984	826	1477	1161	1066	1534	1106	11,124
1966	1253	2214	1982	1624	1342	1379	1307	1173	975	1829	2648	2516	20,242
1967	2521	3169	4913	3018	2350	2105	2044	1925	1543	1569	1070	951	27,178

from anticipation of governmental changes to be produced by the elections. In 1967, the August political campaign followed by elections in September and in November contributed heavily to the Chieu Hoi decline in the third and fourth quarters. Although the graph does not cover the period, the 1963 Buddhist crisis caused a rapid decline from about 1700 in June 1963 to less than 100 in November 1963 when President Diem was killed. The rates rebounded with the installation of the military junta, declined after General Khanh's takeover and began rising again with the civilian takeover in October 1964.

However, the key factor in the 1967 Chieu Hoi decline may be the decline in VC recruits resulting from a decreasing enemy manpower pool. In the summer of 1967 a study of 1000 Hoi Chanh in I CTZ indicated that 96.5% of the military Hoi Chanh were new VC recruits with six months service or less. Few NVA troops defect (only 146 in 1967). Thus fewer VC recruits should mean fewer military Hoi Chanh. MACV estimates that VC recruitment dropped sharply in 1967 -- from 7000 per month in 1966 to 3500 per month in 1967. If the drop in Chieu Hoi corresponded we would expect about 50 percent fewer returnees and a decline in the proportion of military Chieu Hoi. A drop of that magnitude is not yet evident and the proportion of military Chieu Hoi has remained steady. Nevertheless, the recruitment factor bears careful watching in the next few months.

Not only has there been a decrease in the VC personnel most likely to defect, but it is no longer as easy for them to defect. Friendly military operations during 1967 increasingly took place in less populated areas, particularly along the borders with Cambodia and the DMZ. This reduces the possibility of getting ralliers because the enemy line of retreat takes likely prospects out of the reach of friendly forces. Moreover, Hoi Chanh tend to defect to civilian officials rather than armed troops. The border areas and VC strongholds have virtually no such officials.

Shortcomings in the GVN Chieu Hoi program itself affect the Chieu Hoi rate. Overcrowded centers, mistreatment, and GVN corruption, which individual VC hear about through family and friends, discourage the hesitant rallier. The failure of the GVN to find useful work for ralliers also discourages them. The huge influx of Hoi Chanh in the first three months of 1967 saturated facilities and bred conditions likely to produce hesitancy to defect. During September and October 1967, the Chieu Hoi program was paralyzed while cadre and administrators speculated on their future in the Thieu government. (Also during October, Armed Propaganda Teams, which help produce Hoi Chanh, were pulled out of the provinces to participate in the National Day Parade in early November.) Hopefully, the Chieu Hoi program is now reviving after the year end upgrading of Chieu Hoi to a ministry and the change in personnel at the top.

The VC anti-Chieu Hoi campaign ranges from propaganda to mortar attacks on Chieu Hoi centers. They stepped up their activity beginning in April 1967

when evidence of VC cadre infiltrating returnees appeared for the first time. VC propaganda stresses the fate of ralliers at the hands of the GVN (conscription into the Army, torture and death are favorite themes).

Chieu Hoi by CTZ

The original MACV estimate of Hoi Chanh for 1967 was 45,000, based on a factor of 2.2 times the 1966 results. Table 3 compares the original estimate with the actual numbers for 1965, 1966 and 1967.

TABLE 3

ESTIMATED VS ACTUAL HOI CHANH

	1965 Actual	1966 Actual	1967 Estimated	1967 Actual	% Actual of Est
I Corps	1,226	1,739	3,700	2,557	69.1%
II Corps	2,339	9,068	20,200	7,200	35.6%
III Corps	2,692	3,708	8,400	8,016	95.4%
IV Corps	4,867	5,727	12,700	9,405	74.1%
Total	11,124	20,242	45,000	27,178	60.4%

III CTZ came closest to its target number. II CTZ was the worst performer, achieving only 35.6 percent of its goal. The poor II Corps showing resulted from an unrealistic goal for 1967. 1966 was an unsound base on which to project II CTZ 1967 performance: II CTZ has less than 20% of the VC personnel but produced 45% of the 1966 Hoi Chanh. It was not reasonable to expect 20,000 Hoi Chanh from roughly 40,000 VC.

In fact, the interesting question is why II CTZ was able to produce more than 30% of the Hoi Chanh in every quarter from October 1965 through June 1967. Part of the answer may be the saturation of the II CTZ populated areas with friendly forces, and particularly Korean forces. The Koreans entered II CTZ in October 1965, and their areas have produced what appear to be disproportionately large numbers of Hoi Chanh. Intelligence reports and returnee comments indicate that the VC have almost an obsession with what they believe to be the unpredictable brutality of the Koreans. Part of this reaction probably stems from the Koreans' use of fear to induce defectors. A psychological operations worker tells the families of VC that they should influence their men to rally because future operations will kill all VC in given areas. (This technique shows part of the value of working in heavily populated areas.)

I CTZ has consistently provided 9-11% of Hoi Chanh in the past three years in spite of having about 20% of the VC units. The low rally rate may reflect VC tactics (Chieu Hoi centers have been VC targets) and the proximity to North Vietnam. VC units in I CTZ have increasingly been filled with NVA personnel. The returnee numbers for I Corps provinces in 1966 progressed from a low of 104 for Quang Tri in the north to a high of 524 in Quang Ngai in the south. In 1967 the comparable figures were 172 and 761.

III CTZ produced 24% of Hoi Chanh in 1965, 16% in 1966, and 30% in 1967. It has about 27% of the VC. Thus the 1967 results are about what could be expected, and the near achievement of the III CTZ goal reflects primarily its relatively poor performance in 1966. However, the fact that III CTZ had only 11% of its Hoi Chanh in the last three months of 1967 while the rest of the country had 14% might be due to a new VC tactic in III CTZ. VC cadres are saying that VC offensive operations will stop after Tet and that peace will be achieved through a coalition government. Local press speculation about negotiations after Tet has reinforced the VC propaganda. Potential ralliers may be unwilling to risk losing the spoils of victory by rallying now. If this is so, a surge of Hoi Chanh may result if the negotiations fail to materialize.

IV CTZ produced 35% of Hoi Chanh in 1967, compared to 28% in 1966 and 44% in 1965. It has about 35% of SVN VC personnel. Thus its performance in 1967 was about as good as could be expected, and its performance relative to its goal (74%) reflects the relatively poor showing of 1966.

Prospects for 1968

There were 9100 Hoi Chanh in the second half of 1967; at this rate, about 18,000 Hoi Chanh could be expected in 1968. However, the Tet period usually produces large numbers of ralliers, so a 20,000 goal might be more reasonable. Political stability in 1968 could generate a higher total but is unlikely to offset the impact of declining VC recruitment. The MACV goal is 60,000 returnees for 1968, but we understand this is primarily a planning figure for budget purposes. This many returnees could only occur if the war were virtually over -- in the face of VC recruiting of only about 40,000 new members and the heavy enemy losses, it would mean mass desertions by hardened and experienced VC. We see no prospects of this occurring. In fact, considering the low VC recruiting levels, the inefficiencies of the Chieu Hoi program and the emphasis in the Combined Campaign Plan on border operations, it is possible that the 1968 ralliers may not exceed 15,000 (the 4th quarter 1967 rate).

The forthcoming Tet period should provide an interesting test. Past experience indicates that the rate should go up sharply. If it does not, this may signal a low rate in 1968, or it may mean that the 1968 rate hinges on the outcome of the current efforts to get negotiations started.

April 68

CHIEU HOI: A QUARTERLY REPORT

The Chieu Hoi decline continued through first quarter 1968 with a total of 2541 Hoi Chanh, an annual rate of about 10,000. We estimate a 1968 Chieu Hoi total of 15,000 or below, but a definite breakdown in peace talks could raise the rate substantially. Reports of effective use of Hoi Chanh illustrate the value of the Chieu Hoi Program even during a period of low returns. In view of the projected low rate of Chieu Hoi, we believe that the highest benefits will accrue from improving the use of Hoi Chanh and the quality of the program rather than an expansion.

TABLE 1

TOTAL HOI CHANH

	Years			Quarters					Months		
				1967				1968			
	1965	1966	1967	1Qtr	2Qtr	3Qtr	4Qtr	1Qtr	Jan	Feb	Mar
Hoi Chanh	11124	20242	27178	10603	7473	5512	3590	2541	1272	735	534

Source: Tables 1, 2 and 4, OSD Southeast Asia Statistical Summary, and MACV Chieu Hoi reports.

Table 1 shows that the number of Chieu Hoi returnees continued to decline during the first quarter of 1968. The total of 2541 Hoi Chanh was the lowest quarterly total since the first quarter 1965. Projection of the first quarter rate through the rest of the year yields about 10,000 returnees for 1968, close to the 1965 figure of 11,124. If the downward trend persists, we might see only 4,000-7,500 Hoi Chanh this year.

Reporting problems preclude drawing firm conclusions from the recent Chieu Hoi data. MACV reports that Chieu Hoi reporting was spotty during February, and the figures in Table 1 may understate the actual flow of Hoi Chanh in February. In March, all provinces were reporting, but the rate continued to decline. This indicates that the downward trend probably persists. (A reporting error of 50% would be needed to bring the first quarter 1968 figures up to the last quarter 1967 figures.) A joint GVN-US system for reporting the number of Hoi Chanh is scheduled to be operating by April 22. Hopefully, this will provide firmer data. In the meantime, we must reserve judgment on the meaning of the figures for the first quarter 1968.

Table 2 shows that I and IV CTZ are getting a larger portion of the total Chieu Hoi, with II and III CTZ's shares declining. In the last two quarters the I CTZ proportion has been about 17%, compared to a 10% average during the past three years. IV CTZ has accounted for about 50% of the Hoi Chanh so far in 1968, its highest share since third quarter 1965.

The ratio of military to political Hoi Chanh has increased sharply in 1968. At 3.9 military for every political returnee, the ratio is the highest since third quarter 1965 and almost double the average 1967 ratio of 2.2 to 1. Moreover, the ratio has increased significantly in every CTZ except III CTZ; IV CTZ produced the highest ratio of 7.6 to 1.

Table 2 also shows that III and IV CTZ consistently have a higher ratio of military to political Hoi Chanh (III CTZ -- 3.1, IV CTZ -- 3.6) than I CTZ (1.6) and II CTZ (1.3). Political Hoi Chanh consistently declined in III and IV CTZ throughout 1967, in contrast to the sharp II CTZ drop and the fairly constant I CTZ rate during 1967.

The causes and meaning of the different patterns are not clear but probably are related to variations in: types and density of populations, enemy force sizes and structures, and recruiting rates among the four CTZ. The sharp 1968 decline in political Hoi Chanh in all CTZ's may reflect the impact of the VC/NVA Tet offensive and the enemy theme that the war will soon be over. Potential political Hoi Chanh presumably have more time in VC service and are less subject to the hazards of battle than VC military personnel, particularly new VC recruits impressed into service. Thus, they are probably more willing to wait for the situation to clarify than the potential VC military defectors are.

TABLE 2

CHIEU HOI BY TYPE BY CTZ

	1967 1Q	2Q	3Q	4Q	1968 1Q
I CTZ					
Military	459	326	323	334	268
Political	248	251	198	250	128
Other	43	76	32	17	3
Total	750	653	553	601	399 a/
II CTZ					
Military	1632	1289	458	369	252
Political	1312	1033	312	395	142
Other	160	100	70	70	6
Total	3104	2422	840	834	400 a/
III CTZ					
Military	2233	1568	1232	616	341
Political	809	480	359	173	92
Other	209	145	130	62	48
Total	3251	2193	1721	851	481 a/
IV CTZ					
Military	2433	1568	1868	964	1090
Political	730	575	464	288	143
Other	335	62	66	52	28
Total	3498	2205	2398	1304	1261 a/
ALL SVN					
Military	6757	4751	3881	2283	1951
Political	3099	2339	1333	1106	505
Other	747	383	298	201	85
Total	10603	7473	5512	3590	2541

a/ Data for first week in 1968 is not available by CTZ by type. The country-wide total for that week was prorated to obtain CTZ and type data.

Prospects for the Rest of 1968

We concluded our January article* on Chieu Hoi by stating:

> "There were 9100 Hoi Chanh in the second half of 1967; at this rate, about 18,000 Hoi Chanh could be expected in 1968. However, the Tet period usually produces large numbers of ralliers, so a 20,000 goal might be more reasonable. Political stability in 1968 could generate a higher total but is unlikely to offset the impact of declining VC recruitment. The MACV goal is 60,000 returnees for 1968, but we understand this is primarily a planning figure for budget purposes. This many returnees could only occur if the war were virtually over -- in the face of VC recruiting of only about 40,000 new members and the heavy enemy losses, it would mean mass desertions by hardened and experienced VC. We see no prospects of this occurring. In fact, considering the low VC recruiting levels, the inefficiencies of the Chieu Hoi program and the emphasis in the Combined Campaign Plan on border operations, it is possible that the 1968 ralliers may not exceed 15,000 (the 4th quarter 1967 rate)."
>
> "The forthcoming Tet period should provide an interesting test. Past experience indicates that the rate should go up sharply. If it does not, this may signal a low rate in 1968, or it may mean that the 1968 rate hinges on the outcome of the current efforts to get negotiations started."

It now appears that the low number of Tet returnees and the uncertainty generated by prospective negotiations will tend to hold down the number of 1968 Chieu Hoi, particularly the political ones. Conversely, the higher VC recruitment in 1968 may tend to push the military portion of the rate above the current levels. MACV has doubled its estimate of monthly VC recruitment (from the 1967 rate of 3500 per month to a 1968 rate of 7000 per month so far) due to evidence of heavy VC impressment/recruitment in the wake of the Tet offensive. Many of these recruits may rally at the first opportunity, but a Chieu Hoi increase from this source would not erode the hard core VC/NVA structure or diminish critical enemy capabilities.

Assuming the first quarter figures are reasonably accurate, we believe the Chieu Hoi rate will remain low, with a 1968 total of 15,000 or below. A definitive breakdown in peace talks would probably increase the rate substantially.

Low volume does not signify failure of the Chieu Hoi program, since external factors affect the rate substantially. Moreover, reports of effective use of Hoi Chanh illustrate the value of the Chieu Hoi Program even during periods of

* Page 44, SEA Analysis Report, January 1968.

low volume. In February and March 1968, armed propaganda team strength grew 12% (from 2,615 to 2,929); Kit Carson scouts increased from 292 to 332. In Phuoc Tuy, Hoi Chanh provided detailed advance information on VC attacks during the Tet offensive. Australian forces are using Hoi Chanh on operations in which they have demonstrated search techniques resulting in the discovery of VC tunnels and capture of VC personnel. One Hoi Chanh reportedly knows the entire Phuoc Tuy VC infrastructure by name or by sight and plans are underway to roll it up. On 9 April the Chieu Hoi minister paid more than 1 million piasters to a returnee who led allied forces to large weapons caches in Phuoc Tuy.

The planning figure for 1967 Hoi Chanh was about 40,000, and we understand that the Chieu Hoi program and facilities were to be expanded to accommodate an annual flow of this size. Thus, the current program probably could handle about 2.5 times our estimated total for 1968. This would indicate that, aside from contingency programs to handle possible peak loads, the 1968 Chieu Hoi effort might well focus on maximizing use of Hoi Chanh as sources of intelligence, Kit Carson scouts, armed propaganda teams, etc. In addition, the low rate offers an opportunity to improve the training and job placement aspects of the program, thereby increasing its attractiveness.

CHIEU HOI

The Chieu Hoi rate hit bottom at 518 returnees in March and has climbed to a new plateau of about 1600 per month. It still appears that there will be about 15,000 Hoi Chanh for 1968. A sharp increase in Hoi Chanh (say, 50% above the current 1600 monthly rate) could signal a significant change in the war. About 70% of the Hoi Chanh so far this year have come from dissident Hoa Hao and Cambodian KKK groups. Some mass defections and a higher proportion of high ranking Chieu Hoi are reported in 1968, but the data available in Washington are too sketchy for analysis.

Trends

Table 1 and the graph indicate that the Chieu Hoi rate bottomed out in March 1968 and reached a new plateau of about 1600 per month beginning in July. The table also indicates that our previous estimates of about 15,000 Hoi Chanh in 1968 are still valid, barring a dramatic change in the war later this year.

The steady Chieu Hoi decline in 1967 was probably due to the following factors: (1) the political activity in 1967, including two election periods and the accompanying feelings of uncertainty throughout the country, (2) the decline in local enemy recruitment and therefore the number of new VC personnel, the prime source of military Hoi Chanh, (3) a larger proportion of allied military operations taking place in less populated areas, (4) GVN shortcomings in the treatment of Hoi Chanh, and (5) increased enemy propaganda and other actions against the Chieu Hoi program, including tighter internal controls to retain manpower for the 1968 offensives.

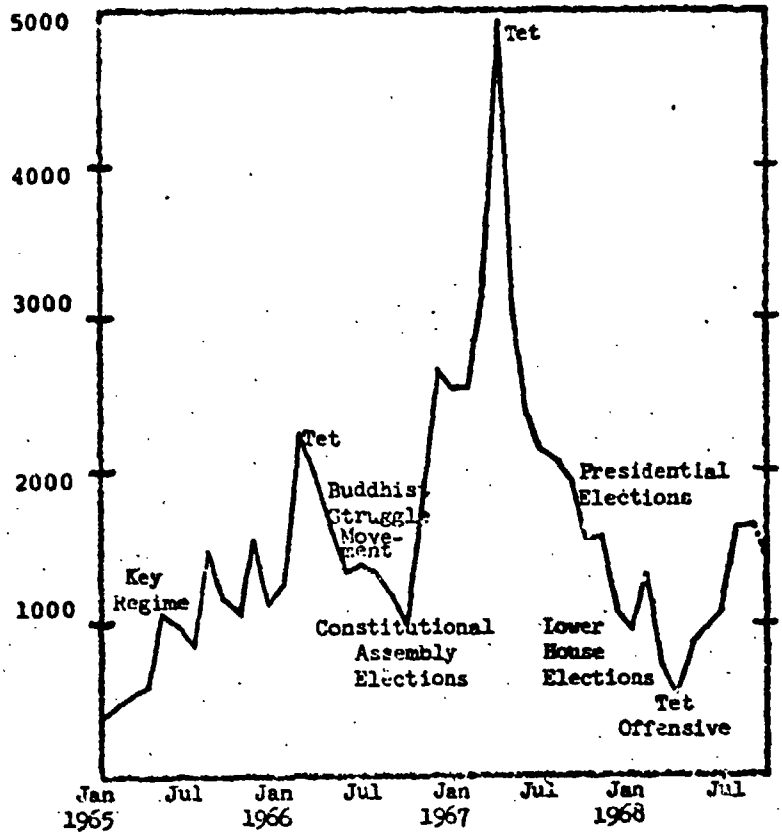

TABLE 1

HOI CHANH BY MONTH (1965-1968)

	Total	J	F	M	A	M	J	J	A	S	O	N	D
1965	11,124	393	443	504	581	1049	984	826	1477	1161	1066	1534	1106
1966	20,242	1253	2214	1982	1624	1342	1379	1307	1173	975	1829	2648	2516
1967	27,178	2521	3169	4913	3018	2350	2105	2044	1925	1543	1569	1070	951
Est 1968	14,907	1303	720	518	881a/	894	1091	1621	1634	1445	1600	1600	1600
											(Estimates)		

a/ Excludes about 300 dissident Hoa Hao who came in over the previous months but reported in April.

Changes in some of these factors may have helped turn the trend upward after March:

(1) The GVN has remained stable.

(2) VC/NVA recruitment/impressment rose sharply in conjunction with the Tet offensive and some of the "recruits" may be finding their way back home via the Chieu Hoi program (the increased ratio of military to other Hoi Chanh tends to support this factor).

(3) The program itself has reportedly improved (especially in I and IV CTZ) including use of Hoi Chanh in Armed Propaganda Teams gainfully employing them to encourage still additional defectors.

(4) More allied forces are now operating closer to populated areas than before, giving the enemy better opportunities to defect.

On the other hand, enemy propaganda and violence against the program continues unabated. This, added to the tight controls within the enemy forces, is probably preventing the Chieu Hoi rate from attaining the high levels of early 1967. Thus, a dramatic and sustained increase in the Chieu Hoi rate could be evidence of a weakening of the enemy's control structure. The current 1600 per month plateau makes us suspect a return to a "normal" rate of 20,000 or so per year rather than a decline in enemy morale sufficient to overcome his internal controls.

Other Patterns

Table 2 shows that the upward trend is occurring in all four CTZs, with I CTZ surpassing its best 1967 performances. IV CTZ is coming close to its best rates of 1967 and continues to have about half of all Hoi Chanh.

Table 2 also shows a significant 1968 increase in Hoi Chanh in the "other" category. This has resulted from the defection of about 950 Cambodian KKK and dissident Hoa Hao; they account for about 10% of all 1968 Hoi Chanh.

If we exclude the "other" element from the Chieu Hoi totals and look at the ratio of military to political Hoi Chanh, we see that 1968 exceeds 1967 with a consistently higher ratio of military Hoi Chanh in every quarter. The range for 1967 was 2.0-2.9 military Hoi Chanh for each political Hoi Chanh; the 1968 range has been 3.4-3.9. This trend seems to indicate that potential political Hoi Chanh have less incentive to defect than the military troops who must face combat. A higher rate and proportion of

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TABLE 2

CHIEU HOI BY TYPE BY CTZ a/
(Monthly Average)

	1967 1Q	2Q	3Q	4Q	1968 1Q	2Q	3Q b/
I CTZ							
Military	153	109	107	111	98	176	184
Political	83	84	66	83	46	80	76
Other	14	25	11	6	1	7	27
Total	250	218	184	200	145	263	287
II CTZ							
Military	544	430	153	123	88	81	85
Political	437	344	104	132	44	37	50
Other	53	33	23	23	3	26	64
Total	1034	807	280	278	135	144	199
III CTZ							
Military	744	523	411	205	112	120	244
Political	270	160	120	58	26	20	19
Other	70	48	43	21	10	19	29
Total	1084	731	574	284	148	159	292
IV CTZ							
Military	811	522	623	322	361	329	522
Political	243	192	154	96	51	63	160
Other	112	21	22	17	7	96	188
Total	1166	735	799	435	419	488	870
All SVN							
Military	2252	1584	1294	761	659	706	1035
Political	1033	780	444	369	167	200	305
Other	249	127	99	67	21	148	308
Total	3534	2491	1837	1197	847	1054	1648

a/ Source: OSD Statistical Summary, Table 2, and MACV/CORDS/CHD Weekly Returnee Report. Second and third quarter 1968 numbers are from the CORDS report because it picked up about 300 KKK in April which the Stat Summary did not.

b/ Total through August 31

political Hoi Chanh could signal a significant change in their appraisal of how the war is going.

Mass Defections and High Ranking Hoi Chanh

Three encouraging trends sometimes cited in the Chieu Hoi program during 1968 have been increasing numbers of (1) mass defections, (2) weapons caches discovered and (3) high ranking VC/NVA personnel.

Included in the "mass defections" are the 950 KKK and Hoa Hao, who cannot be considered as significant as defections of regular NVA or VC troops. There is some question as to whether the KKK ought to be included in the Chieu Hoi numbers at all since they are Cambodians and not formally allied with the VC/NVA cause. The Hoa Hao returnees represent a highly localized phenomenon, since almost all of them rallied from An Giang province where the sect is particularly strong. Thus, they should not be given undue weight in assessing the nationwide trend.

The more interesting mass defections involved VC or NVA troops. Two instances have been reported in the weekly Chieu Hoi Reports. In one case the defectors were from a unit threatened with total annihilation, but which was given the opportunity to surrender. This was the case of the 150 men who surrendered in June in Gia Dinh province after responding to broadcast appeals from their former executive officer to rally. In the other case, a group of 12 enemy rallied with their platoon commander in Gia Dinh province. The only other report we can find about mass defections is a MACV statement that there have been "...several instances in I CTZ and in III CTZ of defections by large groups of ralliers from a single unit." The small number and sporadic timing of VC/NVA mass defections so far, and the circumstances surrounding those defections, do not yet indicate the beginning of a strong trend.

Chieu Hoi Weekly Report #128 stated, "An increasing number of important arms caches are being discovered by allied forces in operations led by Hoi Chanh or ex-Hoi Chanh..." Again, sufficient data is not available (four specific cases have been mentioned by the reports so far in 1968) to compare this trend with 1967.

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The third encouraging trend sometimes cited for the 1968 Chieu Hoi program is the increasing number of high ranking Hoi Chanh. The quality of the military Hoi Chanh has reportedly improved significantly during 1968, but no systematic data is available in Washington to confirm the trend. One Chieu Hoi report (#113) states that an analysis of the available GVN statistics concerning military Hoi Chanh for the first quarters of 1967 and 1968 shows that the percentage of officers and NCOs jumped from 4.07% in 1967 to 10.3% in 1968. Applying the percentages to the total military Hoi Chanh yields 275 officers and NCOs in first quarter 1967 and 204 for the same period in 1968.

In a more recent report, MACV noted:

> "Although the total number of returnees to date (Jan through Jun 1968) is about one-third of last year's figure for the same period, there is a distinct rise in rank of ralliers. An analysis of results over recent months discloses that approximately 2 1/2 times the number of NCO-level and higher Hoi Chanh have rallied than was the case previously."

We think this means 2 1/2 times the <u>percentage</u> previously reported (i.e., 4.07 x 2.5 = 10.2) rather than an absolute increase in <u>number</u>. Further data for analysis of the trend in Hoi Chanh quality is not available in Washington.

PROFILE OF CHIEU HOI RETURNEES

A recent RAND study[1] based on biographical cards for 19,577 of the 45,000 defectors from 1 July 1965 through June 1967 has given the most complete profile of the Chieu Hoi returnees we have seen to date

About 66% of the returnees were the military, but the civilian proportion tended to increase when the returnee rate increased. About 40% of the returnees were village and hamlet guerrillas, 20% were civilian defectors from party organizations, 10%-20% were regular military personnel, and the remaining 25% defected from militia, comm-liaison units, liberation associations, labor groups, etc.

The proportion of cadre in the returnees ranged from 15% to 19%, indicating little difference between cadre and rank-and-file defection trends. Senior cadres ranged from 5% to 8% of returnees. The proportion of senior military cadre[2] rose to 57% of all military cadre in first half 1967, compared to 40% for the previous 18 months. Conversely, the proportion of high ranking civilian cadre declined.

The findings cast doubt on the contention that the Chieu Hoi program attracts primarily underage or overage peasants, new recruits, and deserters from GVN units. A majority of the returnees were 16-30 years old, although the proportion of military returnees this age in the second year declines. Generally, the higher the returnee's unit the lower his average age; guerrillas were older than main force troopers, for example. Military returnees from III and IV CTZ were older and had longer service than those from I and II CTZ. Cadre were generally older than their followers. The majority of the returnees had 12 or more months of VC service. Less than 15% were GVN deserters or had active GVN service before joining the VC.

The returnees represent only a partial manpower loss to the Viet Cong because most of them came from VC villages and want to return home. Also, .5% of the returnees were defecting for the second time. A much higher percentage likely face further service with the VC once they return home, because the VC kill only the defectors who have actively assisted the GVN by turning in their weapons, helping the GVN locate weapons and supplies, providing intelligence, etc. Most Hoi Chanh simply go through the Chieu Hoi center, and the VC regard this group as misguided brothers to be given a second chance. The returnees seem aware of the VC policy, because more of those turning in weapons were willing to work for the GVN, and fewer were willing to return home, compared with returnees who did not bring in their weapons.

1/ "A Profile of Viet Cong Returnees: July 1965 to June 1967," J. M. Carrier, RM-5577-ISA/ARPA, October 1968.

2/ Assistant Platoon leader and above for regular forces, Assistant unit leader and up for guerrillas and militia.

RAND interviews of prisoners and returnees indicate that it is tougher to defect from regular force units than from other VC organizations. The proportion of regular force defectors in the sample was about half of the proportion of VC/NVA main forces in overall enemy strength. On the other hand, the percentage of guerrilla and civilian returnees was greater than their proportion of VC strength. One interpretation of the distribution difference is that few regular force troops are able to defect. Another is that the strengths of guerrilla and civilian units are underestimated. (Evidence outside of the study exists to bolster either case.)

SEAPRO Comment

In past articles we have indicated our view that the Chieu Hoi data can furnish valuable clues about our progress in South Vietnam. The RAND study clearly indicates that analysis of the biographical cards (or a small sample of them) on a monthly basis could generate a quantum jump in the value of the Chieu Hoi data as an indicator of how things are going and greatly increase understanding of the value of the program itself. The number of returnees bringing in weapons or willing to work for the GVN looks as though it would be an extremely useful statistic.

The study also raises some disturbing questions about what happens to Hoi Chanh after they leave the Chieu Hoi center and whether they can be counted as VC manpower losses. We believe the question deserves further investigation.

CHIEU HOI: VC/NVA IN 1968

Summary. Over 19,000 enemy defectors (Hoi Chanh) turned themselves in to the GVN during 1968, down from 27,000 in 1967 and 20,000 in 1966. While the Tet offensive dropped the Hoi Chanh rate to a 3 year low in March 1968, the rate picked up dramatically in the second half of the year -- 42% of the 1968 returnees came in during the 4th quarter. The third party inducement program accounted for 33% of the 4th quarter total, mostly in IV Corps. IV CTZ accounted for 57% of all 1968 Hoi Chanh. Barring another offensive of the size and scale of last year's or a significant change in the political situation, the 1969 goal of 20,000 Hoi Chanh should be met easily and probably surpassed.

The reasons for the upsurge in the second half of 1968 reportedly include improvements in the GVN Chieu Hoi program and deterioration of the enemy's situation in some areas. During the second and third quarters the increases in the returnee rate were probably a return to normal after the depressed situation following the Tet offensive. The fourth quarter, however, achieved new records for some provinces and for IV CTZ as a whole.

GVN efforts to improve the Chieu Hoi program include the following: (1) the third party inducement program in which an individual is paid to bring in defectors, (2) monetary awards for weapons brought in by defectors, (3) more effective use of Hoi Chanh including better recruitment, training, and utilization of the Armed Propaganda Teams (APT) and the Kit Carson Scouts (composed of Hoi Chanh), (4) improved reception, processing and housing for Hoi Chanh, (5) the turnabout program in which a selected returnee is briefed and sent back to his unit to induce other VC to defect. Increasing VC problems with recruitment, living conditions (food, particularly), discipline and morale, and allied military operations also helped to raise the flow of Hoi Chanh.

Hoi Chanh by CTZ

Table 2 breaks down Hoi Chanh by CTZ. IV CTZ, the leader in total returnees since 1967, had four times as many returnees in the fourth quarter as in the first quarter. In comparison I and III CTZ doubled and II CTZ rose very little. IV CTZ went from reporting about half (49%) of the total returnees to two-thirds (67%) between first and fourth quarters.

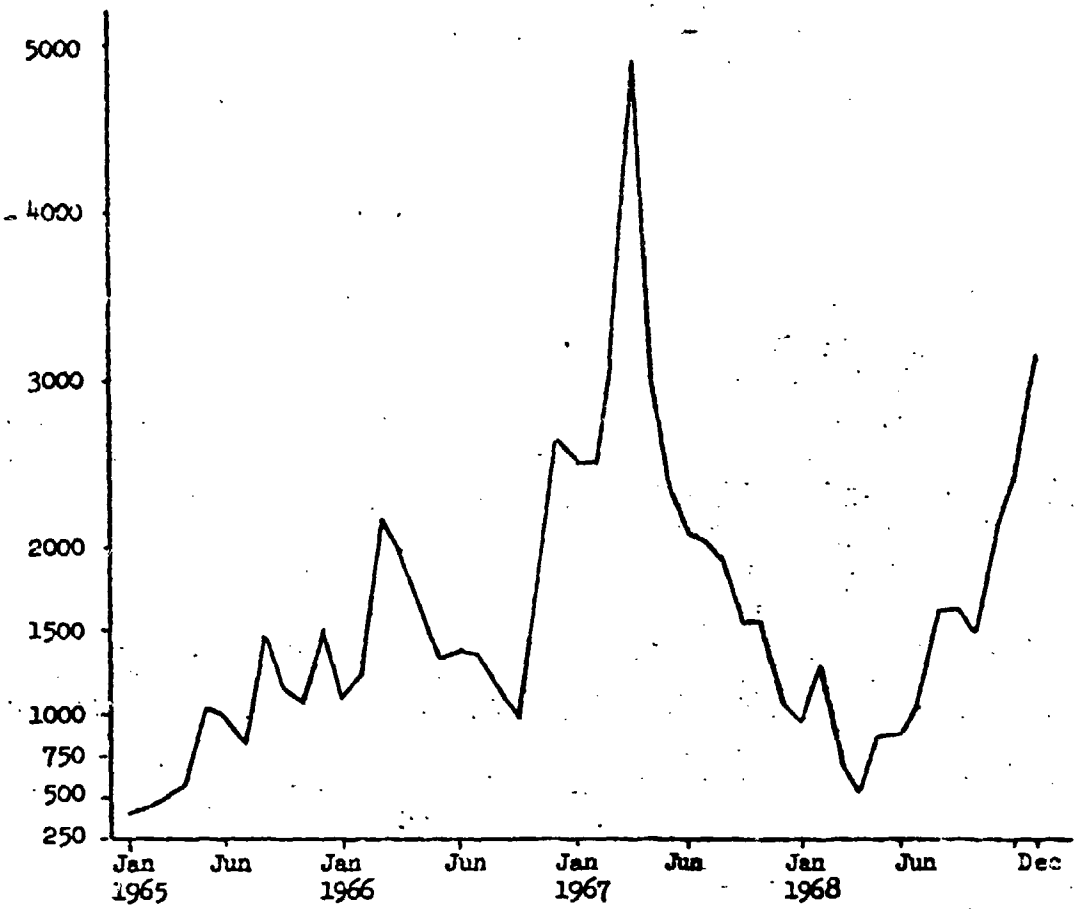

TABLE 1

Total Hoi Chanh

	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1965	11,124	393	443	504	581	1049	984	826	1477	1161	1066	1534	1106
1966	20,242	1253	2214	1982	1624	1342	1379	1307	1173	975	1829	2648	2516
1967	27,178	2521	3169	4913	3018	2350	2105	2044	1925	1543	1569	1070	951
1968	18,171	1303	720	518	1168	902	1133	1621	1634	1501	2115	2408	3148

TABLE 2

HOI CHANH BY CTZ

	1966	1967	1968	1968 1qtr	2qtr	3qtr	4qtr
I CTZ	1739	2557	3050	435	799	924	892
II CTZ	9068	7200	1933	402	435	559	537
III CTZ	3708	6016	2795	447	484	775	1089
IV CTZ	5727	9405	10393	1257	1485	2498	5153
SVN	20242	27178	18171	2541	3203	4756	7671

Source: OSD(C) Statistical Summary, Table 63.

The I CTZ returnee rate actually dropped in the fourth quarter while other areas were experiencing record rates. This is probably due to stricter VC security measures and the heavy NVA presence in I CTZ, weakness in the GVN Chieu Hoi program including the failure of the third party inducement program to get off the ground, and enemy exploitation of the Paris Peace negotiations and the bombing halt. The current enemy propaganda line in I CTZ points out that the United States was in the forefront as a peace-maker with the North Vietnamese, and this indicates that the GVN is a puppet government of the US (thus supporting a continuing VC/NVA propaganda theme). Returnees question the need for peace talks if the GVN is winning. Prospective ralliers may hesitate because of the questionable posture of GVN in the present peace negotiations, knowing well that communist designs for SVN have not changed. In IV CTZ the peace talks are having an opposite effect as discussed below; there was no mention of the VC using the Paris theme in II and III CTZ. The I CTZ returnee rate probably will not improve significantly in the near future unless the third party inducement program gets underway and raises the rate as it has elsewhere.

II CTZ was the area with the fewest Hoi Chanh for the year. Despite the slight fourth quarter decline, the December total (235) was the second highest of the year for II CTZ.

III CTZ improved in the second half of 1968 but still ranked third in total returnees for the year. The third party inducement program is credited with bringing in nearly one-third (314) of the Hoi Chanh returning in the last quarter.

As Table 2 shows, the disparity between IV CTZ returnee rates and the other three CTZ has grown wider over the years, especially in 1968. IV CTZ reported 28% of the 1966 Hoi Chanh. In 1967 its share rose to 35%. The average for 1968 was 57%, rising to 71% in December.

It appears that IV CTZ effectively meets the three major prerequisites for a healthy influx of returnees: (1) an ample Viet Cong "target," (2) absence of extensive NVA units and (3) a fairly well-managed Chieu Hoi program. Chieu Hoi reports indicate that more middle-aged, long committed VC are rallying in IV CTZ. Among their reasons for rallying are: (1) the hard life, the rainy season, no money (2) the Paris talks -- many VC are afraid the NVA will go north leaving the local guerrillas without support (in contrast to I CTZ where the enemy is using the Paris talks as a propaganda argument to keep VC from defecting), (3) GVN psychological operations and Armed Propaganda Team activity.

VC recruiting problems also contribute to the Chieu Hoi increases in IV CTZ because their need to fill vacancies at higher levels and in main force units from guerrilla and local ranks threaten the part time insurgent with transfer away from home. Also, a predominant reason for the favorable atmosphere appears to be the decreased pressure from enemy main force elements; low level party organizations rely on the backing of main force and NVA units to maintain discipline and control. In Vinh Long province, returnees complain of food and other supply shortages, loss of local popular support and an inability to collect taxes (resulting in the reduction of pay to guerrillas), the friction between party and non-party members within the guerrilla movement, and finally the effectiveness of the military operations in Vinh Long which reportedly destroyed 20% of guerrilla forces and caused 5% of them to rally.

A total of 10,369 returnees came in during 1968 in IV CTZ, surpassing the 9,491 returnees in 1967 and setting a new yearly record for any CTZ. One-half rallied during the last quarter (5,217) mostly as the result of the accelerated pacification campaign, the third party rewards program and, to a lesser degree, the turnaround program, which has been fairly effective. On one occasion two Hoi Chanh returned with thirteen ralliers, including a VC hamlet chief.

Third Party Inducement Program

The third party inducement program has been credited with bringing 63% of the IV CTZ Hoi Chanh in December (Table 3). Essentially, the program gives special cash rewards to any Vietnamese citizen who induces a VC to turn himself into the Chieu Hoi program. This program began on a limited basis in Vinh Long province in IV CTZ at the end of September. Nearly 30% of the ralliers in that province in October were credited to it. On November 10, 1968, the program started nationwide as part of the Accelerated Pacification Campaign. The amount of the awards vary according to the importance of the rallier or number of ralliers brought in. In one province (Phuoc Long in III CTZ) 71 third party inducers received 498,000 piasters or an average of 7,014 piasters each.

TABLE 3

THIRD PARTY REWARD PROGRAM HOI CHANH
(Weekly Average)

	November a/		December	
	No.	%	No.	%
I CTZ				
3rd Party Returnees	4	7	7	11
Other	53	93	59	89
Total	57		66	
II CTZ				
3rd Party Returnees	2	5	10	19
Other	35	95	43	81
Total	37		53	
III CTZ				
3rd Party Returnees	64	61	39	48
Other	41	39	42	52
Total	105		81	
IV CTZ				
3rd Party Returnees	210	51	324	63
Other	199	49	191	37
Total	409		515	
SVN				
3rd Party Returnees	280	46	380	53
Other	328	54	335	47
Total	608		715	

a/ 10-30 November. The program was implemented countrywide on November 10.

Although verification procedures do exist to determine if the third party rallier is really a VC or NVA, there appears to be ample room for misuse of the program by individuals seeking monetary gain. This is particularly true if the rallier claims to be a recruit or other unknown. If the rallier succeeds in convincing the Chieu Hoi center personnel that he is a VC, his friend can collect the reward and split it with the rallier who enjoys a two or three month stay in the center and then returns to private life somewhat the richer for his experience. The truly enterprising third party Vietnamese might bring in several non-VC friends or relatives. Some American advisors indicate that the corruption centering around this program may be so serious that as many as one-half of the Hoi Chanh brought in via a third party may not be true ralliers. If true, the 1968 fourth quarter returnee totals may be considerably inflated.

Table 4 shows what the totals for fourth quarter and the year would be if we eliminate all third party ralliers or only count half of them. Even without the third party Hoi Chanh, the fourth quarter total would exceed the third quarter.

TABLE 4

HOI CHANH MINUS THIRD PARTY RALLIERS

	Year	1Q	2Q	3Q	4Q	Oct	Nov	Dec
Total Hoi Chanh	18171	2541	3203	4756	7671	2115	2408	3148
3rd Party Ralliers	2513	0	0	0	2513	0	839	1674
Remainder	15658	2541	3203	4756	5158	2115	1569	1474
Total Including 50% of 3rd Party Ralliers	16914	2541	3203	4756	6414	2115	1988	2311

Source: CHD/CORDS Weekly Returnee Report.

Chieu Hoi by Type

Table 5 gives returnees by type. Military returnees continue to comprise the bulk of the returnees, ranging from 64-71% over the four year period. The percentage of ralliers who are classified as political (infrastructure, etc.) has declined from 31% in 1966 to 21% in 1968. In the last half of 1968, however, the percentage increased from 19% in the second quarter to 23% in the fourth.

TABLE 5

CHIEU HOI BY TYPE

					1968			
	1965	1966	1967	1968	1Q	2Q	3Q	4Q
Military	7936	12897	17672	12569	1978	2146	3062	5383
Political	2581	6303	7877	3825	502	609	952	1762
Other	607	1042	1629	1777	61	448	742	526
Total	11124	20242	27178	16171	2541	3203	4756	7671

The total number of political returnees more than tripled in the fourth quarter over the first. This may be due in part to the Phoenix program which is directed at eliminating the VC infrastructure and whose eliminations include VC ralliers who are identified as infrastructure personnel. Table 6 shows that about 58% of all political Hoi Chanh in 1968 also were reported as VC infrastructure (VCI) eliminated under the Phoenix program. Unfortunately, the two sets of date are not necessarily competible since in some cases more political ralliers were reported in a month by Phoenix than in the Chieu Hoi program. This was particularly true in III CTZ. This may be a case of late reporting, but the continuous discrepancy in III CTZ would indicate a more serious reporting problem.

TABLE 6

POLITICAL HOI CHANH

	1968	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
I CTZ					
Phoenix a/	595	104	104	185	202
Chieu Hoi	377	42	140	97	98
Total	972	146	244	282	300
II CTZ					
Phoenix a/	283	60	51	59	113
Chieu Hoi	236	78	59	68	31
Total	519	138	110	127	144
III CTZ					
Phoenix a/	317	20	65	94	138
Chieu Hoi	32	67	- 5	-32	2
Total	349	87	60	62	140
IV CTZ					
Phoenix a/	1036	71	113	211	641
Chieu Hoi	949	60	82	270	537
Total	1985	131	195	481	1178
SVN					
Phoenix a/	2231	255	333	549	1094
Chieu Hoi	1594	247	276	403	668
Total	3825	502	609	952	1762

a/ Source: USMACV Measurements of Progress.

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The "other" category of Hoi Chanh includes VC who cannot be classified as military or political. The yearly total in this category was 10% of total Hoi Chanh, up from 5-6% in previous years. The bulk of them in 1968 (about 950) were KKK (Cambodian dissidents) or Hoa Hao. These cannot be considered as significant as defections of regular NVA or VC troops. There is some question as to whether the KKK ought to be included in the Chieu Hoi numbers at all since they are Cambodians and not formally allied with the VC/NVA cause. The Hoa Hao returnees represent a highly localized phenomenon, since almost all of them rallied from An Giang province where the sect is particularly strong. Thus, they should not be given undue weight in assessing the nationwide trend.

Weapons Awards

The total amount paid out in weapons awards in 1968 came to about 20 million piasters. This is greatly in excess of previous annual expenditures. The elimination of weapons caches brought about by this awards program has helped the allied military situation.

Moreover, despite the low 1968 returnee rate, Hoi Chanh brought in more than 100 crew-served weapons and more than 1500 individual weapons by the middle of October compared to a 1967 total of 92 crew-served weapons and 1444 individual weapons. In IV CTZ the VC have responded to this program by not allowing VC with less than six months service to retain their weapons unless they are mounting offensive actions.

Prospects for 1969

If the fourth quarter 1968 rate of returnees continues throughout 1969, we could hope for up to 40,000 for the year. The January total (3146), however, was the same as the December total (3148). Since (1) the January number indicates that the Chieu Hoi rate may have peaked and (2) the recent offensive should cut the rate for the current period, we estimate the 1969 Hoi Chanh total at 20,000 to 30,000.

CHIEU HOI: A QUARTERLY REPORT

Summary. The 1969 Chieu Hoi rate is averaging over 40,000 per year, more than double the 1968 total of 18,000, and well above the 1966 and 1967 totals of 20,000 and 27,000. Moreover, the trend is still upward. The third party inducement program which pays people to bring in defectors has accounted for 55% of all returnees since it began last November. IV CTZ accounted for 70% of all the Hoi Chanh so far this year; 63% of the IV CTZ returnees came in through the 3rd party inducement program. MACV has raised its 1969 Chieu Hoi goal to 33,500, up from the 20,000 projected.

The Chieu Hoi ("open arms") program appeals to enemy military and political cadre and personnel to defect to the GVN. These returnees (also called ralliers and Hoi Chanh) numbered 18,000 in 1968 compared to 27,000 in 1967 and 20,000 in 1966. At current rates the returnee total could reach 40,000 by the end of this year, and we expect that 1969 returnees will exceed the 1968 total by June. Table 1 and the graph show the rising trend since first quarter 1968. The slight drop in February 1969 was due to the 1969 post-Tet offensive. This contrasts with the effect of the 1968 Tet and May offensives which appear to have influenced Chieu Hoi rates throughout most of 1968. In view of the increased rate or returnees, MACCORDS recently revised 1969 Chieu Hoi goals upward from 20,000 to 33,500. However, the serious losses suffered by the enemy from the Chieu Hoi program may force him to take more stringent measures to prevent ralliers and thus slow the rate.

TABLE 1

TOTAL HOI CHANH
(Monthly Avg)

1968				1969	
1Qtr	2Qtr	3Qtr	4Qtr	1Qtr	2Qtr[a]
847	1068	1585	2557	3288	4407

a/ April and May.

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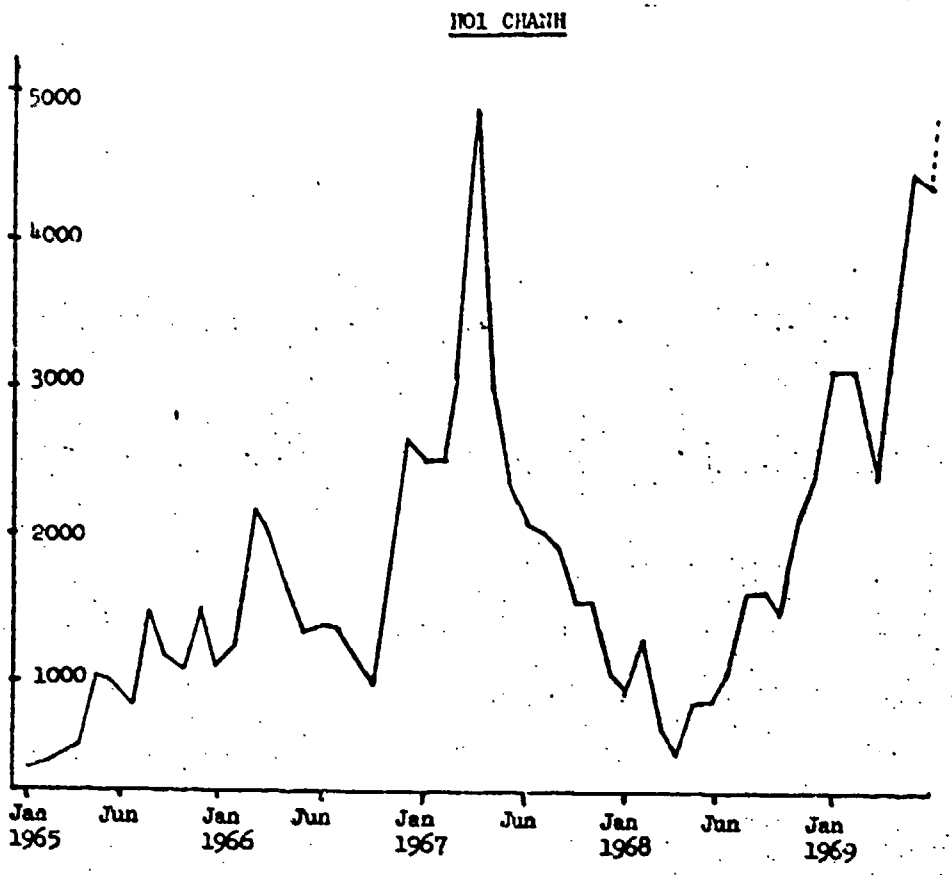

Total Hoi Chanh

	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1965	11,124	393	443	504	581	1049	984	826	1477	1161	1066	1534	1106
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1967	27,178	2521	3169	4913	3018	2350	2105	2044	1925	1543	1569	1070	951
1968	18,171	1303	720	518	1168	902	1133	1621	1634	1501	2115	2408	3148
1969		3146	2389	4328	4213	4600a/							

a/ Estimated from first 17 days.

The greatest gains in returnees by far have been in the IV CTZ region (Table 2) although other areas are also experiencing record high rates. Between first quarter 1968 and first quarter 1969, IV CTZ returnees increased by 5.6 times; they only doubled elsewhere. In 1968, IV CTZ had 57% of total ralliers. In the first four months of 1969, it had 70% of them. The map shows that all of the ten top provinces in total returnees are in IV CTZ.

TABLE 2

HOI CHANH BY CTZ
(Monthly Avg)

	1968	1968 1Qtr	2Qtr	3Qtr	4Qtr	1969 1Qtr	Apr
I CTZ	254	145	266	308	297	288	363
II CTZ	161	134	145	186	179	284	348
III CTZ	233	149	161	258	363	365	656
IV CTZ	866	419	495	833	1713	2351	2846
Total	1514	847	1067	1585	2557	3288	4213

Several conditions prevailing throughout the country are generally conducive to high Chieu Hoi rates. These include:

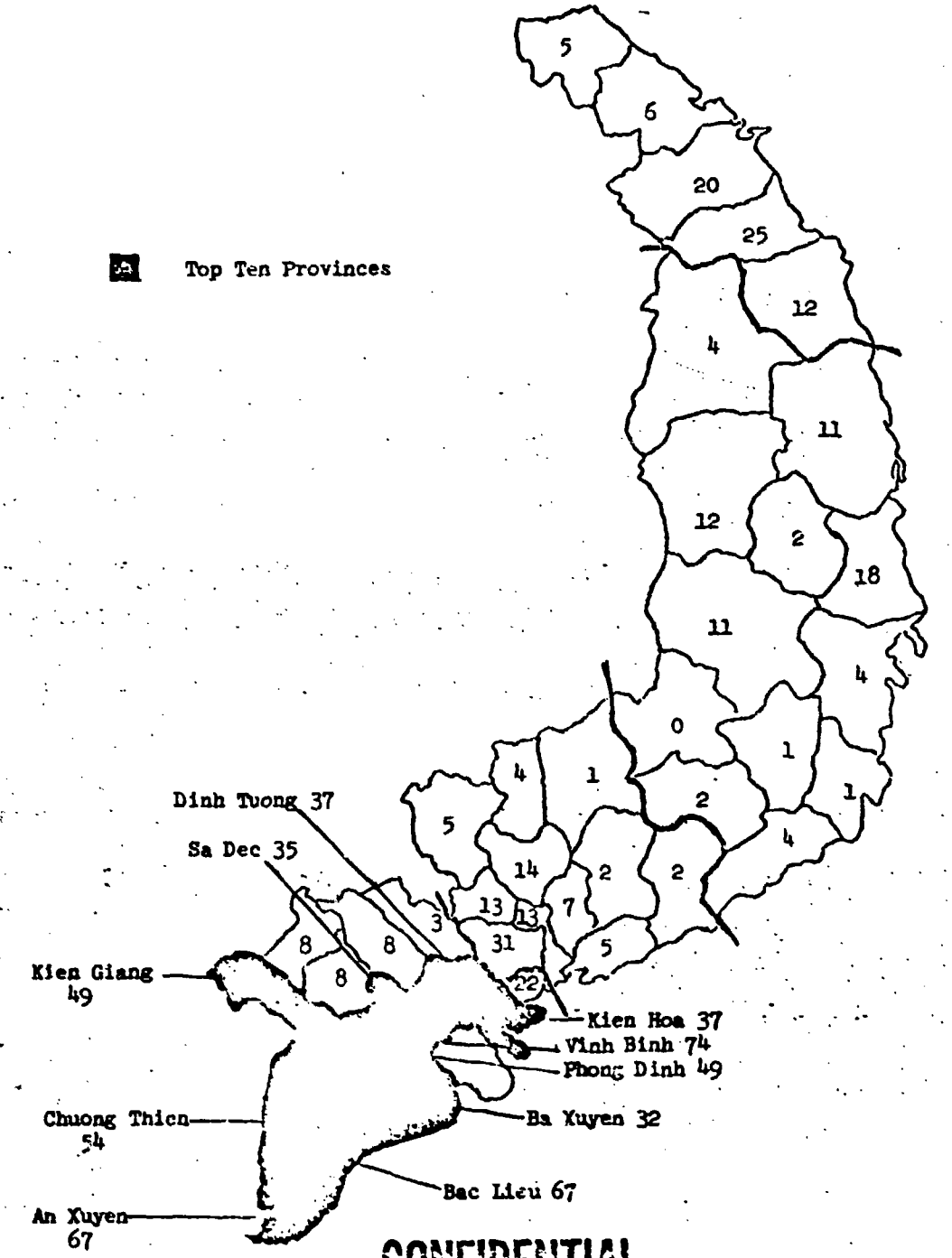
1. Continuing political stability. In the past, periods of political unrest, coups, and elections have produced low Chieu Hoi rates.

2. The extension of a GVN presence in the country, particularly as the result of the Accelerated Pacification Campaign (APC), has brought the GVN into contact with enemy who may have wanted to defect but never had the chance or did not want to give themselves up to Americans for fear they would not make themselves understood. 1/

3. The program is headed by an active and ca[illegible] minister who tours the provinces and the Chieu Hoi centers and back[illegible] programs to induce more ralliers. The GVN Chieu Hoi effort appear[illegible]be improving. The most successful of the programs are: (a) the Third [illegible]rty Inducement Program in which an individual is paid to bring in defe[illegible]tors, (b) the Weapons Award Program in which a rallier is paid for bringing in his weapon or leading allied forces to weapon caches, (c) the Armed Propaganda Teams which employ ex-Hoi Chanh to go into hamlets and villages to induce VC to rally, and (d) the Turnaround Program which sends selected returnees back to their units

1/ A RAND Study (Leon Goure, Inducements and Deterrents to Defection: An Analysis of the Motives of 125 Defectors, August 1968) indicates that a prime concern of potential ralliers is their family's safety. VC with families in GVN controlled areas are more likely to defect than those with families in VC areas. Thus, extension of GVN presence eliminates one obstacle to defection.

CHIEU HOI 1969
Weekly Average by Province



to try to get other VC to rally. Other programs are also having beneficial effects on the Chieu Hoi program, particularly the Phoenix-Phuong Hoang program against VC infrastructure, which helps exert pressure to get political cadre to rally.

Another important factor in the unprecedented number of Hoi Chanh may be the enemy's failure to topple the GVN during its three major offensives in 1968 and the renewed prospect of a long struggle. By December 1967 the Chieu Hoi rate had dropped to its lowest point in 2½ years after a steady decline since the previous June. This decline, before the 1968 Tet offensive, was probably due to the tightened discipline and preparations for the offensive and to the promises that it would be the last great push to victory.

After the Tet, May and August offensives, the enemy began to re-emphasize his doctrine of protracted warfare (announced by Truong Chinh's article in Hanoi). In October, the Chieu Hoi rate abruptly jumped 33% over the rate for the previous three months. Except for the post-Tet offensive month of February 1969, it has been rising steadily ever since as allied pressure continues and the enemy stresses protracted warfare, limited victory, and a "hard and difficult campaign, full of rigors, sacrifices and hardships." Numerous enemy documents and prisoners have complained of the increasing credibility gap within VC ranks between what the troops were promised last year and the current situation.

The foregoing factors may indicate why Chieu Hoi rates are up, but they do not explain why the IV CTZ rate is so high. The question is what has boosted the IV CTZ rate 5.6 times while the rates only doubled in other areas. One reason is probably the ample VC "target" in the area: IV CTZ has about 40% of all the VC combat forces in South Vietnam according to MACV, and very few NVA troops are present. About 70% of the forces elsewhere are NVA troops which seldom defect. 1/ The relative absence of NVA troops in IV CTZ also may mean less discipline and control for the VC forces in the area.

Another reason for the high IV CTZ rate is probably the increased allied pressure in the area. Allied operations and VC KIA have increased sharply in recent months and ralliers have complained about the effectiveness of allied military operations. This pressure has generated a variety of problems for the VC. One is recruitment, which contributes to the Chieu Hoi increases in IV CTZ, because the VC requirement to fill vacancies at higher levels from guerrilla and local ranks threatens the local insurgent with transfer away from home. A special interrogation effort in IV CTZ in January showed that ralliers also gave lack of adequate food and weapons as major reasons for rallying. Complaints about loss of popular support, and inability to collect taxes (resulting in reduced pay for guerrillas),

1/ Only 284 NVA troops (2% of all returnees) defected in 1968 and only 82 (1%) have come in thus far in 1969.

and the friction between party and non-party members within the guerrilla movement were also heard from ralliers. In contrast to I CTZ, where the enemy is using the Paris talks as a propaganda argument to keep VC from defecting, IV CTZ ralliers believe the talks will mean that eventually the NVA will go north, leaving the VC forces without support.

However, the prime reason for IV CTZ success appears to be Third Party Inducement, which started there. It has generated about 63% of all the ralliers in IV CTZ since it started last November. (This amounts to over 40% of all the Hoi Chanh in SVN for that period.) Previously, analysis of this program cast some doubt on the validity of ralliers brought in by third parties, since proof of their VC status is often difficult to obtain. We concluded, however, that even if 50% of the third party returnees were fraudulent Hoi Chanh and we subtracted them out, the IV CTZ total would still be setting records (Table 3).1/

TABLE 3

PERCENTAGE HOI CHANH FROM THIRD PARTY INDUCEMENT

	Nov	Dec	Jan	Feb	Mar	Total
I CTZ	7	11	5	1	32	12
II CTZ	5	19	39	6	16	19
III CTZ	61	48	48	54	79	60
IV CTZ	51	63	66	57	71	63
All SVN	46	53	57	47	63	55

The data indicate that VC military losses in IV CTZ amounted to about 11,000 Military Hoi Chanh and about 20,000 KIA in the last seven months. This amounts to 60% of the 51,000 VC military forces in the accepted MACV order of battle for IV CTZ for March 1969. Even if we assume that half of the third party induced Hoi Chanh are fraudulent, the losses still amount to 53% of the VC forces. Therefore, either the VC are losing at least half of their reported IV CTZ forces about every six months, or the loss figures are inflated, or the OB is underestimated. (ARVN provides the IV CTZ OB numbers and has historically tended to play down the size of enemy units there.) Overall VC incident rates have been declining in IV CTZ as the reported VC KIA and Hoi Chanh have risen, indicating a possible reduction of capability. On the other hand, RVNAF counts of enemy KIA may be inflated, and the Chieu Hoi figures may be inflated by: (1) officials, to get third party inducement money, (2) phoney VC seeking the cash pay-offs and (3) VC who use the program to get ID cards, money, etc. and then return to the VC or assume other roles in anticipation of a negotiated settlement.

In summary, IV CTZ and the Third Party Inducement Program are accounting for the 1969 increase in Hoi Chanh. No one factor appears to be decisive in the remarkable IV CTZ increase, but the Third Party Inducement Program stands out. Even more significant is the high returnee numbers in provinces which have had no large-scale permanent U.S. presence (Kien Giang, Chuong Thien, An Xuyen and Bac Lieu provinces, for example).

1/ February 1969 Southeast Asia Analysis Report.

CHIEU HOI: A FOLLOW UP

In last month's Report 1/ we discussed the high Chieu Hoi rate so far in 1969. We noted that IV CTZ accounted for 70% of all Hoi Chanh through the middle of May and that 63% of the IV CTZ returnees came in through the 3rd party inducement program. We cited several reasons for the high IV CTZ rate including increased allied pressure, the large number of VC personnel (40% of all VC combat forces in SVN), VC hardships (recruitment, poor supply, and other problems), and the success of the 3rd party inducement program.

A recent embassy report 2/ from Saigon points out that many of the third party ralliers were only impressed laborers or guerrillas and might better be considered refugees than ralliers. Also, little is known about ralliers after they leave the Chieu Hoi center. Many probably return to their hamlets where they may be impressed by the VC again, thus making them eligible to rally a second time. These factors indicate that the Chieu Hoi rate in IV CTZ may be having less impact on the enemy than the gross numbers alone would indicate.

"Although the Chieu Hoi rate in IV Corps tapered off somewhat in May from the very high April total, the overall trend for the year continued to be phenomenal. With 12,383 ralliers for the year as of May 31, the entire 1968 total was exceeded by almost 20 percent with seven months left to go in 1969.

"A combination of factors has contributed to the remarkably high Chieu Hoi rate this year. The failure of the Viet Cong (VC) to achieve the objectives which they promised during the Tet and subsequent offensives in 1968 caused a decline in the morale of many VC and convinced them that they were not, after all, going to win. This loss of confidence was complemented by greatly increased pressure by ARVN and US forces, especially in the employment of US helicopters, B-52s and fighter-bombers, which inflicted severe hardship on the average VC soldier. Increased friendly operations disrupted VC supply activities, causing shortages of food and medicine. A third factor, the movement of the GVN into many new areas during the Accelerated Pacification Campaign presented many VC with a good opportunity to rally. These three factors probably account for a majority of the ralliers who were active Viet Cong. But there is another group of ralliers, it is difficult to say how many, but probably at least half the total, who might better be considered refugees rather than enemy soldiers who have abandoned the fight. These ralliers,

1/ "Chieu Hoi: A Quarterly Report," SEA Analysis Report, May 1969, p. 32.
2/ "Political Developments in IV Corps During May 1969," State Airgram A-317, June 16, 1969.

typically, have served the VC for periods of a month or two, or perhaps a year, as laborers or guerrillas, do not bring any weapons with them when they rally, and are usually "induced" to rally by a third party who receives a financial reward for bringing them in.

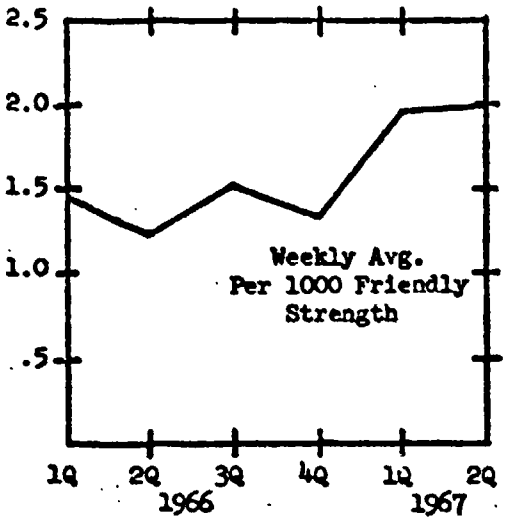
"In Bac Lieu, for example, where the Chieu Hoi rate has been high recently, in about 70 percent of the cases a third party award is paid, averaging about 4200VN$. Few of these ralliers bring weapons with them. The supposition is that the "third party" persuades a farmer friend of his to rally and the two split the award money. When these people rally the main effect on the Viet Cong is to reduce the manpower pool from which they draw laborers to support their troops (captured documents indicate that the VC are having problems getting enough porters to transport supplies). While there is undeniably a net accrual to the benefit of our side in such a situation, it is easy to overstate the case in terms of weakening the VC and strengthening the government. For example, after leaving the Chieu Hoi Center many "refugee-ralliers" go back to their farms where they will be subject to impressment by the Viet Cong which, incidentally, makes them eligible to rally again.

"Many of the ralliers say that they would like to join the RF or PF after leaving the Center. Unfortunately, and perhaps understandably, most RF and PF commanders are reluctant to recruit a recently returned Viet Cong for fear of putting a fox in the chicken coop. U.S. advisors admit this is a problem, local Vietnamese do not usually trust ralliers, but they point out that if the Viet Cong wanted to infiltrate an RF unit or PF outpost it would be simpler and arouse less suspicion for a VC agent to enlist directly without rallying first. The argument usually fails to convince, ralliers leave the camps, and little is known about what happens to them after that."

EFFICIENCY IN INFLICTING LOSSES: ENEMY VERSUS FRIENDLY

During the first half of 1967 the enemy loss rate increased more than the friendly loss rate. But enemy efficiency in killing friendly forces has remained comparable to friendly force efficiency in killing VC/NVA. For every 1000 VC/NVA forces 1.5 friendly forces per week were killed; for every 1000 friendly forces, 1.5-2.0 VC/NVA per week were killed.

GRAPH 1



GRAPH 2

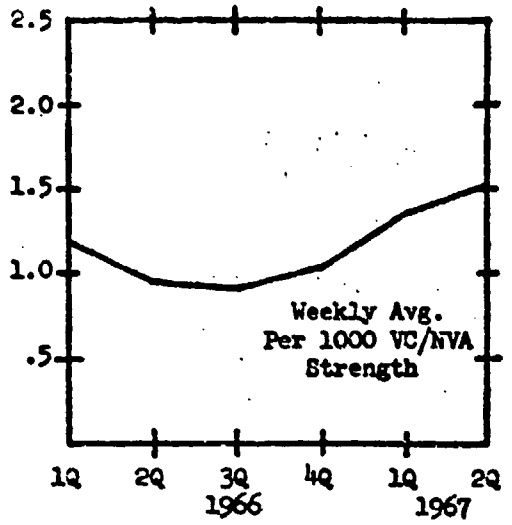


TABLE 1

VC/NVA KILLED PER 1000 FRIENDLY STRENGTH
(Weekly Average)

	1966					1967	
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1966 Avg	1st Qtr	2nd Qtr
VC/NVA Killed							
Body Count	1005	915	1200	1150	1067	1750	1800
Died of Wounds a/	350	320	420	405	374	615	630
Total Killed	1355	1235	1620	1555	1441	2365	2430
Avg. Friendly Strength (000)	930	982	1043	1144	1025	1188	1217 b/
VC/NVA Killed Per 1000 Friendly Strength:							
Body Count	1.1	.9	1.2	1.0	1.0	1.5	1.5
Total Killed	1.5	1.3	1.6	1.4	1.4	2.0	2.0

a/MACV Factor of .35 times body count.
b/April-May average.

Table 1 and Graph 1 show that by body count, friendly forces increased their weekly VC/NVA kill rate from 1.0 per 1000 friendly strength in 1966 to 1.5 in 1967; additions of the MACV died of wounds raises the rates from 1.4 in 1966 to 2.0 in 1967. Thus, friendly efficiency has increased about 50%.

Table 2 and Graph 2 show that VC/NVA forces increased their weekly kills of friendly troop from 1.0 per 1000 VC/NVA strengths in 1966 to about 1.5 in 1967. Thus, VC/NVA forces also increased their efficiency by 50%.

TABLE 2

FRIENDLY KILLED PER 1000 VC/NVA STRENGTH
(Weekly Average)

	1966					1967	
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1966 Avg	1st Qtr	2nd Qtr
Friendly Killed	315	265	270	305	290	395	440
Avg. VC/NVA Strength (000)	265	282	297	291	284	289	289
Friendly Killed Per 1000 VC/NVA Strength	1.2	.9	.9	1.0	1.0	1.4	1.5

Table 3 shows that the straight Enemy/Friendly Kill ratio for 1967 is higher than the 1966 ratio. But when the two ratios are adjusted to reflect opposing force strengths, the 1966 and 1967 ratios remain the sar

TABLE 3

KILL RATIOS

	1966					1967	
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1966 Avg	1st Qtr	2nd Qtr
Enemy/Friendly							
Body Count Only	3.2	3.5	4.4	3.8	3.7	4.4	4.1
Body Count & Died of Wounds	4.3	4.7	6.0	5.1	5.0	6.0	5.5
Enemy KIA Per 1000 FF/Friendly KIA Per 1000 Enemy							
Body Count Only	.9	1.0	1.3	1.0	1.0	1.1	1.0
Body Count & Died of Wounds	1.2	1.3	1.7	1.3	1.4	1.5	1.3

RELATIVE KILL RATIOS IN SOUTH VIETNAM

US forces continue to bear the heaviest brunt of the fighting and to perform best. During the Tet offensive RVNAF forces absorbed a much larger proportion of the fighting and then slacked off (but are still doing better than their 1967 average). The ROK forces were apparently unaffected by the Tet offensive but hit a combat peak in the second quarter of 1968.

Tables 1 and 2 show kill ratios for allied forces in SVN for 1967 and 1968. Disregarding the small Australian and Thai forces, the following points emerge:

1. US forces have the highest enemy/friendly kill ratio for 1968 (6.9 to 1) and for the 1967-68 period as a whole (6.1 to 1). They improved their ratio by 33% in 1968 (Table 1).

2. The RVNAF kill ratio (2.4) was half those of the US and ROK forces in 1967 (Table 1). It more than doubled during first quarter 1968, rising to almost match the US ratio (RVNAF 6.3 vs. US 6.6), but this was largely a reflection of the large numbers of KIA during Tet. The RVNAF kill ratio dropped sharply in the second quarter of 1968 while the US ratio and the number of enemy killed by US forces continued to rise (Table 2).

3. The average ROK kill ratio remained constant in 1967 and 1968 (Table 1). The kill ratio was off sharply during first quarter 1968 but is highest for any force (8.9) during the second quarter (Table 2).

Table 3 shows the enemy combat deaths per 1000 friendly troops for each allied forces and the same enemy combat deaths related to allied troops in maneuver battalions. It indicates that:

1. On a per capita basis, US forces killed more enemy than any other force and doubled their 1967 rates.

2. RVNAF killed about 3 times as many enemy per 1000 RVNAF strength in 1968, due primarily to their strong performance at Tet.

3. Again, ROK performance remained constant.

Table 4 shows combat deaths per 1000 deployed troops and the same combat deaths related to troops in maneuver battalions. We note that:

1. The US has always taken far higher (2-3 times) KIA per strength in maneuver battalions than have any other forces in Vietnam, and the discrepancy widens in 1968.

2. In 1966 and 1967 all forces suffered about the same KIA per 1000 troops (the small Australian and Thai forces can be ignored). In 1966 US forces had 30% more KIA per 1000 troops than did the RVNAF and 75% more than the Koreans.

3. US KIA per 1000 troops this year is 77% above last year while the RVNAF is up only 36%, the Australians and Thais are up 43% and the ROKs are down 3%.

The reasons for these differences are not clear. We could be (1) fighting more aggressively; (2) assuming more dangerous missions; (3) not as imaginative in our strategy and tactics; (4) being targetted more by the enemy, or (5) doing some combination of the above.

TABLE 1

KILL RATIOS

	1967			1968 (Jan-Jun)			TOTAL FOR PERIOD		
	EN KIA 1/	FRIENDLY KIA 2/	EN/FR	EN KIA 1/	FRIENDLY KIA 2/	EN/FR	EN KIA 1/	FRIENDLY KIA 2/	EN/FR
US	48978	9358	5.2	66132	9571	6.9	115,110	18929	6.1
RVNAF	31085	12716	2.4	50685	10084	5.0	81,770	22800	3.6
ROK	5192	1005	5.2	2716	518	5.2	7,908	1523	5.2
AUS	220	76	2.9	239	69	3.5	459	145	3.2
THAI	102	16	6.4	51	21	2.4	153	37	4.1
TOTAL	85577	23171	3.7	119823	20263	5.9	205,400	43434	4.7

1/ Source: JCS GUAVA Computer File
2/ OSD SEA Statistical Summary

TABLE 2

US AND RVNAF KILL RATIOS

	1968					
	1st Quarter			2nd Quarter		
	ENEMY KIA	FRIENDLY KIA	EN/FR RATIO	ENEMY KIA	FRIENDLY KIA	EN/FR RATIO
US	32069	4847	6.6	34063	4724	7.2
RVNAF	34366	5436	6.3	16319	4648	3.5
ROK	860	309	2.8	1856	209	8.9

TABLE 3

ANNUAL ENEMY KIA RATE

	PER 1000 FRIENDLY TROOPS DEPLOYED		PER 1000 TROOPS IN MANEUVER BNS	
	1967	1968[a]	1967	1968[a]
US	108	252	641	1392
RVNAF	50	145	356[b]	1142[b]
ROK	111	110	265	261
AUS-NZ	37	65	122	199
THAI	79	43	170	93
TOTAL ALLIED	76	193	461	1152

a/ Projection based on Jan-Jun Data.
b/ Overstates Enemy KIA by RVNAF Maneuver battalions by estimated 30% because RF and PF forces accounted for at least that proportion of enemy KIA.

TABLE 4

ANNUAL FRIENDLY KIA RATE

	PER 1000 TROOPS DEPLOYED			PER 1000 TROOPS IN MANEUVER BNS		
	1966	1967	1968[a]	1966	1967	1968[a]
US	16.7	20.6	36.4	106.4[b]	122.5[b]	201.4[b]
RVNAF	19.8	20.6	28.0	55.7[b]	69.9[b]	75.4[b]
ROK	15.2	21.4	20.8	38.3	51.3	49.8
AUS-NZ	15.5	12.2	17.5	37.5	42.2	57.5
THAI	-	12.3	17.6	-	29.1	38.2

a/ Projection based on Jan-Jun 68 data.
b/ Calculations include regular force KIA only.

RELATIVE KILL RATIOS IN VIETNAM: A CORRECTION

In the article "Relative Kill Ratios in South Vietnam" in the August 1968 SEA Analysis Report (p.16) we incorrectly reported that the US kill ratio was higher for the second quarter 1968 than for the 1st quarter. Since then we have obtained new data which has permitted us to calculate the enemy/friendly kill ratio by month for 1968 (Table 1).

The 1st quarter 1968 kill ratio for US forces is now shown to be 7.7 (not 6.6) and the second quarter ratio was 6.0 (not 7.2). We also corrected the other kill ratio table in last month's article but it does not change the overall results (Table 2).

Table 1 supports the hypothesis that high kill ratios are correlated with high rates of enemy attacks. Kill ratios for both US and RVNAF were higher during February and May -- the peak periods of enemy offensives. Another point is that the RVNAF suffered more KIA during the enemy Tet offensive, but US forces suffered more KIA in the May mini-Tet offensive.

TABLE 1

US & RVNAF KILL RATIOS

	1968 Jun	Feb	Mar	1st Qtr	Apr	May	Jun	2d Qtr	Jul	Aug
US										
Enemy KIA	9672	17696	10033	37401	6798	15796	5844	28438	3319	7756
US KIA	1202	2105	1540	4847	1409	2169	1146	4724	812	1050
En/Fr Kill Ratio	8.0	8.4	6.5	7.7	4.8	7.3	5.1	6.0	4.1	7.4
RVNAF										
Enemy KIA	8794	18461	7111	34366	4678	7759	3882	16319	2836	7518
RVNAF KIA	1449	2743	1544	5436	1312	1969	1367	4648	828	1544
En/Fr Kill Ratio	6.1	7.6	4.6	6.3	3.6	3.9	2.8	3.5	3.4	4.9
ROK										
Enemy KIA	163	210	487	860	732	531	593	1856	496	205
ROK KIA	100	127	82	309	81	57	71	209	58	67
En/Fr Kill Ratio	1.6	1.7	5.9	2.8	9.0	9.3	8.4	8.9	8.6	3.1

TABLE 2

KILL RATIOS

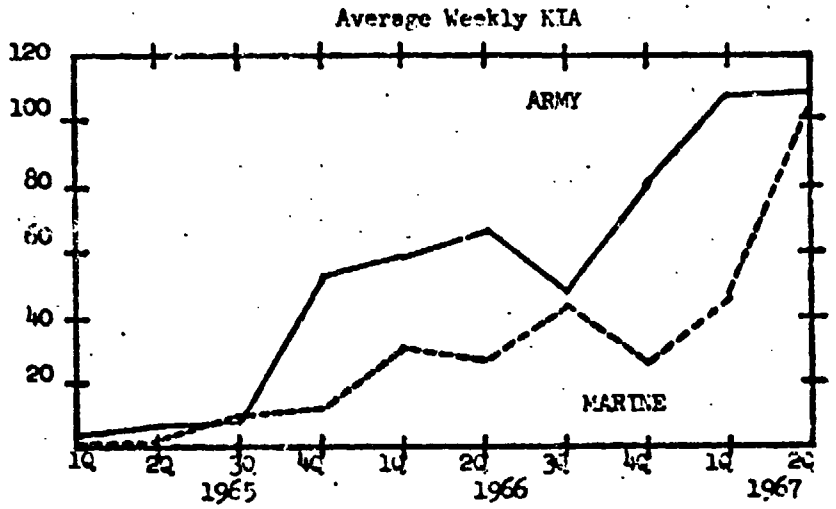
	1967			1968 (Jan - Jun)			TOTAL FOR PERIOD		
	EN KIA[1]	FRIENDLY KIA[2]	EN/FR	EN KIA[1]	FRIENDLY KIA[2]	EN/FR	EN KIA[1]	FRIENDLY KIA[2]	EN/FR
US	48978	9358	5.2	65839	9571	6.9	115110	18929	6.1
RVNAF	31085	12716	2.4	50685	10084	5.0	81770	22800	3.6
ROK	5192	1005	5.2	2716	518	5.2	7908	1523	5.2
AUS	220	76	2.9	239	69	3.5	459	145	3.2
THAI	102	16	6.4	51	21	2.4	153	37	4.1
TOTAL	85577	23171	3.7	119530	20263	5.9	205400	43434	4.7

1/ Source: JCS CUAVA Computer File.
2/ OSD SEA Statistical Summary.

US COMBAT DEATHS IN SEA

The recent sharp increase in US combat deaths in Southeast Asia can be attributed to three factors. The most significant is the sharply increased level of combat in the northern part of I CTZ with a resulting increase in Marine deaths. The second is simply the buildup of US combat troops and the attendant increase in the pace of our combat effort: 541 battalion days per month during the first quarter of CY 1966 and 2031 days during the first quarter of this year. The third factor relates to a change in Viet Cong/NVA tactics during the past 6 months. They are relying less on overt attacks and more on mortar and artillery attacks on US installations. This has led to a particularly large increase in US wounded.

Army/Marine Casualty Comparison



As Chart 1 shows, Army casualties have historically been about double those of the Marines. During May 1967, however, Marine casualties exceeded Army casualties (624 vs 543). This only happened one other time (Sept 66) since U.S. Army troops arrived in large numbers in late CY 1965. Army casualties during the first 5 months of this year have been well above the levels of CY 1966 but the increase was not nearly as abrupt as that of the Marine Corps. Weekly Marine casualties averaged 32 per week in 1965, 47 during the first quarter and 104 during April and May of 1967. Table 1 compares the combat deaths by Service for the past 29 months.

TABLE 1

U.S. Casualties in SEA
(Weekly Average)

	1965				1966				1967	
Killed in Action	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q a/
Army	4	6	7	52	58	65	47	65	107	108
Marine Corps	-	2	10	13	31	28	44	27	47	104
Navy	1	2	2	2	2	2	3	2	4	9
Air Force	1	1	1	2	3	3	2	2	4	3
Total	6	11	20	69	94	98	95	96	162	224
Wounded										
Army	30	25	37	187	358	418	287	366	646	764
Marine Corps	1	14	64	76	156	183	260	194	366	697
Navy	1	1	3	13	11	11	19	15	23	51
Air Force	2	5	7	6	6	14	7	16	13	19
Total	34	45	111	282	531	626	573	586	1048	1531

The number of Marine deaths per thousand troops deployed, however, has consistently exceeded the Army's death rate. In large part the reason is that a larger proportion of the Marines in Vietnam are in units engaged in combat. The larger numbers of well trained and equipped NVA troops in I Corps is also a factor. During the first five months of 1967 Marine losses were about 4.2 per thousand per month compared to 1.7 per thousand for the Army. As is shown on Table 2, to make the comparison more valid we also compared Army deaths with the combined Navy and Marine Corps deaths. This was done for two reasons; 1) the Navy provides corps men and doctors for Marine units in I Corps, and 2) the Navy provides much of the logistic support for Marine units in I Corps, while the Army provides this service for itself. The combined Navy/Marine deaths per thousand, however, are still considerably above the Army (2.2 vs 1.6 in CY 66, 3.4 vs 1.7 in Jan-May 67). The details are shown on Table 2.

TABLE 2

U. S. Casualties/1000 Strength/Per Month

	1965				1966				1967	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Army	1.1	1.0	.4	1.9	1.9	1.8	1.2	1.3	1.8	1.6
Marine Corps	.5	.5	1.2	1.4	3.4	2.3	3.5	1.9	2.8	5.9
Marine/Navy	.7	.8	1.2	1.4	2.9	1.9	2.8	1.5	2.3	4.7

a/ Based on April-May data.

Table 1 also shows the average number of personnel wounded per week for the past 29 months. The number of nonfatal wounds has increased more sharply during CY 1967 than has the number of deaths; this may be attributed to the wider use by the VC/NVA of mortar and artillery attacks.

Army Deaths in II and III CTZ

US Army personnel killed per month in II and III Corps during the first five months of this year up 93% over the last half of 1966; Viet Cong and North Vietnamese combat deaths have only increased by 62%. One factor in this more rapid increase in US deaths than enemy deaths may be the change in Viet Cong tactics that has taken place in recent months. The enemy appears to be selecting his combat situations more carefully and relying on longer range weapons to inflict more US casualties without a comparable increase in his casualties.

Causes of US Casualties

Table 3 shows the causes of US casualties by quarter for the period January 1965 through April 1967. Of the total of over 9200 combat deaths recorded by the US during that period, nearly half (48%) were caused by gunshot wounds. Another 36% were caused by other types of ordnance such as artillery, rockets, mines, and grenades. About 8% have been caused by aircraft crashes, divided about equally between fixed wing aircraft and helicopters.

The data in Table 3 tends to confirm that the change in VC/NVA tactics (greater reliance on mortar and rocket attacks) is resulting in a heavier toll of U.S. personnel. Artillery, Rocket and Mortar fire rose from less than 1% in 1966 to 5% during Jan-April 1967. Deaths caused by all times of explosive ordnance increased from 35% to 40%. Gunshot caused deaths dropped from 51% to 46%.

TABLE 3

Cause of U. S. Combat Deaths
(Monthly Average)

	1965				1966				1967			No.
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	April	Total	Ave.
Gunshot	4	17	34	149	231	196	199	213	325	326	4432	158
Artillery	-	1	2	8	4	2	6	14	28	57	251	9
Mines/Bombs/Grenades	11	5	24	30	37	49	62	61	125	103	1319	47
Fragmentations Wounds b/	2	5	6	64	81	117	97	64	125	128	1809	65
Aircraft crashes	6	18	18	24	37	27	27	26	44	52	736	26
Misadventure c/	-	1	2	3	6	20	13	25	32	24	330	12
Other	1	1	2	19	12	18	12	12	29	19	335	12
Total	24	48	87	297	408	429	416	413	709	709	9212	329

a/ Includes Mortar caused
b/ Exact cause not reported but was some type of explosive ordnance (mortar, mines, grenades etc.)
c/ Inflicted by U.S. forces during combat (short artillery rounds, bombing errors, etc.

U.S. CASUALTIES

Despite heavy Marine casualties along the DMZ during September, total U.S. killed in hostile action (KHA) for the month were about the same as the average for the previous 8 months (775 compared to 777). Marine losses in September (445) were the highest since May (624) and 50% above the January-August 1967 average (298). The September casualty data demonstrate clearly that the focus of combat operations is now on I Corps; 67 percent of the KHA (and wounded) during the month occured in this Corps area.

Casualties in II and III Corps are well below the levels of the first half of this year. For example, during August and September Army KHA in the two corps areas averaged 177 per month compared to 416 during the first six months of the year. This is partially a function of weather, but the sharp drop in the combat tempo in these areas appears to be the major factor. U.S. KHA by Corps, with the DMZ area separately identified, are shown on Table 1. Tables 2 and 3 are a similar break-out of U.S. non-fatal wounds, showing the wounded who needed hospitalization and those who did not.

Combat near the DMZ. An examination of the casualties near the DMZ shows a clear saw-tooth pattern to enemy activities. The table below is extracted from Tables 1-3 and includes only casualties near the DMZ. The enemy appears to operate on a bi-monthly cycle. On this basis we should expect October casualties to be low, as they have been for the first half of the month.

1967 U.S. Casualties near the DMZ a/

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
Deaths	31	182	97	350	97	241	69	268
Wounded								
Hospitalized	120	562	457	1320	369	812	354	1057
Not Hosp.	110	532	435	1258	431	779	335	1550
Total Casualties	261	1276	989	2928	814	1832	758	2885

a/ DMZ plus Quang Tri Province

TABLE 1

U.S. DEATHS RESULTING FROM HOSTILE ACTION
1967

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
DMZ*									
NAVY	2	2	6	5	26	6	14	5	15
USMC	14	29	176	92	324	91	227	64	253
TOTAL	16	31	182	97	350	97	241	69	268
OTHER I CTZ									
ARMY	0	0	0	0	36	27	22	44	45
NAVY	11	8	5	11	24	13	8	12	12
USMC	120	137	137	188	300	213	122	151	192
USAF	0	0	8	0	0	0	0	0	0
TOTAL	131	145	150	199	360	253	152	207	249
II CTZ									
ARMY**	100	219	219	149	181	158	143	90	51
NAVY	0	0	0	0	0	0	0	0	0
USAF	0	0	0	0	0	1	4	0	0
TOTAL	100	219	219	149	181	159	147	90	51
III CTZ									
ARMY**	227	236	347	200	248	213	154	102	111
NAVY	3	2	0	0	4	0	6	0	8
USAF	2	0	0	0	1	0	3	0	0
TOTAL	232	238	347	200	253	213	163	102	119
IV CTZ									
ARMY	0	0	0	22	70	74	50	28	49
NAVY	1	1	3	0	1	0	1	0	1
USAF	0	0	0	0	0	0	0	0	0
TOTAL	1	1	3	22	71	74	51	28	50
OTHER S.E.ASIA***									
ARMY	19	15	23	25	8	17	3	20	18
NAVY	0	3	5	2	2	2	9	14	1
USAF	21	10	15	16	8	15	15	5	19
TOTAL	40	28	43	43	18	34	27	39	38
S.E.ASIA									
ARMY	346	470	589	396	543	489	372	284	274
NAVY	17	16	19	18	57	21	38	31	37
USMC	134	166	313	280	624	304	349	215	445
USAF	23	10	23	16	9	16	22	5	19
TOTAL	520	662	944	710	1233	830	781	535	775

*DMZ PLUS QUANG TRI PROVINCE.
**ARMY GROUND DATA FOR SVN IS COUNTRY-WIDE. I CTZ FROM III-MAF SOURCES, IV CTZ FROM 9TH DIV CASUALTIES; REMAINDER APPORTIONED BETWEEN II & III CTZ BY JCS OPREP.
***SVN HELICOPTER PLUS OFFSHORE, NVN, AND LAOS AREAS.

SOURCES: OASD(C), JCS, USA HQ, USMC HQ, BUPERS.

OASD/SA/SEA PROGRAMS DIV.
October 10, 1967

TABLE 2

US NONFATAL WOUNDED FROM HOSTILE ACTION
1967 HOSPITALIZED a/

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
DMZ b/									
Navy	2	3	17	17	51	11	39	8	42
USMC	66	117	545	440	1269	358	773	346	1015
Total	68	120	562	457	1320	369	812	354	1057
OTHER I CTZ									
Army	0	0	0	0	110	103	83	163	190
Navy	12	27	27	30	56	32	31	40	29
USMC	589	469	679	537	905	568	489	760	671
Total	610	496	706	567	1071	703	603	963	890
II CTZ									
Army	378	635	501	442	549	376	324	332	237
Navy	0	0	0	0	0	0	0	0	0
Total	378	635	501	442	549	376	324	332	237
III CTZ									
Army	746	738	1507	1028	1023	955	771	565	632
Navy	2	6	0	2	7	14	22	10	13
Total	748	744	1507	1030	1030	969	793	575	645
IV CTZ									
Army	0	0	0	79	345	130	254	128	220
Navy	3	2	4	4	3	2	3	0	6
Total	3	2	4	83	348	132	257	128	226
OTHER S. E. Asia c/									
Army	10	8	10	12	7	10	3	11	10
Navy	0	3	2	0	0	27	28	28	14
USAF	5	13	20	11	27	5	14	6	16
Total	15	24	32	23	34	42	45	45	40
S. E. Asia									
Army	1134	1381	2018	1561	2034	1574	1435	1199	1279
Navy	28	41	50	53	117	86	123	86	104
USMC	655	586	1224	977	2174	926	1262	1106	1686
USAF	5	13	20	11	27	5	14	6	16
Total	1822	2021	3312	2602	4352	2591	2834	2397	3085

a/ Regional data prorated using hospitalization rate for month and service.
b/ DMZ & Quang Tri Province
c/ SVN Air plus offshore, NVN, and Laos

Sources: OASD(C), Army HQ, BUPERS, USMC HQ.

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OASD/SA/SEA Programs Division
17 October 1967

TABLE 3

CONFIDENTIAL

US NONFATAL WOUNDED FROM HOSTILE ACTION
1967 NOT HOSPITALIZED a/

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
DMZ b/									
Navy	3	1	26	27	80	16	62	13	98
USMC	61	109	506	408	1178	415	717	322	1452
Total	64	110	532	435	1258	431	779	335	1550
Other I CTZ									
Army	0	0	0	0	93	87	71	138	161
Navy	33	45	41	49	87	51	48	63	69
USMC	647	436	630	500	840	529	454	706	967
Total	680	481	671	549	1020	667	573	907	1197
II CTZ									
Army	322	541	427	377	468	320	277	283	201
Navy	0	0	0	0	0	0	0	0	0
Total	322	541	427	377	468	320	277	283	201
III CTZ									
Army	635	628	1284	873	873	814	656	482	538
Navy	2	11	1	3	12	21	35	17	33
Total	637	639	1285	876	885	835	691	499	571
IV CTZ									
Army	0	0	0	68	293	110	216	109	187
Navy	6	4	7	6	6	3	5	0	16
Total	6	4	7	74	299	113	221	109	203
Other S. E. Asia									
Army	9	8	8	11	6	9	2	9	8
Navy	0	5	3	0	1	45	44	43	34
USAF	16	44	69	40	91	17	50	22	40
Total	25	57	80	51	98	71	96	44	82
S. E. Asia									
Army	966	1177	1719	1329	1733	1341	1222	1021	1105
Navy	44	66	78	85	186	136	194	136	250
USMC	608	545	1136	908	2018	861	1171	1028	2429
USAF	16	44	69	40	91	17	50	22	40
Total	1634	1832	3002	2362	4028	2355	2637	2207	3824

Comparative Casualty Rates - As would be expected Marine casualties along the DMZ are heavier than those experienced in other areas. Per 1000 strength, Marine casualties in the DMZ-Quang Tri area were 3 times as high as overall Marine casualties. However, when only personnel in maneuver battalions are considered, casualties were only 1 1/2 times as high:

Casualties per 100 Strength per Year a/

	All USMC			USMC Maneuver Battalions		
	Killed	Hosp.	Non-Hosp.	Killed	Hosp.	Non-Hosp.
DMZ-Quang Tri	137	527	482	164	576	532
All I CTZ	46	174	161	126	385	355
Ratio, DMZ/I CTZ	3.0	3.0	3.0	1.3	1.5	1.5

Overall Marine casualties per 1000 were, in turn, about 2 1/2 times the Army rate overall, and within maneuver battalions about 1 1/2 times the Army rate:

Casualties per 100 Strength per Year a/

	All Army			USMC Maneuver Battalions b/		
	Killed	Hosp.	Non-Hosp.	Killed	Hosp.	Non-Hosp.
Casualty Rate	19	67	57	82	279	237
Ratio, USMC/Army	2.4	2.6	2.8	1.5	1.4	1.5

The higher Marine casualty rate overall is not unexpected since the Army support slice is much larger (the Navy performs much of Marine's support function). The higher casualties rate for Marines in maneuver battalions compared to the Army is more interesting. The primary factor probably is the intensity of the combat operations near the DMZ.

a/ Data are for January-August 1967.
b/ Assumes that 90% of Army division casualties are in maneuver battalions.

June 68

US KIA IN SVN

In the May 1968 SEA Analysis Report we estimated US KIA for the remainder of 1968. We found that: (1) US KIA will total about 20,000 for 1968; by November the 1968 total will exceed that of all previous years combined; (2) US KIA during 1968 will surpass the 1967 total in late June; and (3) US KIA in SVN will exceed the Korean War total of 33,629 by December. This month we are investigating where US forces are killed.

Table 1 shows US KIA, by CTZ, for 1967 and 1968. Over the past 16 months, the enemy killed 50% of US KIA in I CTZ, 15% in II CTZ, 26% in III CTZ, 4% in IV CTZ, and 5% in the air or in an area for which the CTZ is unknown.

TABLE 1

US KIA IN SVN[a]

	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	Apr	Total
I CTZ							
US KIA	681	1559	1324	953	2519	824	7860
% of Total	32.2	56.3	63.3	40.0	52.0	58.5	50.3
II CTZ							
US KIA	506	446	239	533	477	121	2322
% of Total	23.9	16.1	11.4	22.3	9.8	8.6	14.9
III CTZ							
US KIA	704	615	348	688	1321	310	3986
% of Total	33.3	22.2	16.6	28.9	27.3	22.0	25.5
IV CTZ							
US KIA	65	52	77	84	308	84	670
% of Total	3.1	1.9	3.7	3.5	6.4	6.0	4.3
Countrywide[b]							
US KIA	2113	2770	2091	2384	4869	1409	15614

a/ Source: Table 53, CSD(C) SEA Statistical Summary.
b/ Does not equal the sum of the CTZ's because of some US KIA in the air, or for which the CTZ is unknown.

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Table 2 shows that the massive movement of US combat units to I CTZ may account for the large number of deaths there this year. In fact, losses in I CTZ per battalion are not increasing as fast as those in the rest of the country: I CTZ losses per battalion this year increased 34% over 1967 (from 12.2 KIA per battalion per month to 16.3), while losses per battalion elsewhere doubled (from 7.0 KIA per battalion to 14.3). Our conclusion is subject to an unknown degree of error, however, since the number of battalions is only a rough measure of relative combat exposure, and since our figures include losses to units other than maneuver battalions.

Table 3 and the shaded map show US KIA by province from 4th quarter 1966 through 1st quarter 1968. Table 3 shows the sum of US KIA in friendly initiated large unit (battalion or larger) ground operations and US KIA in enemy initiated incidents. The table accounts for only 73% of the US KIA in SVN because it does not include US KIA in friendly small unit actions, in the air, or for which a province is not designated. In addition, the computer files used (GUAVA and VCIIA) are not always updated to include US died of wounds or to incorporate revised reports on earlier actions; therefore they often do not include corrected reports of the actions contained in the files.

Eight provinces during the period reported 74% of the US KIA in Table 3. Quang Tri (21.6%) and Quang Nam (12.0%) in I CTZ have been the provinces with the most US KIA during the period from 4th quarter 1966 through 1st quarter 1968. Other provinces with a high percentage of US KIA are Kontum (7.4%) and Binh Dinh (7.3%) in II CTZ; and Binh Duong (7.5%), Tay Ninh (7.1%), Hau Nghia (6.3%), and Long An (5.0%) in III CTZ. As shown on the map, the northern third of SVN has accounted for 60% of US KIA and the Saigon area (just the shaded provinces) has accounted for 36%. The two areas together have accounted for about 96% of US KIA.

Table 4 shows that 65% of US KIA attributable to provinces have been killed in provinces bordering Laos or Cambodia. Since all of I CTZ borders Laos except Quang Ngai Province, it is reasonable that 93% of I CTZ KIA has been in border provinces. In IV CTZ most of our operations have been in Dinh Tuong, so only 3% of US KIA has been on the border. Although both II and III Corps approach 50% US KIA in border provinces for the entire period, we find significant variations when the data is examined by quarter. For II Corps a peak of 62% is reached for the 4th quarter 1967 and 1st quarter of 1968. This is an increase of 14% over an average of 48% for the four preceding quarters. We believe that this increase results from the enemy attempt to lure US units to the Vietnamese frontiers and the US strategy to stop the VC/NVA at the frontiers. In III Corps, highs of over 50% US KIA in border provinces are reached during both 1st and 4th quarters reported versus a low of about 30% during the 2nd and 3rd quarters of 1967. The III Corps US KIA cycle probably results from more active VC and US campaigning in the border provinces during the dry season. Here again, US forces moved to the frontier to stop VC/NVA forces.

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TABLE 3

US KIA PER BATTALION PER MONTH a/

	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total	1968 Jan	Feb	Mar	1st Qtr
I CTZ									
US KIA	681	1559	1324	953	4517	586	1109	824	2519
Bn Months	60	92	101	117	370	45	55	55	155
US KIA per Bn per Mo.	11.4	16.9	13.1	8.1	12.2	13.0	20.2	15.0	16.3
II CTZ									
US KIA	506	446	239	533	1724	129	168	180	477
Bn Months	66	57	59	68	250	17	16	17	50
US KIA per Bn per Mo.	7.7	7.8	4.1	7.8	6.9	7.6	10.5	10.6	9.5
III CTZ									
US KIA	704	615	348	688	2355	379	598	344	1321
Bn Months	120	93	88	99	400	37	34	34	105
US KIA per Bn per Mo.	5.9	6.6	4.0	6.9	5.9	10.2	17.6	10.1	12.6
IV CTZ									
US KIA	65	52	77	84	278	67	158	83	308
Bn Months	0	10	12	4	26	3	3	3	9
US KIA per Bn per Mo.	--	5.2	6.4	21.0	10.7	22.3	52.7	27.7	34.2
Countrywide									
US KIA b/	2113	2770	2091	2384	9358	1202	2124	1543	4869
Bn Months	246	252	260	288	1046	102	108	109	319
US KIA per Bn per Mo.	8.6	11.0	8.0	8.3	8.9	11.8	19.7	14.2	15.3

a/ Source: Table 53, OSD(C) Statistical Summary, for US KIA
Table 106, OSD(C) Statistical Summary, for number of battalions by CTZ.

b/ Does not equal the sum of the CTZ's because of some US KIA in the air, or for which the CTZ in unknown.

TABLE 3

US KIA IN LARGE OPERATIONS AND FROM ENEMY INITIATED INCIDENTS[a]

	1966 4th Qtr	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	Total	% of Countrywide Total
Quang Tri	91	181	470	427	266	994	2431	21.6
Thua Thien	12	44	58	55	43	111	323	2.9
Quang Nam	53	72	340	219	303	360	1347	12.0
Quang Tin	9	11	19	100	82	5	226	2.0
Quang Ngai	14	83	137	32	10	63	339	3.0
Total	179	391	1024	833	706	1533	4666	41.5
Kontum	12	14	180	82	348	195	831	7.4
Binh Dinh	122	202	157	105	135	98	819	7.3
Pleiku	139	172	36	22	4	16	389	3.5
Phu Yen	34	13	6	4	19	28	104	1.0
Darlac	0	0	0	0	1	2	3	0
Khanh Hoa	0	0	0	1	3	0	4	0
Tuyen Duc	2	0	0	0	0	1	3	0
Lam Dong	0	16	8	0	29	2	55	.5
Binh Thuan	2	7	13	10	11	22	65	.6
Phu Bon	0	0	0	0	0	0	0	0
Ninh Thuan	1	0	0	0	3	0	4	0
Quang Duc	0	0	0	0	0	3	3	0
Total	312	424	400	224	553	367	2280	20.3
Phuoc Long	0	0	50	0	11	25	86	.8
Binh Tuy	3	1	0	0	4	0	8	.1
Long Khanh	13	17	43	50	13	24	160	1.4
Binh Long	74	6	1	17	42	11	151	1.4
Tay Ninh	62	321	70	12	213	122	800	7.1
Binh Duong	68	161	111	130	208	158	836	7.5
Gia Dinh	14	72	25	19	41	47	218	1.9
Bien Hoa	29	19	36	53	81	66	284	2.5
Phuoc Tuy	0	1	2	7	5	0	15	.1
Long An	15	67	172	48	66	197	565	5.0
Hau Nghia	27	17	77	57	102	442	702	6.3
Total	305	682	587	393	786	1072	3825	34.1

a/ Source: GUAVA and VCITA Computer Files.

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TABLE 3
(Cont'd)

	1966 4th Qtr	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	Total	% of Countrywide Total
Dinh Tuong	0	45	32	59	74	112	322	2.9
An Giang	0	0	0	5	0	0	5	0
Vinh Long	0	1	0	1	2	16	20	.2
Kien Hoa	0	2	4	11	0	16	33	.3
Vinh Binh	1	0	3	1	2	1	8	.1
Phong Dinh	0	0	0	0	0	47	47	.4
An Xuyen	0	0	0	0	0	0	0	0
Chau Doc	0	0	0	1	4	1	6	.1
Sa Dec	0	0	0	0	0	0	0	0
Kien Tuong	0	0	1	0	0	0	1	0
Go Cong	0	0	0	0	0	0	0	0
Kien Phong	0	0	0	1	0	2	3	0
Kien Giang	0	0	0	0	4	0	4	0
Chuong Thien	0	0	0	0	0	3	3	0
Ba Xuyen	0	0	0	3	4	1	8	.1
Bac Lieu	0	0	1	0	0	0	1	0
Total	1	48	41	82	90	199	461	4.1
Countryside Total	797	1545	2052	1532	2135	3171	11232	
Official Total b/	1243	2113	2770	2091	2384	4869	15470	
% of Official Total	64.1	73.1	74.1	73.3	89.6	65.1	72.6	

b/ Source: Table 2, OSD(C) SEA Statistical Summary.

PERCENTAGE DISTRIBUTION OF US KIA ATTRIBUTABLE TO PROVINCES

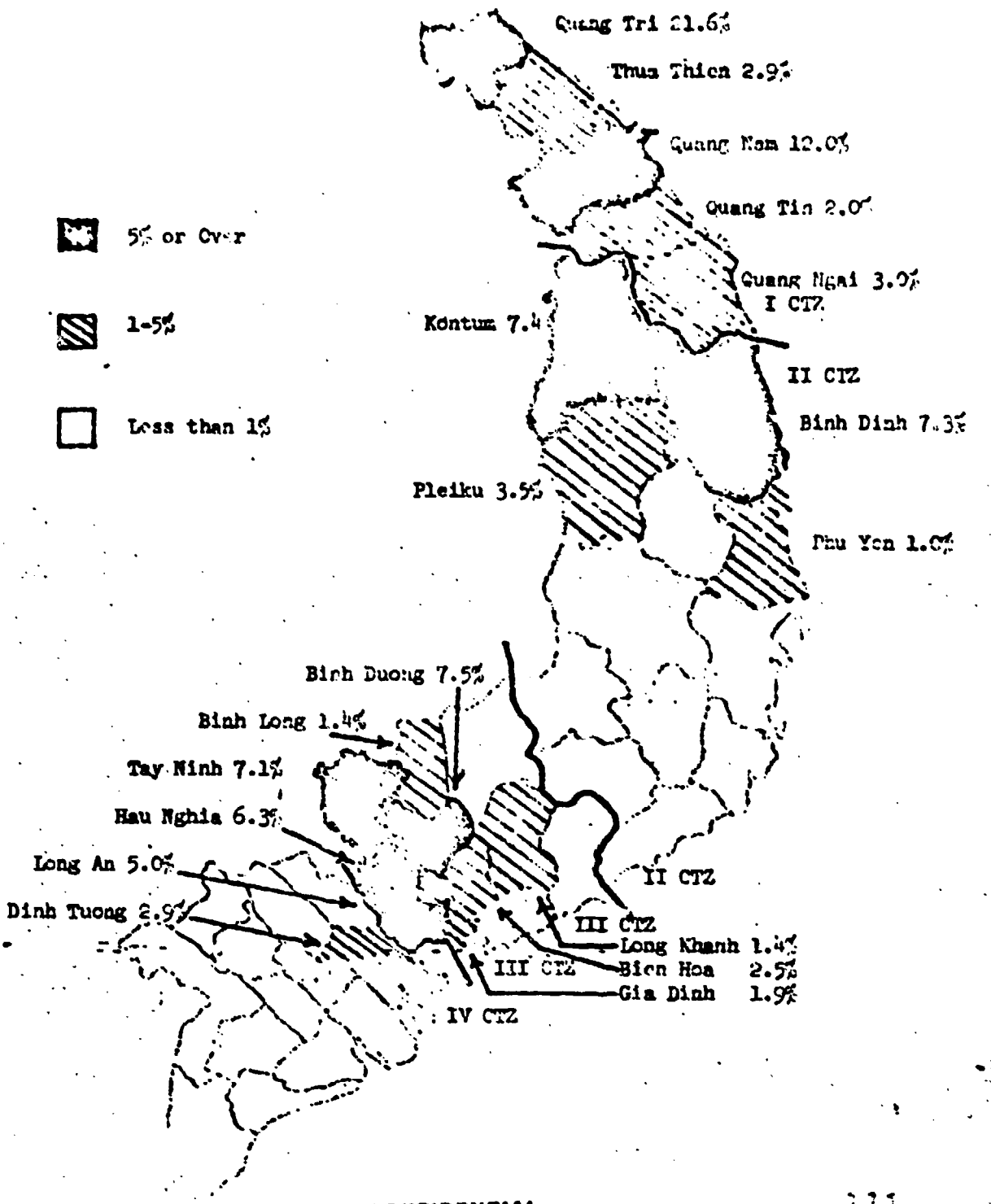

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TABLE 4

US KIA IN BORDER PROVINCES

	1966 4th Qtr	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	Total	%
I CTZ								
Border Provinces	165	308	807	801	696	1470	4307	92.7
Other Provinces	14	83	137	32	10	63	339	7.3
Total	179	391	1024	833	706	1533	4646	
II CTZ								
Border Provinces	151	186	216	104	353	216	1226	53.8
Other Provinces	161	238	184	120	200	151	1054	46.2
Total	312	424	400	224	553	367	2280	
III CTZ								
Border Provinces	163	344	198	86	368	580	1739	45.5
Other Provinces	142	338	389	307	418	492	2086	54.5
Total	305	682	587	393	786	1072	3825	
IV CTZ								
Border Provinces	0	0	1	2	8	3	14	3.0
Other Provinces	1	46	40	80	82	196	447	97.0
Total	1	46	41	82	90	199	461	
Countrywide								
Border Provinces	479	838	1302	993	1425	2269	7306	65.0
Other Provinces	318	707	750	539	710	902	3926	35.0
Total	797	1545	2052	1532	2135	3171	11232	

a/ Source: GUAVA and VCIIA Computer Files.

ARMY AND MARINE KIA

Earlier SEA Analysis Report articles examined US combat deaths (KIA) relative to command experience, location in-country, and level of RVNAF casualties. This study estimates the distributions of Army and Marines KIA according to force component, cause of casualties, and (for the Marines only), type of engagement.[1]

Some of the main points are:

1. From January 1967 through September 1968, 82% of Army and Marines KIA were sustained by personnel in maneuver battalions.

2. Maneuver battalion personnel averaged about 15 times the KIA rate of other forces (109 vs 7 per 1000 men per year).

3. Marine KIA rates for both maneuver battalions and other forces are significantly higher than Army rates (130 vs 100 for maneuver battalions, 16 vs 5.5 for other forces), due to the USMC location in I CTZ, not tactics or equipment.

4. The KIA rate for all Army and Marine forces in Vietnam rose to 46 during the Tet offensive (first quarter of 1968) compared to a Jan 1967-Sep 1968 average of 31, and an Army rate during the Korean War of 45.

5. During the first half of 1968 the highest KIA rates for both maneuver battalion personnel and other forces were experienced in IV CTZ (239 and 31).

6. On the average, for each Marine KIA occurring in a VC/NVA initiated incident, 2.0 occurred on a US operation and 1.5 occurred on a US patrol.

7. Approximately 50% of Army and Marine KIA result from gunshot wounds. During the October lull this percentage fell to under 30.

Distribution by Force Component

Table 1 indicates that over the long-run, 82% of Army KIA and 31% of Marine KIA, have occurred in maneuver battalions. This is close to the 80% approximation used to estimate maneuver battalion casualties in some

1/ A sample of 3628 Army and Marines KIA was selected at random from the total of 20,891 KIA sustained by the two Services between Jan 1, 1967 and Sep 30, 1968. A maximum probable error of less than 5% is associated with all quarterly estimates, while estimates spanning the entire seven quarter period have maximum errors of less than 2%. A 95% level of significance has been used throughout the study for computing maximum errors and for testing hypotheses.

previous analyses. However, some distortion would be introduced in applying this figure to monthly or quarterly data. Table 1 also shows that 92% of the KIA in major Army units (divisions and separate brigades) containing maneuver battalions occur in the battalions. In this instance, the Marine percentage is not comparable because the major units reported are regiments and 99% of the personnel are in maneuver battalions.

TABLE 1

PERCENTAGE OF KIA IN MANEUVER BATTALIONS[a]
(Jan 67 - Sep 68)

	1967				1968			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Jan 67-Sep 68
Of Major Units w/Maneuver Bns.								
Army	93.1	95.3	95.7	91.2	89.1	88.0	92.8	92.2
Marines	89.8	99.1	99.5	99.3	99.9	98.7	98.9	99.2
Of All Forces								
Army	86.7	89.3	81.8	83.3	78.8	78.9	80.6	82.8
Marines	81.7	86.6	81.4	80.2	74.9	83.6	73.8	80.7

a/ Includes attached cavalry units (Army) and battalion landing teams (Marines).

SOURCE: DOD Forms 1300.

KIA Rates

KIA rates by type unit are shown in Table 2. Overall rates from this table are also plotted on Graph 1 to facilitate comparison. On the average, maneuver battalions sustained KIA at about 15 times the rate experienced by other units. The impact of the Tet offensive is apparent in the sharp rise in KIA rates during the first quarter of 1968. Although the maneuver battalions KIA rate showed a much larger absolute increase over the preceding quarter (+59.6 against +8.0 for other units), the percentage increase in the rate was about twice as great for non-maneuver battalions (+143% against +67%). This implies that a relatively greater share of the impact of the Tet offensive was felt by support units, and may indicate the shifts in KIA rates to be expected during periods when hostile forces are on the offensive.

TABLE 2

KIA RATE BY FORCE COMPONENT, Jan 67 - Sep 68
(Annual Rate Per 1000 Average Strength)[a]

	1967				1968			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Jan 67-Sep 68
Maneuver Bns[b]								
Army	103.9	95.2	55.8	92.2	147.3	123.8	79.7	99.9
Marines	85.8	175.0	133.2	78.6	148.9	188.3	102.1	130.2
Overall	97.9	106.1	79.9	88.2	147.8	141.9	85.3	108.9
Non-Maneuver Bns								
Army	3.9	2.8	2.9	4.7	10.5	9.3	5.3	5.5
Marines	9.0	12.4	14.0	17.9	29.0	15.6	17.3	15.9
Overall	4.7	4.8	5.0	5.6	13.6	10.4	7.3	7.3
All Forces								
Army	25.8	20.9	12.9	22.3	39.3	34.5	21.3	25.2
Marines	33.6	63.3	51.6	33.1	73.1	76.0	47.7	54.5
Overall	25.1	30.2	21.1	24.4	46.1	42.7	26.4	31.3

a/ Operating strength only.
b/ Includes attached cavalry units (Army) and battalion landing teams (Marines).
SOURCES: OSD Directorate for Statistical Services, DOD Forms 1300, MACV Strength Report, Army Build-up Progress Report.

It is interesting to note that these rates are somewhat lower than the overall Army KIA rates from previous conflicts. The WW II data includes personnel in the Army Air Corps which tends to lower the KIA rate.

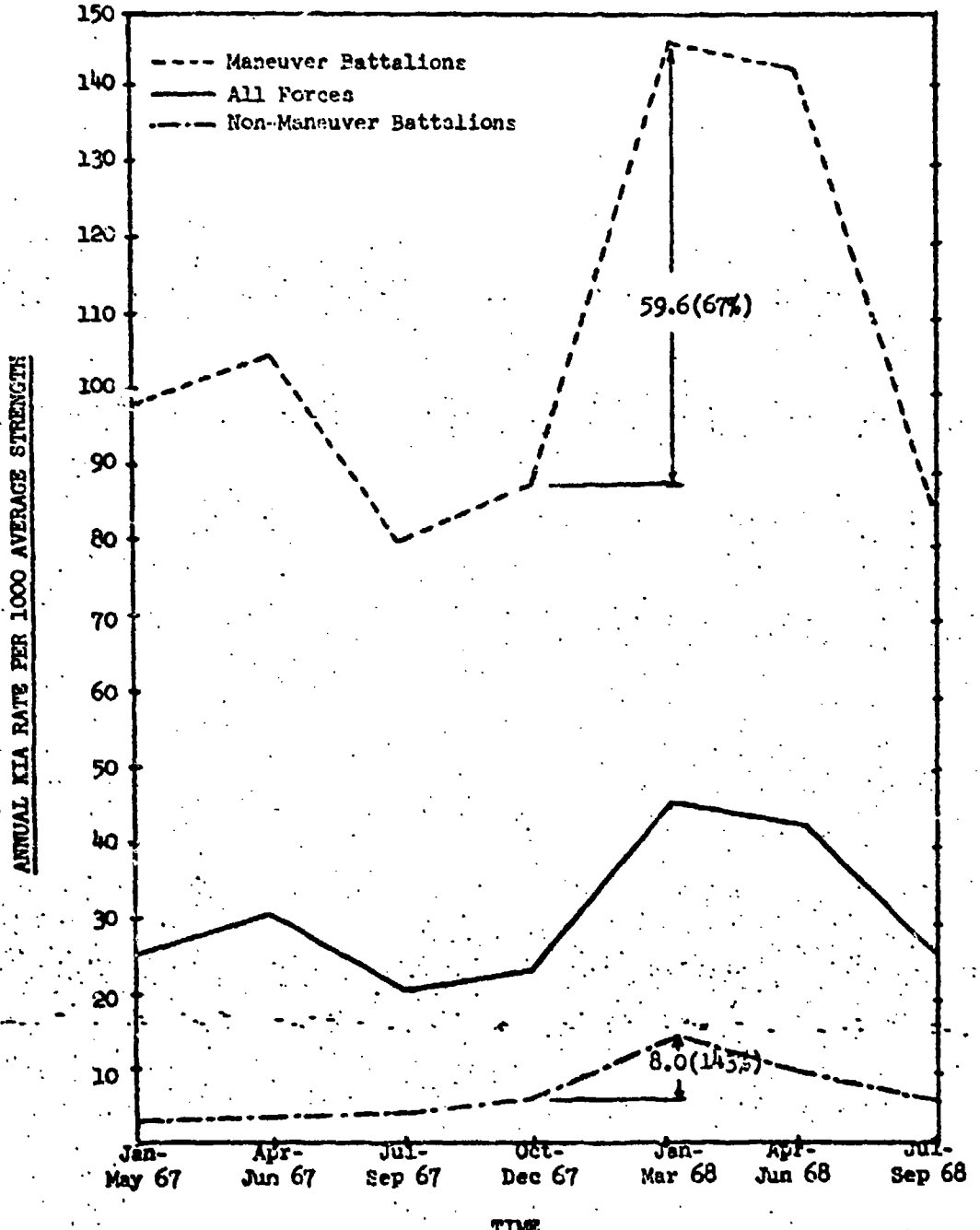
World War II

All theaters[a]	37.4
European theater only[b]	51.9
Korean War[c]	45.1

a/ Based on strength and casualties in the European theater of operations (Jun 44 - May 45), the Mediterranean theater (Nov 42 - May 45) and the Pacific (Apr 42 - Aug 45).
b/ European theater including Air Corps (Jun 44 - May 45).
c/ Jul 50 - Jul 53.

GRAPH 1

ARMY AND MARINE KIA RATES BY COMPONENT



The significantly higher Marine KIA rates appear to be the result of their location in I CTZ, not their tactics or equipment. The higher tempo of combat activity in I CTZ is demonstrated by the comparable Army maneuver battalion KIA in that Corps area during the first half of 1968, as shown by Table 3. A second factor which raises the overall Marine rate is the relatively larger proportion of Marine strength in maneuver battalions (33.8% against 29.0% for the Army). Much of the Marine's logistical support is provided by Navy personnel.

Table 3 also shows that during the first half of 1968 the highest KIA rates in SVN, for both maneuver battalions and other forces, were experienced in IV CTZ. For example, the first quarter maneuver battalion KIA rate in IV CTZ (311.5) exceeds the next highest rate experienced in a Corps area by a factor of two-thirds. Table 4 compares casualty rates for other units and all forces.

TABLE 3

KIA RATE IN MANEUVER BATTALIONS BY CTZ- Jan-Jun 68
(Annual Rate Per 1000 Average Strength)

	Jan-Mar 1968	Apr-Jun 1968
I CTZ		
Overall	170.5	165.4
Army	(186.7)	(158.1)
Marine	(159.9)	(172.0)
II CTZ	102.9	93.4
III CTZ	138.8	113.5
IV CTZ	311.5	179.6
Countrywide	147.8	140.8

SOURCE: OSD Directorate for Stat Services; DOD Forms 1300; MACV Strength Report.

TABLE 4

KIA RATES BY CTZ - Jan-Jun 68
(Annual Rate Per 1000 Average Strength)

	Units other than Maneuver Battalions		All Forces	
	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr
I CTZ	21.3	19.8	78.5	72.3
Army	(19.7)	(14.3)	(86.1)	(67.9)
Marines	(22.1)	(22.1)	(72.8)	(74.5)
II CTZ	5.7	5.1	18.2	16.4
III CTZ	7.2	6.1	33.9	28.4
IV CTZ	40.4	23.7	114.5	67.0
Countrywide	13.6	10.5	46.1	42.3

SOURCE: DOD Forms 1300 for KIA data and MACV Strength Report for strength data.

Distribution by Engagement

Table 5 shows the breakdown of Marine KIA between hostile caused aircraft crashes, and ground engagements.

TABLE 5

PERCENTAGE OF MARINE KIA: AIR VS GROUND

	1967				1968				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	1-20 Oct	Jan 1 67-Oct 20 68
Aircraft	1.0	1.6	3.0	2.2	7.2	3.0	7.1	12.3	4.0
Ground	99.0	98.4	97.0	97.8	92.8	97.0	92.9	87.7	96.0

The distribution of reported Marine KIA occurring on the ground is shown by type of engagement in Table 6, and plotted on Graphs 2-4. A description of the type of activity in which the casualty was engaged is usually included in Marine KIA reports. If a US operation was mentioned, the KIA was placed in that engagement category. If the report stated "while on patrol" with no further information, it was assumed to be a patrol. In cases where the VC/NVA forces clearly had the initiative (e.g., attacks on "defensive positions," ambushes, our troops were in the base camp or on a resupply mission) the engagement was assumed to be VC/NVA initiated.

TABLE 6

PERCENTAGE OF MARINE GROUND KIA BY ENGAGEMENT[a/]
(Jan 1 67 - Oct 20 68)

	1967				1968				
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	1-20 Oct	Jan 1 67-Oct 20 68
US Operations	53.0	67.7	51.6	45.8	23.4	40.8	26.5	34.1	44.6
US Patrol	31.3	20.0	24.2	30.1	45.0	37.5	43.9	43.9	32.8
VC/NVA Initiated[b/]	15.7	12.3	24.2	24.1	31.6	21.7	29.6	22.0	22.6

a/ Insufficient information precluded identification of the engagement for 14.3% of Marine ground KIA

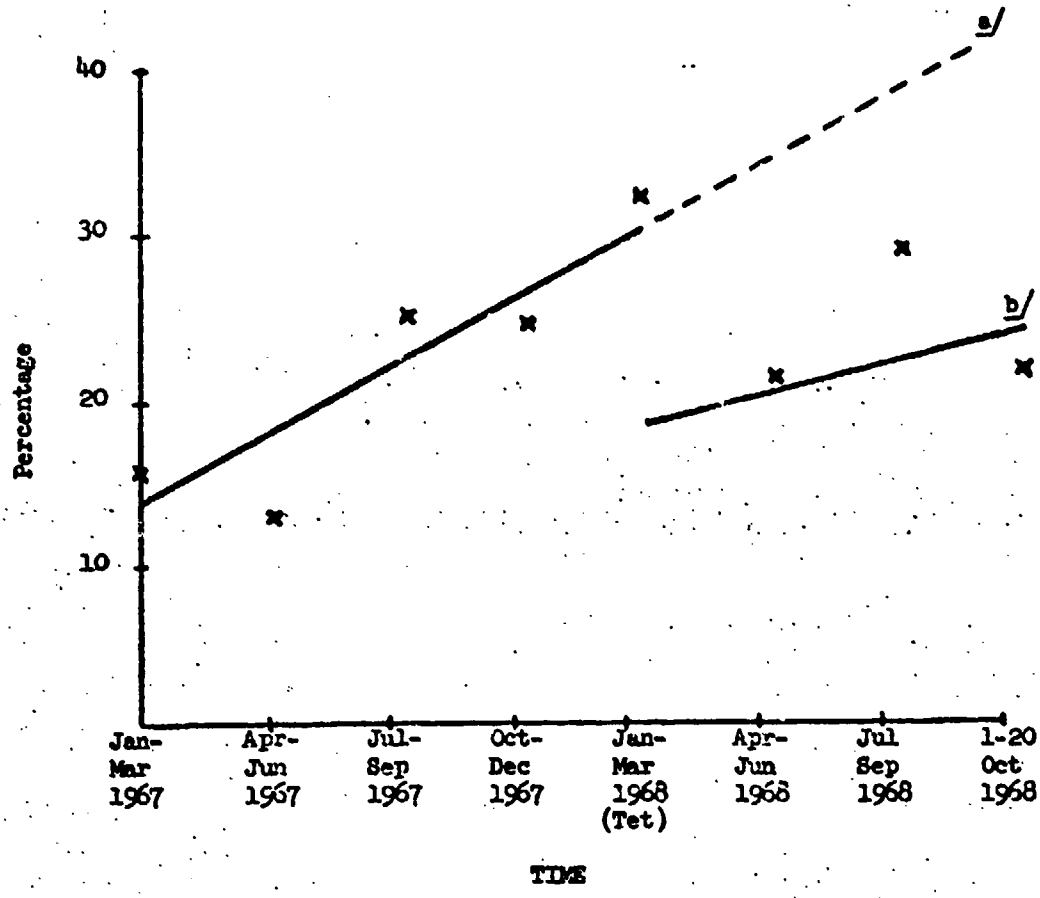
b/ Includes all Marine KIA sustained while in a "defensive position," base camp, on a resupply mission, or like situations where hostile initiative is clear.

SOURCE: DOD Form 1300

Over the Jan 67-Sep 68 period, an average of 2.0 KIAs have occurred on US operations, and 1.5 on US patrols, for each occurring in a VC/NVA initiated incident. The seven-quarter trend has been markedly downward for operations (-4.7% per quarter), and upward for patrols (+3.1%), as indicated in Graphs 3 and 4. In Graph 2, the regression line has been fitted to the pre-Tet data only, and shows that the share of Marine KIA resulting for VC/NVA initiated incidents was increasing at an average quarterly rate of 4.4% through Mar 68. Although the two post-Tet quarters are not significantly lower in a strict statistical sense, there is nonetheless a strong indication that the percentage has, in fact, fallen off since Tet. This is further suggested by the October data which is not, however, conclusive since only three weeks are covered. A final indication of a change in the trend after Tet is the relatively low correlation association with a regression line fitted to the entire period (.55 compared to .89 for the pre-Tet data alone).

The percentage of Marine KIA attributed to VC/NVA initiative in Table 6 no doubt understates the true percentage for this category since some of the combat deaths sustained on US operations and patrols through combat initiated by the enemy cannot be identified as such from individual KIA reports.

GRAPH 2
PERCENTAGE OF MARINE KIA FROM
VC/NVA INITIATED INCIDENTS



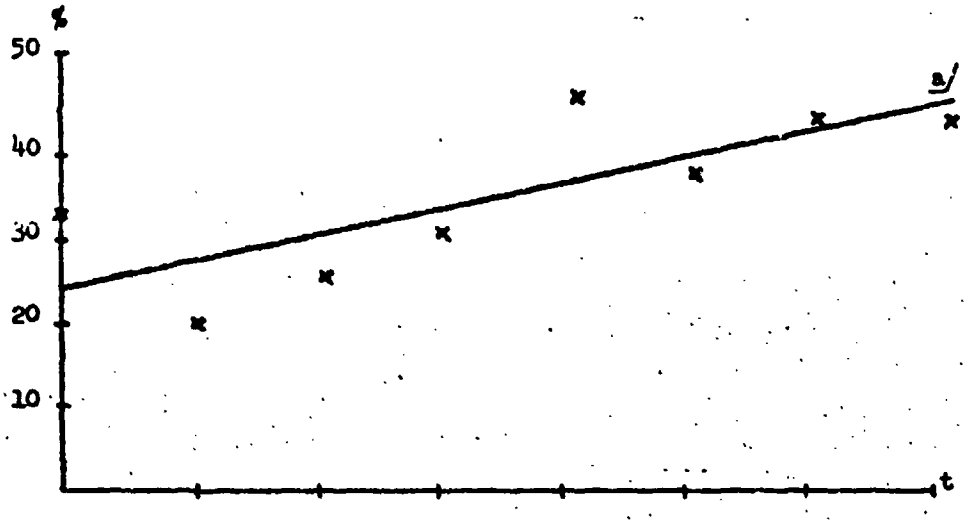
SOURCE: DOD Forms 1300

a/ % = 12.9 + 4.4 t
Correlation coefficient = 0.89

b/ Lower limit (at 95% significance) of forecast projected from pre-Tet trend.

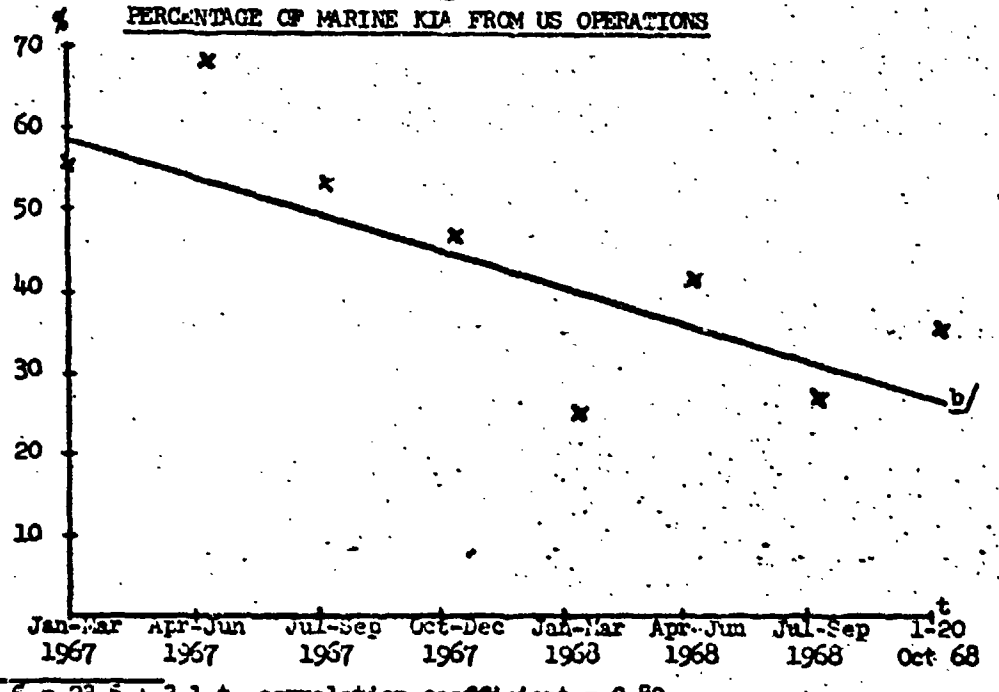
GRAPH 3

PERCENTAGE OF MARINE KIA FROM US PATROLS



GRAPH 4

PERCENTAGE OF MARINE KIA FROM US OPERATIONS



a/ $\% = 23.5 + 3.1\ t$, correlation coefficient = 0.80
b/ $\% = 59.2 - 4.7\ t$, correlation coefficient = 0.77
SOURCE: DOD Form 1300

Distribution by Weapon Cause

Distribution of KIA by weapon cause is shown in Table 7. The weapon causing the death was not reported for 22.3% of the Army KIA; however, there is no reason to suspect that the distribution of unreported KIA differs significantly from that observed for the reported segment. Various hostile weapons inflict about the same share of KIA on both Army and Marines, with the single exception of artillery. Here the Marine average of 4.7%, which reached peaks of 14.3% and 9.9% in the last two quarters of 1967, is over six times greater than the 0.7% experienced by the Army.

TABLE 7

PERCENTAGE OF GROUND KIA BY WEAPON CAUSE[a/]
(Jan 67 - Sep 68)

	Army	Marine	Overall
Small arms	50.3	47.4	48.7
Mine/booby trap	24.6	22.9	23.7
Rocket/mortar	17.3	17.4	17.4
Grenade	2.0	3.5	2.8
Artillery	0.7	4.7	2.9
Friendly	5.1	4.0	4.5

a/ Insufficient information precluded identification of the weapon cause for 22.3% of Army ground KIA.

Tables 8 and 9 show some significant shifts in the relative share of KIA caused by various hostile weapons during the October 1968 combat lull. Destroyed aircraft played a larger role in October. On the ground, the share of deaths caused by small arms dropped by half, while artillery fell to almost zero. Corresponding increases occurred in the mine/booby trap category, and, to a much lesser extent, rockets/mortars. None of these trends are visible in the data from the previous quarter, so this may reflect the general KIA pattern associated with a period of low combat activity.

TABLE 8

PERCENTAGE OF ARMY AND MARINE KIA: AIR VS GROUND

	Jan 67-Jun 68	Jul-Sep 68	Oct 1-20,68
Hostile action against aircraft	4.2	6.0	12.9
Hostile ground engagements	96.8	94.0	87.1

TABLE 9

PERCENTAGE OF GROUND KIA BY WEAPON CAUSE

	Jan 67-Jun 68	Jul-Sep 68	Oct 1-20 68
Small arms	49.0	46.4	27.8
Mine/booby trap	23.7	23.6	40.2
Rocket/mortar	17.3	17.8	23.1
Grenade	2.9	2.4	3.0
Artillery	2.9	2.4	-
Friendly	4.2	7.4	5.9

WHERE US COMBAT DEATHS OCCUR IN VIETNAM

Summary. US KIA in Vietnam will probably exceed the Korean War total of 33,629 sometime in April, perhaps sooner if the enemy sustains the high intensity fighting of the post-Tet 1969 period. Over the past two years, there has been remarkably little change in the provinces where significant US combat deaths occur. I CTZ has accounted for 53% of US combat deaths and the two I CTZ provinces of Quang Tri and Quang Nam[1] have accounted for over a third of all US KIA. During 4th quarter 1968, the proportion of US combat deaths shifted south and went up in the III and IV CTZ provinces around Saigon, indicating a shift of enemy interest to that area.

As of February 22, US combat deaths stood at 31,923 only 1,706 short of the Korean War total of 33,629. Since US KIA has been running at 800 per month, the Korean War total should be exceeded by the first of May. However, if the enemy can sustain the intensity of the early days of his post-Tet 1969 offensive, US KIA rates may double and the Korean War total would be surpassed by April 1.

In the June 1968 Analysis Report, we investigated where US combat deaths occurred in South Vietnam, using incomplete data from the CUAVA and VCIIA computer files. Since that time, the file on US KIA maintained by OASD (Comptroller) Statistical Services has become operational and we are now in a position to make a more accurate analysis of the location of American combat deaths in Vietnam.

Table 1 shows US KIA by CTZ for 1967 and 1968. During the two year period, 53% of the US combat deaths occurred in I CTZ, 27% in III CTZ, 14% in II CTZ, and 5% in IV CTZ. While the same relative ordering of the CTZ's has persisted through most of the two year period, II CTZ took relatively more KIA in 1967. Moreover, the last quarter of 1968 showed a shift in emphasis to the southern half of the country as US combat deaths increased in the III and IV CTZ provinces surrounding Saigon while declining in I and II CTZ; nearly half (47.6%) of the US KIA occurred in III and IV CTZ's and both CTZ had their highest percentages of total US KIA for the two year period.

Table 2 compares the number of US maneuver battalions with US KIA by CTZ. Although we know on the average that 83% of combat deaths occur in maneuver battalions, combat deaths are not distributed among the CTZ's in the same proportion as the battalions.[2] In 1967 38% of the maneuver battalions were located in III CTZ, yet III CTZ accounted for only 27% of US KIA. Likewise, in 1968 15% of the maneuver battalions operated in II CTZ but that CTZ accounted for only 10% of US KIA.

1/ Quang Tri borders DMZ; Quang Nam contains Danang.
2/ For a detailed discussion of combat deaths in maneuver and non-maneuver battalions see "Army and Marine KIA," SEA Analysis Report, November 1968, page 20.

TABLE 1

US COMBAT DEATHS IN S/W BY CTZ

	67-68 Total	1967 Total	1968 Total	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
I CTZ											
US KIA	12732	4642	8090	684	1604	1343	1011	2646	2892	1675	877
% of Total	53.4	49.8	55.7	32.5	58.0	65.1	42.4	54.7	61.4	57.0	42.9
II CTZ											
US KIA	3215	1786	1429	530	427	271	558	512	447	300	170
% of Total	13.5	19.2	9.8	25.2	15.4	13.1	23.5	10.6	9.5	10.2	8.3
III CTZ											
US KIA	6539	2475	4064	773	647	367	688	1340	1102	810	812
% of Total	27.4	26.6	28.0	36.7	23.4	17.8	29.0	27.7	23.4	27.5	39.7
IV CTZ											
US KIA	1155	276	879	56	58	69	93	326	250	142	161
% of Total	4.8	3.0	6.0	2.7	2.1	3.3	3.9	6.7	5.3	4.8	7.9
CTZ Unknown	210	135	75	61	30	15	29	16	20	14	25
% of Total	.9	1.4	.5	2.9	1.1	.7	1.2	.3	.4	.5	1.2
Countrywide	23851	9314	14537	2104	2766	2070	2374	4840	4711	2941	2045

Source: OASD(Comptroller) Statistical Services US KIA computer file.

TABLE 2

US KIA AND MANEUVER BATTALION DEPLOYMENT
(Monthly Average)

	1967 KIA	%	1968 KIA	%	1967 1st Qtr	1967 2nd Qtr	1967 3rd Qtr	1967 4th Qtr	1968 1st Qtr	1968 2nd Qtr	1968 3rd Qtr	1968 4th Qtr a/
I CTZ												
US KIA	387	49.8	674	55.7	228	535	449	335	882	964	558	292
Maneuver Bns.	30.8	35.4	53.5	48.1	20	30.6	33.6	39	51.6	55.3	58	49
II CTZ												
US KIA	149	19.2	119	9.8	177	142	90	186	171	149	100	57
Maneuver Bns.	20.8	24.0	17.0	15.3	22	19	19.6	22.6	16.6	18	16.6	17
III CTZ												
US KIA	206	26.6	339	28.0	258	216	122	229	447	367	270	271
Maneuver Bns.	33.3	38.1	36.3	32.7	40	31	29.3	33	35	35.3	35.0	39.6
IV CTZ												
US KIA	23	3.0	73	6.0	19	19	23	31	109	83	47	54
Maneuver Bns.	2.2	2.5	4.3	3.9	-	3.3	4	1.3	3	3.6	4.0	6.3
Countrywide b/												
US KIA	776	-	1211	-	701	922	690	791	1613	1570	950	682
Maneuver Bns.	87.5	-	1111	-	82	84	86.6	96	106.3	112	114	112

Source: OSD (Comptroller) US KIA File.
SEA Statistical Summary - Table 106.

a/ 4th quarter 1968 figures are tentative for maneuver battalions.

b/ CTZ data do not add to countrywide because the location of some KIA are unknown or in the air.

The discrepancies are not surprising because the presence of a US unit is a necessary but not a sufficient condition for US combat deaths to occur. This is only another way of saying that in Vietnam the intensity of combat is heavily dependent upon the actions of the enemy.

Table 3 and the four shaded maps show total US KIA by province for 1967 and 1968. Nine of Vietnam's 44 provinces account for 74% of all US combat deaths in 1967-68 (Map 1). Quang Tri and Quang Nam, both in I CTZ, have accounted for over one-third (34%) of all US KIA during the two year period and have reported the most KIA in both 1967 and 1968. At the other end of the spectrum, the IV CTZ provinces of Bac Lieu, An Giang, and An Xuyen are the provinces where the fewest American lives have been lost. The low rates probably stem as much from the relative absence of US operations in these provinces as from security conditions; An Giang is one of the most secure areas in South Vietnam, but An Xuyen and Bac Lieu are provinces with low security ratings.

.126

The areas where US KIA occur have remained almost constant over the last two years. From Maps 2 and 3, we find 17 provinces showing significant US KIA in 1967 and 1968.1/ Sixteen of these provinces are significant in both years and account for over 90% of combat deaths.

The concentration of US KIA has also remained unchanged except for the top provinces. The four most significant provinces2/ accounted for 46.5% in 1967 and 54.5% in 1968. The increased concentration at the top can be attributed to the very heavy increase in I CTZ action during the first half of 1968, including large numbers of combat deaths at Khe Sanh, Hue and in the May offensive.

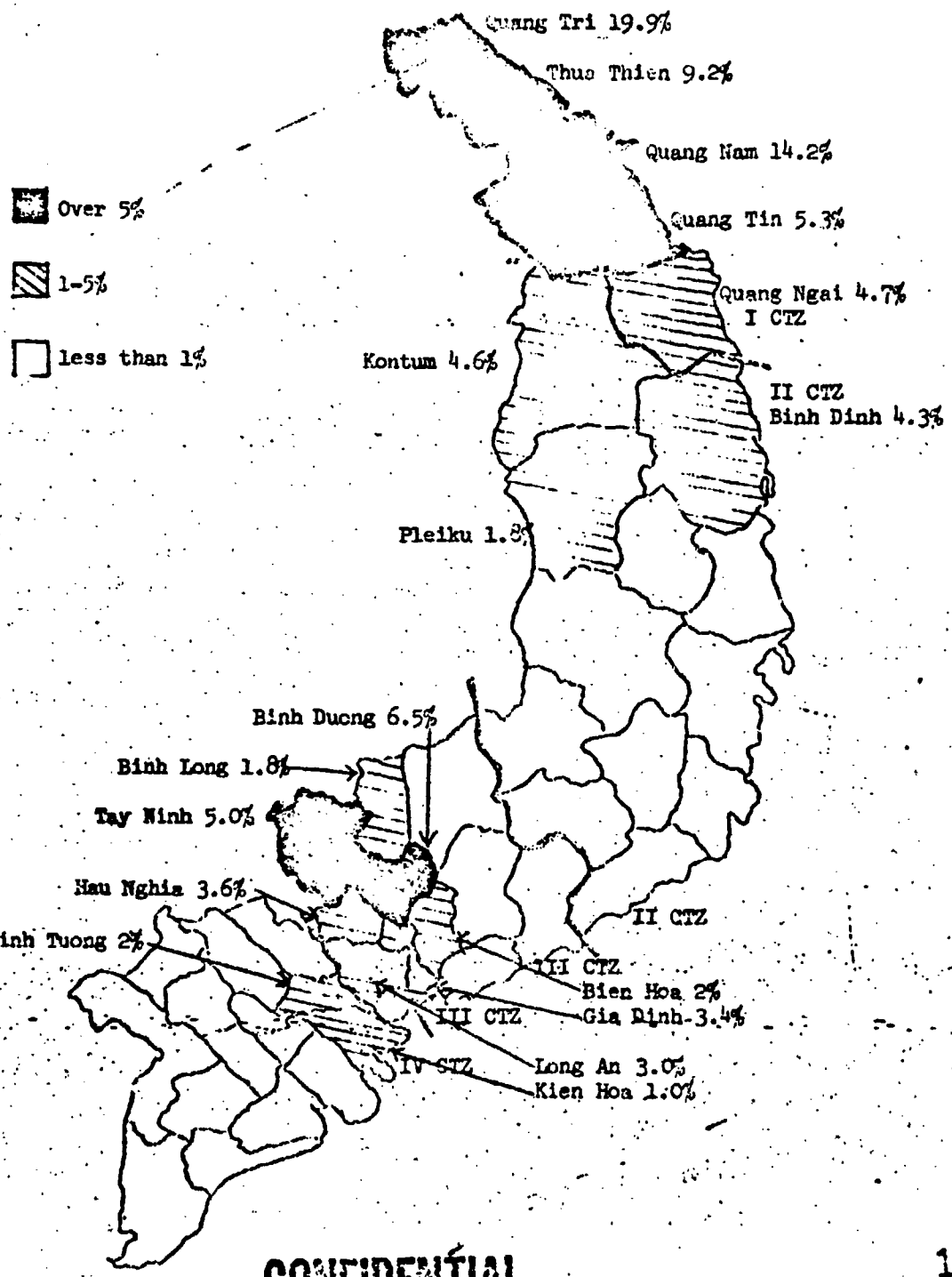
Since the bombing halt and Paris understandings concerning the DMZ, action has begun to shift from the I CTZ provinces to other areas. Map 4 details significant US KIA for the 4th quarter of 1968.2/ It shows a distinct shift from the overall 1968 pattern with US KIA now concentrated in Quang Nam and Quang Tri in I CTZ and in the III CTZ provinces of Tay Ninh, Binh Duong and Hau Nghia which are astride the invasion routes from the VC/NVA Cambodian border sanctuaries to Saigon.

In the 4th quarter, the 11 significant III and IV CTZ provinces clustered around Saigon accounted for 46% of US KIA versus the 48% accounted for by the 8 significant KIA provinces in I and II CTZ. The 1968 total for the same provinces shows the I and II CTZ provinces accounting for 63% versus the 31% of the III and IV CTZ provinces. However, it is impossible to say how permanent this shift of emphasis will be, because the absolute number of US KIA in 4th quarter 1968 was the lowest of any quarter studied and, as the tempo of the fighting increases, I CTZ could again become the focus of attention.

1/ Significant US KIA means 1% or greater of the yearly total.
2/ The latest time period for which we have data.
3/ Quang Tri, Quang Nam, Binh Duong and Quang Tin in 1967. Thua Thien replaced Quang Tin in Top 4 in 1968.

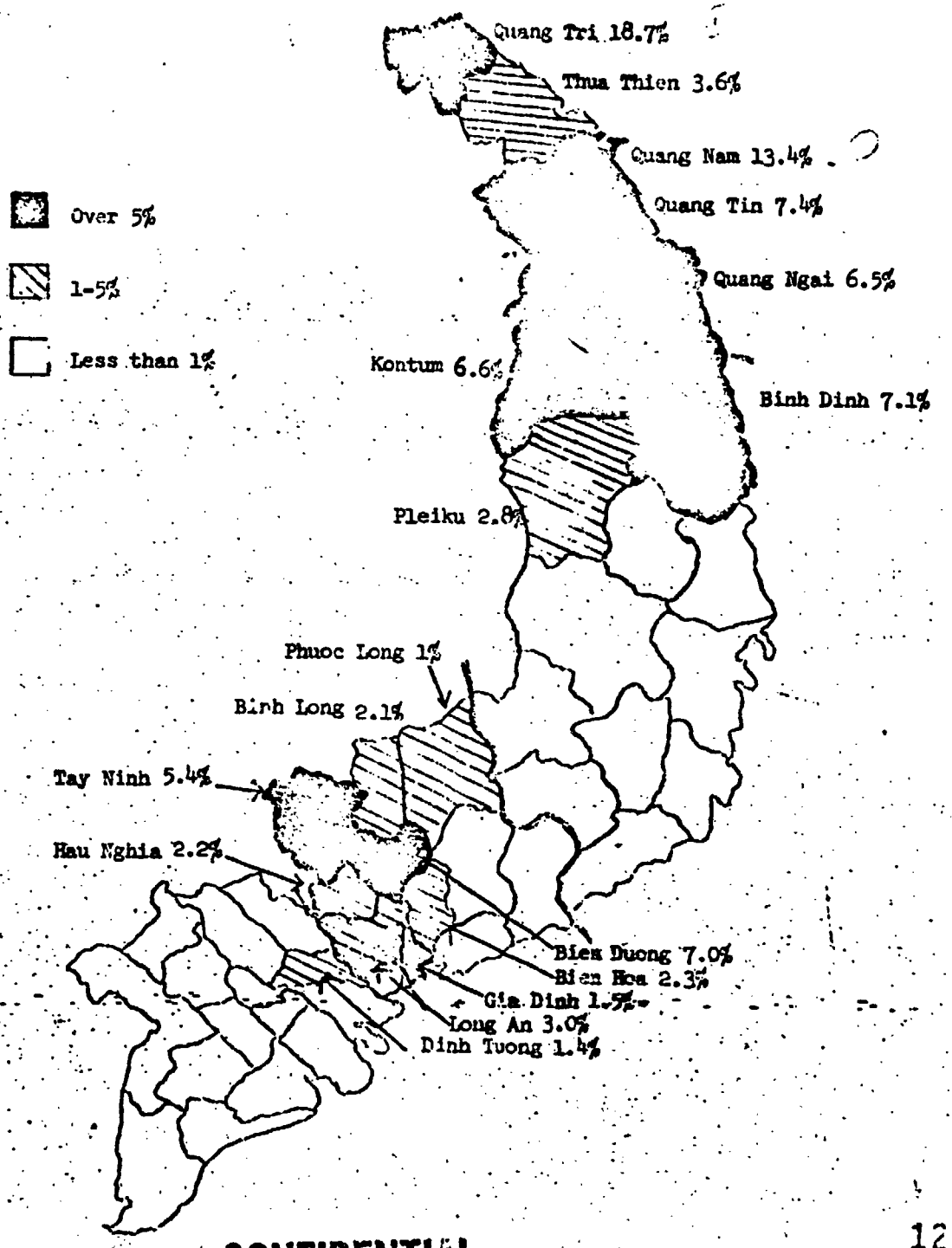
MAP 1

PERCENTAGE DISTRIBUTION OF US KIA ATTRIBUTABLE TO PROVINCES 1967-68



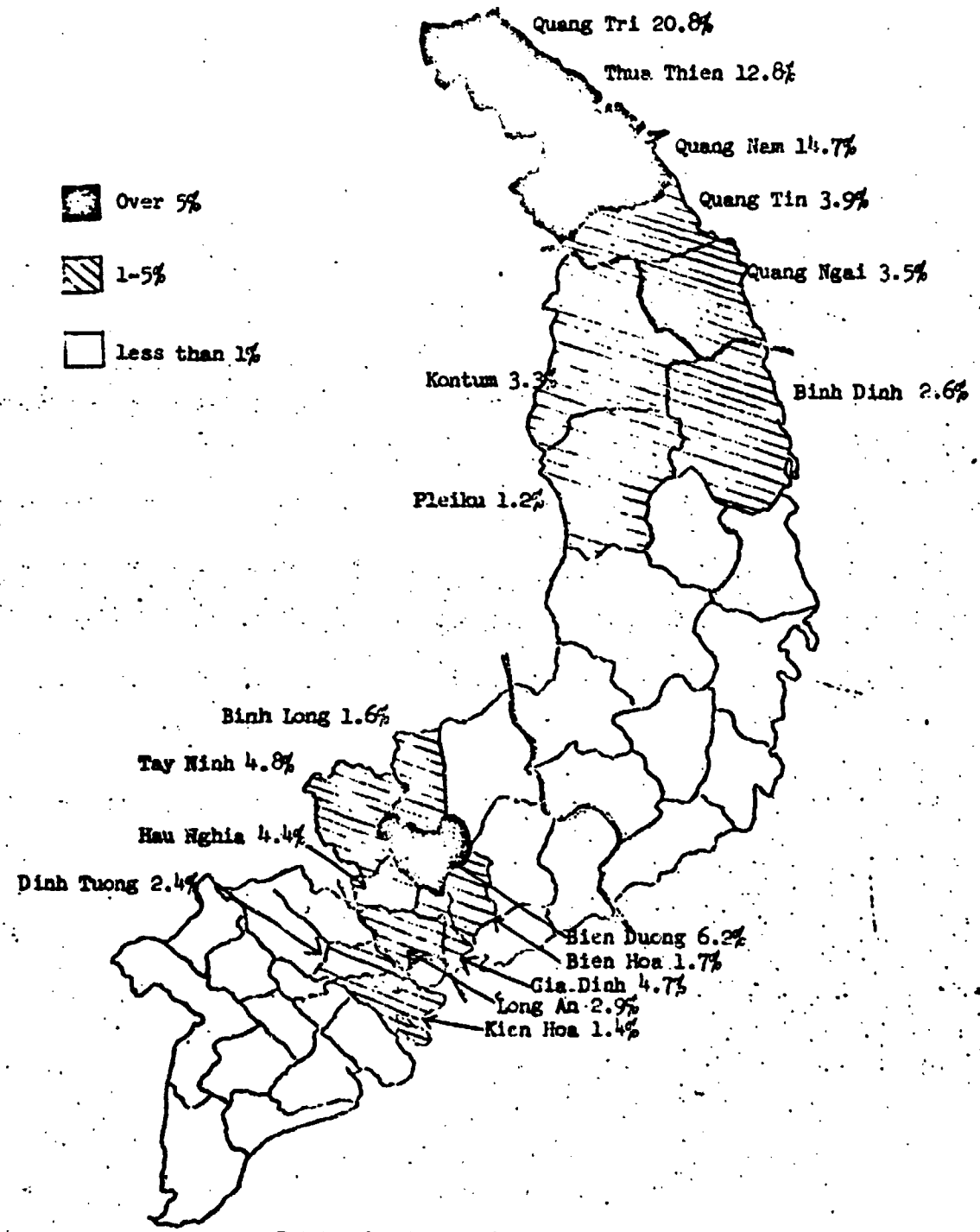
MAP 2

PERCENTAGE DISTRIBUTION OF US KIA ATTRIBUTABLE TO PROVINCES - 1967



MAP 3

PERCENTAGE DISTRIBUTION OF US KIA ATTRIBUTABLE TO PROVINCES - 1968



MAP 4

PERCENTAGE DISTRIBUTION OF US KIA ATTRIBUTABLE TO PROVINCES - 4TH QTR 1968

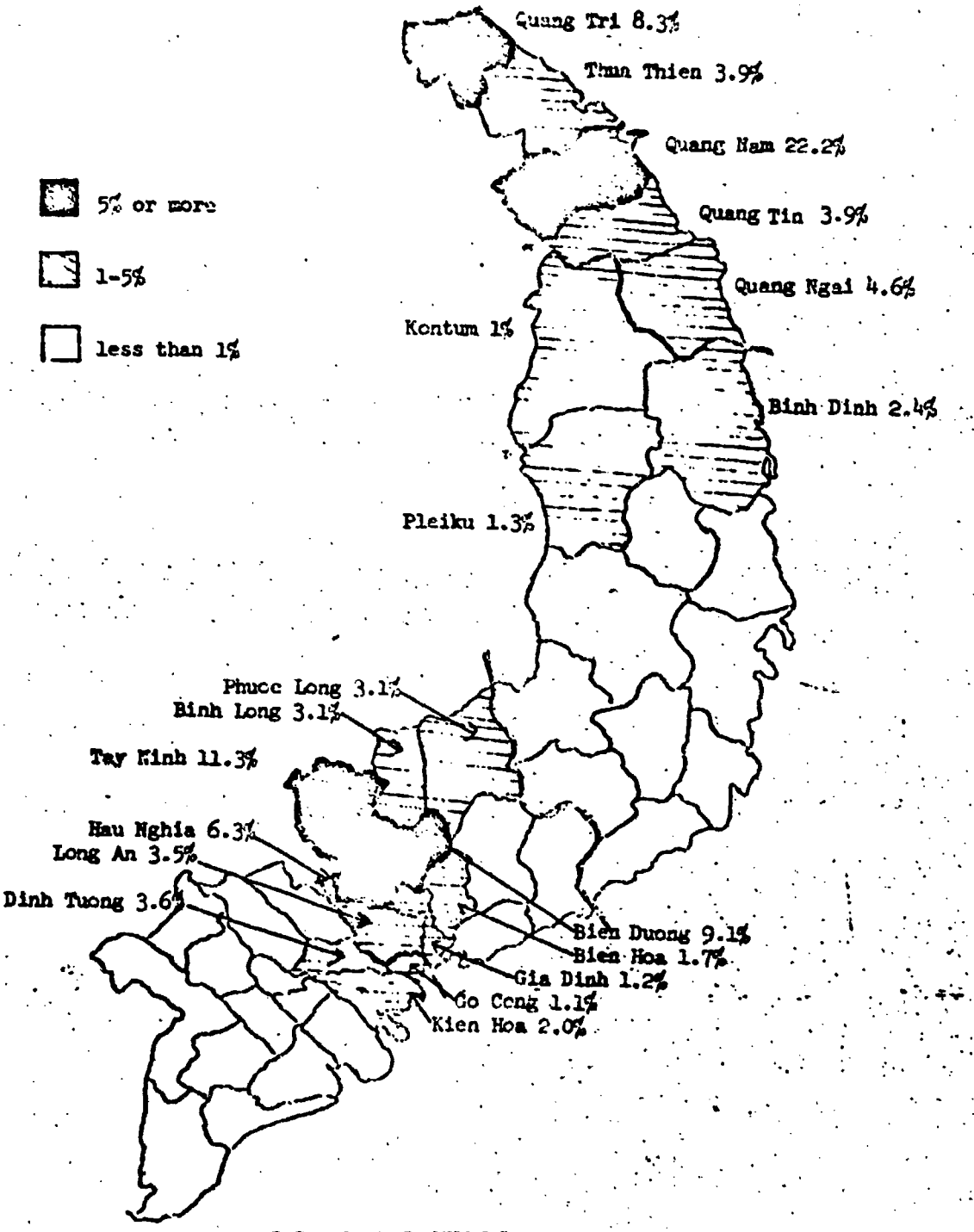


TABLE 3

US KIA BY PROVINCE - 1967-1968

	67-68 Total	% of 67-68	1967	% of 1967	1968	% of 1968	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
I CTZ														
Quang Tri	4,777	19.9	1,761	18.7	3,016	20.8	225	652	583	281	1007	1313	526	170
Thua Thien	2,201	9.2	338	3.6	1,863	12.8	61	88	76	113	777	705	252	79
Quang Nam	3,376	14.2	1,245	13.4	2,131	14.7	521	341	316	367	549	541	594	454
Quang Tin	1,256	5.3	659	7.4	567	3.9	35	245	252	177	177	203	207	50
Quang Ngai	1,111	4.7	605	6.5	506	3.5	142	276	126	61	117	130	165	94
Unknown/Offshore	41	.1	24	.2	7	-	0	2	15	7	6	0	1	0
Total	12,732		4,643		8,090		664	1604	1345	1006	2645	2892	1875	977
II CTZ														
Kontum	1,098	4.6	616	6.6	482	3.3	146	96	69	307	229	193	49	21
Binh Dinh	1,037	4.3	662	7.1	375	2.6	278	171	109	194	92	146	88	49
Pleiku	434	1.8	264	2.8	170	1.2	65	127	74	18	96	49	38	27
Phu Yen	147	.6	76	.8	71	.5	42	3	6	25	42	14	3	12
Darlac	90	.4	21	.2	69	.5	2	5	3	11	28	3	30	8
Khanh Hoa	39	.2	18	.2	21	.1	0	13	1	4	9	6	2	4
Tuyen Duc	21	.1	5	.1	16	.1	1	0	0	4	3	6	3	4
Quang Duc	88	.4	3	-	85	.6	2	0	0	1	20	1	60	15
Lam Dong	81	.3	35	.4	46	.3	8	1	11	15	9	9	13	15
Ninh Thuan	27	.1	7	.1	20	.1	4	3	0	0	10	1	3	6
Binh Thuan	109	.4	53	.6	56	.4	17	4	8	24	26	10	11	9
Phu Bon	20	.1	6	.1	14	.1	1	1	0	4	6	8	0	0
Unknown/Offshore	21	.1	20	.2	1	-	4	5	10	1	1	1	0	0
Total	3,215		1,786		1,429		550	427	271	553	512	447	303	170
III CTZ														
Phuoc Long	224	.9	89	1.0	135	.9	14	41	3	31	43	13	16	63
Binh Tuy	53	.2	28	.3	25	.2	8	1	5	14	7	13	5	0
Long Khanh	131	.5	70	.7	61	.4	13	26	27	4	21	22	16	2
Binh Long	403	1.8	196	2.1	207	1.6	19	22	18	137	43	40	60	64
Tay Ninh	1,192	5.0	499	5.4	693	4.8	271	111	30	87	141	115	205	232
Binh Duong	1,548	6.5	650	7.0	898	6.2	204	158	113	205	310	276	127	167
Gia Dinh	816	3.4	138	1.5	678	4.7	41	72	9	16	396	210	48	24
Bien Hoa	466	2.0	216	2.3	250	1.7	71	37	51	57	105	95	16	34
Phuoc Tuy	98	.4	70	.7	28	.2	14	28	12	16	14	7	2	5
Long An	705	3.0	280	3.0	425	2.9	77	96	41	66	90	121	142	72
Hau Nghia	847	3.6	204	2.2	643	4.4	38	77	40	53	170	190	155	128
Unknown/Offshore	36	.1	35	.4	1	-	9	8	16	2	0	0	0	1
Total	6,539		2,475		4,064		773	647	397	686	1340	1102	810	812
IV CTZ														
Kien Tuong	84	.4	28	.3	56	.4	6	11	4	7	21	19	13	3
Kien Phong	23	.1	8	.1	15	.1	0	0	2	6	6	3	2	4
Dinh Tuong	477	2.0	126	1.4	351	2.4	19	24	37	46	140	98	40	73
An Giang	4	-	0	0	4	-	0	0	0	0	2	2	0	0
Vinh Long	57	.2	9	.1	48	.3	1	1	2	5	[illegible]	[illegible]	11	4
Kien Hoa	251	1.0	42	.5	209	1.4	12	13	11	[illegible]	65	83	42	40
Vinh Binh	24	.1	16	.2	8	.1	4	5	2	5	3	2	3	0
Phong Dinh	90	.4	12	.1	78	.6	1	0	4	7	56	9	7	6
Kien Giang	13	.1	5	.1	8	.1	0	0	3	2	1	2	0	5
Chuong Thien	10	-	3	-	7	-	2	1	0	0	2	0	1	1
Ba Xuyen	17	.1	3	-	14	.1	0	0	0	3	9	0	5	0
An Xuyen	5	-	2	-	3	-	0	0	0	2	0	0	2	1
Go Cong	44	.2	8	.1	36	.2	5	1	2	0	1	5	7	22
Bac Lieu	1	-	0	0	1	-	0	0	0	0	0	1	0	0
Sa Dec	19	-	2	-	18	.1	0	0	0	2	4	3	5	6
Chau Doc	13	.1	2	-	11	.1	0	0	1	1	2	2	5	2
Unknown/Offshore	30	.1	10	.1	20	.1	6	0	2	1	2	15	0	0
Total	1,135		276		859		56	58	69	93	326	250	142	141
Unknown/Offshore	210		135		75		61	30	15	29	16	20	14	25
Countrywide Totals	23,851		9,324		14,533		2104	2756	2090	2374	4848	4711	2941	2005

Source: OASD(COMPTROLLER) KIA file.
NOTE: (-) indicates percent less than .1.

US COMBAT DEATHS IN VIETNAM

Summary. The SVN provinces with the highest US combat death rates tend to border provinces which have: (1) large concentrations of enemy forces, (2) high rates of US operations, (3) high rates of enemy ground assaults, (4) relatively effective Vietnamese forces, (5) moderate concentrations of US forces. There seems to be no relationship between either the total province or HES infrastructure ratings and high rate of US KIA. The shift of high US KIA rates from I CTZ to III and IV CTZ in the past six months is associated with a southward shift of US maneuver battalions, US battalion days of operations, and a buildup of enemy forces and attacks in the III-IV CTZ area.

In the February issue of the Analysis Report we reported the provinces where US combat deaths (KIA) occurred in Vietnam in 1967 and 1968.1/ In this article we investigate the relationship between US KIA and 13 other important factors (Table 1) in the 10 provinces which had the highest US KIA in each year. Each factor was related to US KIA by a specific hypothesis; for example, we postulated that large numbers of US KIA in a province would be associated with a high number of US maneuver battalions stationed in that province. The relationship which we expect the factor to have with high US KIA is shown in parenthesis.

Table 2 presents the findings in summary form. It shows that:

1. US KIA seems closely associated with frequent US large operations.2/ This was the closest association found in the study although it could only be tested for 1967 because of problems with the data.3/ US KIA is moderately associated with the deployment of US maneuver battalions and with US battalion days of operation.

1/ "Where US Combat Deaths Occur in Vietnam", SEA Analysis Report, February 1969, p. 12.

2/ A close association means that when the 10 highest US KIA provinces were ranked on another factor, 2 or fewer of these provinces failed to rank in the top ten provinces on that factor for the year concerned. A moderate association means that 3 to 5 of the provinces did not rank in the top ten provinces on that factor. No association means that 6 or more of the provinces did not rank in the top 10. The probability of a high US KIA province occurring by chance among the provinces rated on another factor is .23 (10/44) assuming random distribution of factors. This does not hold for location near a border where the chance is .36 (16/44).

3/ In 1968 US operations in III CTZ were reported as a single large operation after April. Battalion days are all reported in Tay Ninh province although US forces operate in other III CTZ provinces.

TABLE 1

FACTORS CONSIDERED IN ANALYSIS OF US KIA

	Expected Relationship With US KIA
A. US Forces and Operations	
1. Number of US maneuver battalion headquarters in Province	(high)
2. Number of US battalion days of operation in province	(high)
3. Number of US large operations in province	(high)
B. VC/NVA Forces and Operations	
1. VC/NVA combat and combat support troop strength	(high)
2. VC/NVA total attacks	(high)
3. VC/NVA attacks by fire	(high)
4. VC/NVA ground assaults and ambushes	(high)
C. RVNAF Effectiveness	
1. ARVN effectiveness	(low)
2. RF effectiveness	(low)
3. PF effectiveness	(low)
D. Local Factors	
1. Per cent of population of SVN	(low)
2. VC infrastructure influence	(high)
3. Location in relation to border	(near border)

2. US KIA is closely associated with concentrations of enemy troop strength; this was the strongest relationship shown over the two year period. The relationship between US KIA and enemy activity (attacks) varied from strong to moderate, with ground assaults and ambushes having the closest association with US combat deaths.

3. US KIA does not appear to be associated with low RVNAF combat effectiveness. In fact, provinces where US KIA is highest have relatively effective ARVN divisions, and Regional and Popular Forces.

4. There seems to be no relationship between US KIA and the state of the VC infrastructure in a province. Total province population also had no relationship to US KIA. However, provinces with high US KIA do tend to be border provinces.

As expected the factors most closely associated with US KIA seem to be VC/NVA forces and activities and US forces and activity.

TABLE 2

RANK IN US KIA COMPARED TO RANK IN OTHER INDICATORS a/

1967

	US				VC/NVA			
	US KIA	Maneuver Battalions	Battalion Days of Operation	Large Operations	Combat Strength	Total Attacks	Ground Assaults	Attacks By Fire
Quang Tri	1	5	1	3	1	1	4	1
Quang Nam	2	2	5	1	11	2	2	6.5
Quang Tin	3	9.5	17	15.5	8	10.5	7	11
Binh Dinh	4	4	2	6	4	13	5	33.5
Binh Duong	5	3	3	2	9	9	12.5	8.5
Kontum	6	17	4	10	2	10.5	25.5	12
Quang Ngai	7	8	14	8	3	3	1	15
Tay Ninh	8	16	11	11.5	5	6	9.5	2
Thua Thien	9	9.5	6	4.5	10	5	9.5	3
Long An	10	12.5	10	9	20	8	3	24

1968

			M	M				
Quang Tri	1	1	O	O	1	4	16	2
Quang Nam	2	3	T	T	3	1	1	1
Thua Thien	3	2			2	5	8	6
Binh Duong	4	4	A	A	8	6	20	5
Tay Ninh	5	13	V	V	4	3	3	4
Gia Dinh	6	21	A	A	15	16	5	12
Phu Nhia	7	8	I	I	18	2	4	3
Quang Tin	8	6	L	L	9	13	13	13
Quang Ngai	9	12	A	A	7	17	7	25
Kontum	10	7	B	B	5	11	11	9.5
			L	L				
			E	E				

a/ Fractional numbers (i.e., 9.5) indicates tied rank.
b/ Computed from per cent of rural population considered free from influence of VC infrastructure (A or B on HES Indicator 2-A).
c/ RVNAF Effectiveness: H = High
M = Medium
L = Low
Combat effectiveness evaluated on kill ratio and enemy killed/1000 friendly strength.

	VC/NVA			POPULATION		HVTAF FORCES a/			
Last Month	Total Attacks	Ground Assaults	Attacks By Fire	VC Political Infrastructure b/	Population	ARVN Combat Effectiveness	RF Combat Effectiveness	PF Combat Effectiveness	Near Border
1	1	4	1	34	23	H	H	H	Yes
1	2	2	6.5	26	3	N/A	O	O	Yes
1	8	7	11	36	13	H	T	T	Yes
4	10.5	5	33.5	10	2	H			[illegible]
9	13	12.5	8.5	37	28	L	A	A	[illegible]
2	9	23.5	12	12	38	N/A	V	V	Yes
3	19.5	1	14	8	6	H	A	A	[illegible]
5	3	9.5	2	7	21	L	I	I	Yes
0	4	9.5	3	23.5	4	H	L	L	Yes
0	3	3	24	60	18	L	A	A	No
							B	B	
							L	L	
							E	E	
1	4	18	2	9	23	H	H	H	Yes
3	1	1	1	20	3	H	H	H	Yes
2	5	8	6	5	4	H	H	H	Yes
8	6	10	9	31	28	L	H	H	No
4	3	3	4	23	21	H	H	H	Yes
5	10	5	12	16	1	N/A	H	H	No
5	8	4	3	43	33	H	H	H	Yes
8	13	13	13	23	13	H	H	H	Yes
9	17	7	23	15	6	H	H	H	No
5	11	11	9.5	11	38	L	H	L	Yes

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These findings from the static analysis can be tested by examining the trends in US KIA over the past six months and relating them to US and enemy force levels and activity. In 4th quarter, 1968, the percentage of total US KIA occurring in III and IV CTZ's increased to 48%, compared to the 32% average for the preceding quarters of 1968. In first quarter 1969 III-IV CTZ percentage remained high (41%). At the same time, the percentage of US KIA suffered in I CTZ dropped off while II CTZ fluctuated about its previous average. Thus US KIA shifted southward during the past six months.

TABLE 3

PERCENT OF US KIA BY CTZ

	1968				1969
	1Q	2Q	3Q	4Q	1Q
I	55	62	57	44	47
II	10	10	10	8	12
III	28	23	28	40	32
IV	7	5	5	8	9

Source: OSD/Comptroller SEA Statistical Summary.

Map 1 indicates that US combat forces also moved southward. In November 1968, MACV shifted 9 US maneuver battalions from I CTZ to III and IV CTZ. This resulted in an 8% overall decrease in I CTZ's share of US maneuver battalions with a corresponding increase in III and IV CTZ's. On a CTZ-wide basis, US maneuver battalion retain the same deployment today as they did after the November shift. Thus, the shift in US KIA in 4th quarter 1968 and 1st quarter 1969 is in the same direction as the redeployment of US forces. (Map 1.)

TABLE 4

PERCENT OF US MANEUVER BATTALIONS BY CTZ

	1968				1969
	1Q	2Q	3Q	4Q	1Q
I	50	50	50	42	42
II	16	15	15	15	15
III	31	32	30	37	37
IV	3	3	5	6	6

Source: OSD/Comptroller SEA Statistical Summary.
1Q 1969 - JCS Daily Operational Summary.

US battalion days of operation have shifted along with US units. Battalion days have dropped off in I CTZ and increased in III and IV CTZ. This indicates that large operations have increased in these areas (remember, all activities in III CTZ are run under one operation).

TABLE 5

PERCENT OF US BATTALION DAYS OF OPERATION

	1968				1969
	1Q	2Q	3Q	4Q	1Q
I	38	38	40	33	32
II	21	16	16	17	13
III	36	42	40	45	48
IV	5	4	4	5	7

Source: OASD/SA SEA Statistical Tables.

Of course, the enemy force levels in III CTZ have not remained fixed. Table 5 reveals a slow but relatively steady buildup of VC/NVA forces in III CTZ over 1968-69. IV CTZ, however, has remained relatively constant. The nine US battalions arrived in the middle of the enemy buildup. Thus we have another important factor in US KIA, enemy strength, which conforms to the expected patterns.

TABLE 6

PERCENT OF VC/NVA BATTALIONS BY CTZ

	1968				1969
	1Q	2Q	3Q	4Q	1Q
I	34	39	39	37	37
II	25	22	19	19	14
III	27	26	30	31	37
IV	14	13	12	13	12

Source: MACV Collateral OB.

The III CTZ share of VC/NVA activity (as represented by total attacks) has also increased markedly. Although enemy attacks tended to be concentrated in the southern half of SVN in 1968-69, the III CTZ share of attacks again exhibits a slow and steady upward trend.

TABLE 7

PERCENT OF VC/NVA ATTACKS BY CTZ

	1968				1969
	1Q	2Q	3Q	4Q	1Q
I	21	26	26	24	21
II	18	16	16	19	21
III	27	33	35	32	39
IV	34	25	23	25	19

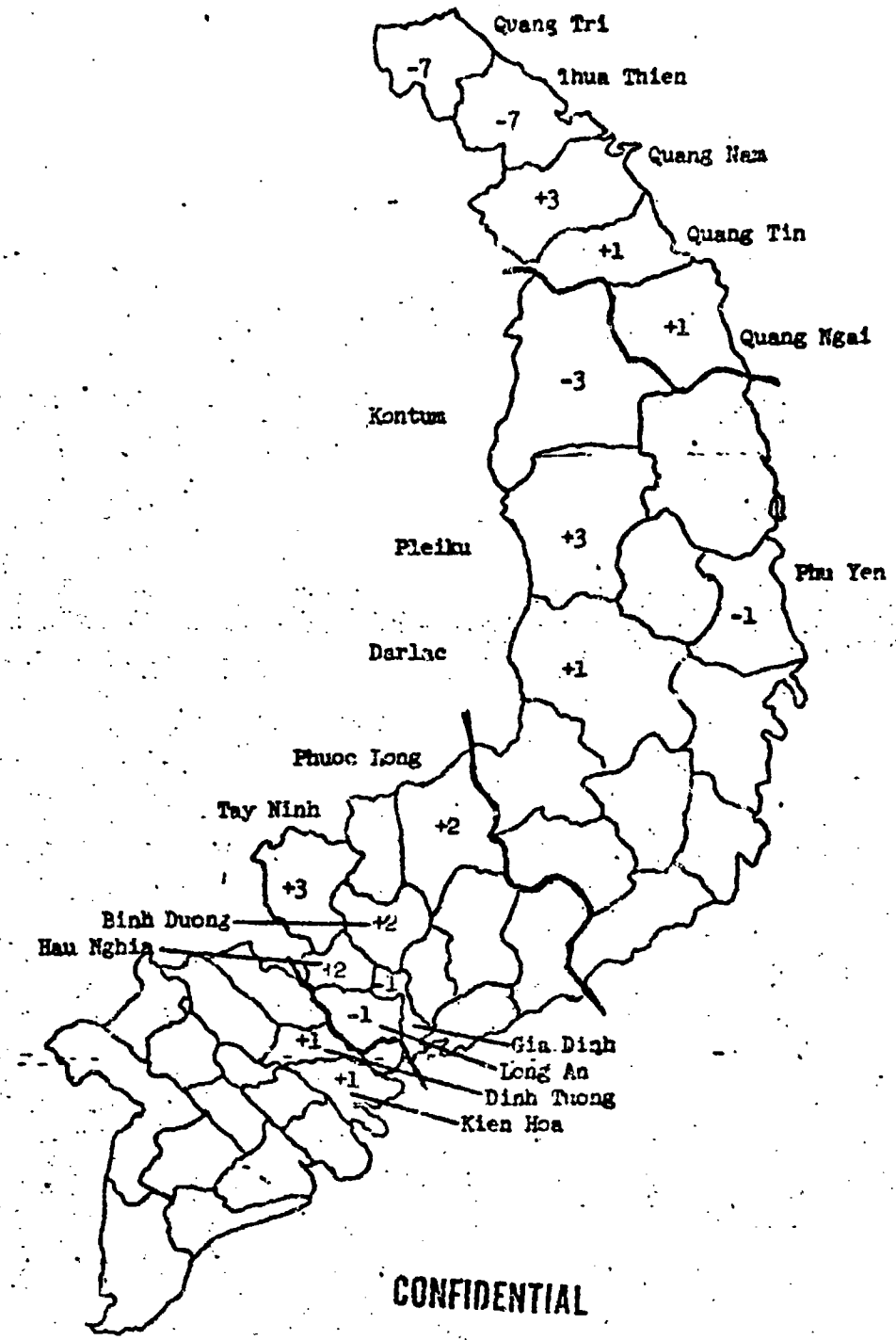
Source: OASD/SA SEA Statistical Tables. March 1969 from DIA.

At the same time, however, enemy activity in IV CTZ had been dropping off. From a high of 34% of the countrywide total of attacks during the 1968 Tet offensive, IV CTZ has dropped to only 19% in first quarter 1969. At the present time there is no way to account for this exception to the general rule except to note that the US presence in IV CTZ is small in relation to US presence elsewhere and that IV CTZ provinces have not previously been among the 10 highest provinces in US KIA.

Thus, in the areas associated with high US KIA the factors found to have a significant relationship to US KIA in our analysis are generally found to be operative in the recent shift in the pattern of US KIA. As expected, increased US KIA is associated with an increase in US troop deployments and activity and with enemy strength and activity.

MAP 1

CHANGES IN US MANEUVER BATTALION DEPLOYMENT BY PROVINCE
June - December 1968



US COMBAT DEATHS IN VIETNAM: AN OVERVIEW

Every war has human and materiel costs. For the United States, the human costs of the Vietnam conflict are usually expressed in terms of American combat deaths which now exceed 30,000. However, the human costs go beyond the number of KIA. US forces have suffered over 5,800 deaths from non-hostile causes. Moreover, more than 110,700 men have been hospitalized for wounds received in action, and about as many more have been hospitalized for disease and non-battle injuries. In our past studies of human costs of the war, we have omitted the latter three areas; but our article on non-hostile US deaths, which follows in this issue, examines a neglected facet of the war.

In past issues of the SEA Analysis Report we have covered a variety of aspects concerning US combat deaths. In particular we have found that:

1. US KIA are highly concentrated geographically -- 9 of South Vietnam's 44 provinces accounted for 70% of US KIA in 1967-68. The areas of highest US combat deaths include Northern I CTZ, the highlands of II CTZ, and the corridors into Saigon from the Cambodian border in III CTZ.

2. The provinces which are highest in US combat deaths tend to be border provinces which have large concentrations of enemy forces, high numbers of US operations, high numbers of enemy attacks, relatively effective South Vietnamese forces, and large concentrations of US maneuver battalions.

3. We know the approximate distribution of US KIA by type of weapon. Overall almost half of our combat deaths have come from small arms fire. Close to one quarter are caused by mines and booby-traps. Table 1 breaks down Army and Marine KIA by weapon cause.

TABLE 1

PERCENTAGE OF GROUND KIA BY WEAPON CAUSE [a/]
(Jan 67-Sep 68)

	Army	Marine	Overall
Small Arms	50.3	47.4	48.7
Mine/Booby Trap	24.6	22.9	23.7
Rocket/Mortar	17.3	17.4	17.4
Grenade	2.0	3.5	2.8
Artillery	0.7	4.7	2.9
Friendly	5.1	4.0	4.5

Source: OASD(SA) study of Forms 1300, November 1968.
a/ Insufficient information precluded identification of the weapon cause for 22.3% of Army ground KIA.

4. US KIA are concentrated in maneuver battalions. Over the long run 82% of Army and 81% of Marine KIA were troops in maneuver battalions. At the present time we have 112 maneuver battalions in Vietnam which account for approximately 110,000 of the 443,000 Army and Marine forces there.

5. US KIA are largely controlled by the enemy. Regression analysis indicates that about 85% of the variation in US combat deaths is explained by the level of enemy activity as reflected in VC/NVA attacks. However, the actual number of US KIA reported in enemy attacks is very low -- only about 15% of total US combat deaths during 1966-68. Operational reporting indicates that about 65% of American deaths occur on large US operations. It appears that the enemy has the option in most fights as to whether to engage or withdraw, and he opens fire first in most engagements. When VC/NVA forces desire combat they can inflict casualties either by attacking fixed targets such as bases, outposts, or population centers or by engaging friendly forces on large operations. The enemy's actions against US forces out on operations are discussed more fully in the article entitled, "Tactical Initiative in Vietnam," which follows the article on non-hostile US deaths.

6. The enemy retains the ability to selectively target the various components of allied forces. Recently the VC/NVA have concentrated on US targets in order to inflict high casualties on American forces in an effort to influence political opinion within the United States. The article, entitled, "Enemy Emphasis on Causing US Casualties: A Follow-Up," continues our analysis of the enemy's focus and discusses captured documents and shifts in combat statistics which bear upon the enemy's policy.

For those among our readers who desire to pursue any of the above topics further, we include a list of past articles from the SEA Analysis Report in which they were more fully covered.

Topic	Article Title	Issue	Page
1.	Where US Combat Deaths Occur in Vietnam	Feb 69	12
2.	US Combat Deaths in Vietnam	Apr 69	23
3. & 4.	Army and Marine KIA	Nov 68	20
5.	Military Initiative in South Vietnam	Sep 68	6
6.	Enemy Emphasis on Causing US Casualties	Apr 69	30

US DEATHS FROM NON-HOSTILE CAUSES IN VIETNAM

Summary. Approximately 1 out of every 7 deaths suffered by US forces in Vietnam has been from non-hostile causes. The overall rate of non-hostile deaths has been about 3.7 per 1000 US troops since 1965. The rates for Army and Marine forces in Vietnam run 2 to 3 times the rates for Army and Marine forces deployed elsewhere. This means a net increase of at least 200 non-hostile deaths annually for each 100,000 U.S. troops deployed into Vietnam.

US combat deaths in South Vietnam totaled 34,538 as of April 30, 1969. During the same period 5803 US military personnel lost their lives to non-hostile causes including disease, accidents, aircraft crashes not a result of enemy action, and various other categories. This means that 1 out of every 7 of the more than 40,000 US deaths was due to causes other than enemy activity.

Table 1 shows that non-hostile deaths have been proportional to the level of US forces in South Vietnam since 1965. The annual rate of non-hostile deaths/1000 friendly troops rose rapidly during 1960-65. Although it has increased slightly since 1965, the annual rate has remained relatively stable (around 3.7 per 1000 US forces per year) despite a five-fold increase in American forces.

TABLE 1

NON-HOSTILE DEATHS AND US STRENGTH IN VIETNAM

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969[a/]
Non-Hostile Deaths	0	2	18	36	48	359	1043	1679	1917	2103
US Average Strength (000)	.8	3.2	11.3	16.3	23.3	104.1	290.9	444.5	514.4	541.0
Annual Deaths/1000 Average Strength	0	.6	1.6	2.2	2.1	3.5	3.6	3.8	3.7	3.9

Source: OSD/Comptroller SEA Statistical Summary.
a/ Annual rate based on first four months data.

Table 2 compares hostile and non-hostile deaths since 1960. Early in the conflict when US forces were engaged in little activity, non-hostile deaths accounted for a large percentage of our fatalities. Until this year, the trend showed a steady decrease with non-hostile deaths accounting for a smaller proportion of total deaths each year as the VC/NVA forces increased battlefield activity.

TABLE 2

NON-HOSTILE AND HOSTILE DEATHS IN VIETNAM

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969 a/
Non-Hostile	0	2	18	36	48	359	1043	1679	1917	2103
Hostile	0	1	31	77	146	1365	4989	9358	14561	12030
Non-Hostile As % of Total Deaths	-	66	37	32	25	21	17	15	12	15

Source: OSD/Comptroller SEA Statistical Summary.
a/ Annual rate based on first four months data.

Table 3 compares non-hostile death rates in Vietnam with active duty death rates for our forces elsewhere. It reveals that the Vietnam non-combat environment is twice as hazardous as all other areas. In 1968, the Army rate in Vietnam was roughly twice the rate suffered by Army forces in other areas. The Marine Corps rate in other areas is 25% higher than the Army, and the Marine rate in Vietnam is more than twice its world-wide rate.

TABLE 3

ARMY AND MARINE NON-HOSTILE DEATHS - 1968
VIETNAM VS. OTHER AREAS a/

	Total	Vietnam	Other
Army			
Average Strength (000)	1515	340	1175
Active Duty Non-Hostile Deaths b/	3466	1257	2209
Annual Rate/1000 Average Strength	--	3.7	1.9
Marine Corps			
Average Strength (000)	298	80	218
Active Duty Non-Hostile Deaths b/	966	428	538
Annual Rate/1000 Average Strength	--	5.4	2.5

Source: Army Activity Report; Army Adjutant General's Office; Headquarters, Marine Corps, G-1.
a/ Other areas include COMUS and all other foreign based US forces excluding Vietnam.
b/ Deaths from all causes among active duty forces.

The greatest single cause of non-hostile deaths has been aircraft crashes 1/ which account for 1643 lives or 29% of the total. Accidents of all types account for 82% of the total while malaria, hepatitis, and other forms of disease and illness have caused only 9%. Table 4 summarizes non-hostile deaths by cause for all cases through March 1969.

TABLE 4

NON-HOSTILE DEATHS BY CAUSE
(All Deaths Through March 1969)

	ARMY	NAVY	COAST GUARD	MARINES	AIR FORCE	TOTAL
Aircraft Loss/Crash	1113	120	0	208	202	1643
Vehicle Loss/Crash	316	21	0	85	28	450
Drowned/Suffocated	320	116	0	118	16	570
Burns	36	8	0	22	5	71
Illness/Other Than Malaria	200	18	0	36	25	279
Malaria	46	1	0	31	0	78
Heart Attack	91	15	0	13	27	146
Stroke	11	1	0	6	1	19
Suicide	95	0	0	11	1	107
Accidental Self-Destruction	206	2	0	65	0	273
Intentional Homicide	45	2	0	7	0	54
Accidental Homicide	269	8	0	179	3	459
Other Accidents	660	89	2	367	57	1175
Other Causes	36	155	0	13	9	213
Not Reported	61	20	0	12	7	100
Total Non-Hostile Deaths	3505	576	2	1173	381	5637

Source: OSD/Comptroller Statistical Services,
US casualties in Southeast Asia by cause of casualties report.

1/ Aircraft crashes resulting from hostile action are not counted here.

US COMBAT DEATHS DURING THE LULL

Summary

Most US deaths in ground combat during the lull seem to come from mines and booby traps. During periods of normal activity, gunshot wounds are the leading cause of US combat deaths. US maneuver battalions still are accounting for about 80% of all US combat deaths during the lull, and the geographical distribution of US KIA has not changed significantly.

Combat Deaths by Weapon

Because of the "lull", the cause of death pattern has changed as shown in Table 1. During periods of normal or high combat activity, gunshot wounds account for about 40%-50% of all US combat deaths, with mine and booby-trap wounds accounting for about 20%-25%. In periods of low combat intensity, the percentages tend to reverse, with mines and booby-traps accounting for about 40% of all US KIA and gunshot wounds accounting for about 25%. This phenomenon was noted during the pronounced lull last October, and seems to be occurring again this month. This shift should not be a surprise. Gunshot wounds should decline when the enemy is avoiding ground combat; but US forces continue to conduct operations at the same rate as before the lull and therefore continue to run into mines, booby-traps and other static, defensive weapons.

TABLE 1

PERCENTAGE OF GROUND KIA BY WEAPON CAUSE a/

	Jan 67-Sep 68	Oct 68	May 69	Jun 69	1-15 Jul 69
Small Arms	49	28	43	25	26
Mine/Booby-Traps	24	40	20	21	41
Rocket/Mortar/Artillery	20	23	22	23	19
Grenade b/	3	3	11	29	7
Friendly	5	6	4	2	7

a/ The 1967 and 1968 statistics cover both Army and Marines while 1969 figures are for the Marines only. This furnishes an adequate basis for comparison, because there has been no significant difference between fatality distributions of the two services. Comparable Army KIA data are not yet complete for June and July.

b/ Includes rocket propelled grenades (RPG). The recent increase in grenade fatalities can be attributed to the enemy's greater use of RPG's but since the June and July data is for Marines only, this may only be true in I CTZ.

Combat Deaths in Maneuver Battalions

In the past, an average of 81% of all US KIA have occurred within maneuver battalions. There is no indication that this proportion has changed in recent months since the May, June and July figures (78.4%, 76.3% and 83.5% respectively) are well within the limits of chance variation and cannot be counted as significant departures.

Combat Deaths by Geographical Area

There does not appear to be any significant shifts in the geographical locations of US combat deaths in South Vietnam during 1969, at least until recent weeks. I Corps has accounted for about half of all US combat deaths followed by III Corps with about 30%. Table 3 shows KIA compared to approximate US maneuver battalion strength by CTZ. Preliminary July figures show a pronounced drop except in I Corps. KIA per 1000 men in maneuver battalions varies between 8 and 16 for all corps areas except II Corps. The lower II Corps figure may be attributed to the generally low level of enemy activity within the area and the assignment of most US troops (15 of 17 battalions) there to pacification, while ARVN and 3rd Nation forces engage in combat operations.

The nine of the ten highest casualty provinces for 1968 continue to account for about three-quarters of all US KIA in 1969, although their relative rank varies from period to period as shown below.

TABLE 2

US COMBAT DEATHS BY PROVINCE
(Monthly Average)

	1968		1969					
			Jan-Mar		Apr-Jun*		Jul*	
	Rank	KIA	Rank	KIA	Rank	KIA	Rank	KIA
Quang Tri	1	251	2	146	2	112	2	80
Quang Nam	2	178	1	187	1	160	1	120
Thua Thien	3	155	8	39	6	84	7	30
Binh Duong	4	75	4	84	7	69	6	45
Tay Ninh	5	58	3	98	3	98	5	50
Gia Dinh	6	57	-	-	-	-	-	-
Hau Nghia	7	54	7	51	9	35	9	15
Quang Tin	8	47	9	38	5	88	4	70
Quang Ngai	9	42	5	78	4	96	3	75
Kontum	-	-	6	50	8	44	8	20
		927		780		786		505
% of countrywide total		75%		74%		75%		70%

* June and July estimated from random sample of Forms 1300.

TABLE 3

US COMBAT DEATHS AND MANEUVER BATTALION STRENGTH (COC)
(Monthly Average)

	1967	1966	1969 Jan-Mar	Apr	May	Jun	Jul a/
I CTZ							
KIA	587	675	488	388	645	514	460
Personnel in Mn. Bns. (000) b/	34	47	47	47	47	47	46
KIA/1000 Mn. Bn. Str.	11.4	14.4	10.4	8.3	13.7	10.9	10.0
II CTZ							
KIA	149	119	119	78	38	109	55
Personnel in Mn. Bns. (000) b/	17	16	16	16	16	16	16
KIA/1000 Mn. Bn. Str.	8.8	7.4	7.4	4.9	2.4	6.8	3.4
III CTZ							
KIA	206	339	338	304	321	354	180
Personnel in Mn. Bns. (000) b/	27	33	38	38	38	38	38
KIA/1000 Mn. Bn. Str.	7.6	10.3	8.9	8.0	8.4	9.3	4.7
IV CTZ							
KIA	23	73	97	59	88	60	15
Personnel in Mn. Bns. (000) b/	2	4	6	6	6	6	4
KIA/1000 Mn. Bn. Str.	11.5	18.3	16.2	9.8	14.7	10.0	3.6
COUNTRYWIDE							
KIA c/	782	1217	1061	847	1209	1100	720
Personnel in Mn. Bns. (000) b/	80	100	107	107	107	107	104
KIA/1000 Mn. Bn. Str.	9.8	12.2	9.9	7.9	11.3	10.3	6.9

Source: OSD/Comptroller SEA Statistical Summary;
MACC Daily Operational Summary
a/ Estimated on basis of random sample of Forms 1300.
b/ Estimated. USMC battalion equals 1200 men. USA battalion equaled 820 men in 1967 and 920 men in 1968 and 1969.
c/ CTZs do not add to countrywide because some KIA are not reported by CTZ.

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ARMY AND MARINE COMBAT DEATHS

Marine casualty rates in Vietnam have consistently been higher than those of the Army. This appears to reflect the greater combat intensity in the northern part of South Vietnam where the Marines operate. The primary factor, however, is that the Marine forces have a much larger proportion of their troops in combat units. When casualty rates are viewed in the context of personnel in combat units in comparable combat environments, Marine rates are higher than Army rates, but the difference is not great. Moreover, over the last three years, the trend of Marine KIA relative to Army KIA is clearly downward.

Table 1 shows that Marine KIA rates per 1000 friendly troops deployed in Vietnam have exceeded Army KIA rates in each year (and every quarter) since 1967. The greatest discrepancy in the last 30 months occurred in third quarter 1967 when the actual number of Marine deaths exceeded Army deaths (by 336 to 310 monthly average over the quarter) even though the number of Army personnel in Vietnam was four times greater. During that period the Marines' death rate was about 320% higher than the Army's. However, the Marine rates have steadily declined since 1967 and the differences between Army and Marine KIA rates have narrowed significantly due to a reduction in Marine rates and an increase in Army rates.

TABLE 1

ARMY AND MARINE KIA PER 1000 AVERAGE STRENGTH - COUNTRYSIDE
(Monthly Average)

				1968				1969	
	1967	1968	1969	1Q	2Q	3Q	4Q	1Q	2Q
ARMY									
KIA	454	778	739	1051	981	615	464	701	777
Avg. Strength (000)	288	349	363	332	352	355	357	364	361
KIA/1000 Avg. Strength	1.6	2.3	2.0	3.2	2.8	1.7	1.3	1.9	2.2
MARINES									
KIA	288	385	270	489	529	333	188	305	234
Avg. Strength (000)	77	83	81	82	84	85	82	81	81
KIA/1000 Avg. Strength	3.7	4.6	3.3	6.0	6.3	3.9	2.3	3.8	2.9
% Difference - (Marine greater than Army)	131	100	65	100	125	129	77	100	32

Source: CSD/Comptroller SEA Statistical Summary.
MACV Strength Report.

Using the measure of combat deaths per 1000 total strength is not a fair measure for comparing the KIA rates of the two services. The Marines are supported by Navy personnel (and in some areas by Army support troops) and therefore have a much higher ratio of combat to total personnel than does the Army. However, past studies have usually found that the combat environment of Marine units (I Corps) is more intense and hence comparison with Army units operating in all areas of Vietnam is misleading.

This difficulty can be overcome by restricting our study to Army and Marine units in I Corps dealing only with maneuver battalion strength and KIA to correct for differences in support and combat ratios. Table 2 shows that in I Corps the combat death rates of Marine maneuver battalions exceeded those of Army units by 40% in 1968 (Table 1 based on total strength showed a 100% difference). However, in the first six months of 1969 the KIA rates of Marine combat units have been 4% less than comparable Army units. Army rates are identical for the two years, but Marine rates have dropped sharply in 1969.

TABLE 2

ARMY AND MARINE KIA PER 1000 MEN IN MANEUVER BATTALIONS - I CTZ
(Monthly Average)

			1968				1969	
	1968	1969	1Q	2Q	3Q	4Q	1Q	2Q
ARMY								
KIA a/	215	182	285	325	171	77	127	236
Mn. Bn. Str. (000) b/	26.7	22.1	24.8	28.5	30.4	22.1	22.1	22.1
KIA/1000 Mn. Bn. Str.	8.1	8.2	11.5	11.4	5.6	3.5	5.7	10.7
MARINE								
KIA a/	311	218	394	429	268	151	245	190
Mn. Bn. Str. (000) b/	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
KIA/1000 Mn. Bn. Str.	11.3	7.9	14.3	15.5	9.7	5.5	8.9	6.9
% Difference - (Marine greater than Army)	+40	-4	+24	+36	+73	+57	+56	-36

Source: SEAFA Computer File.
OSD/Comptroller SEA Statistical Summary.

a/ KIA in maneuver battalions approximated as 82% of total KIA for the Army and 81% of total KIA for Marine Corps.

b/ Average maneuver battalion strength estimated from number of maneuver battalions by assuming strength for an Army battalion at 920 and a Marine battalion at 1200.

We can make a more detailed comparison than the corps level comparison. Two provinces in I Corps, Quang Tri and Quang Nam, have had both Army and Marine maneuver battalions operating in them since early 1968. Table 3 compares the combat death rates in these two provinces. The Marine combat death rate exceeded the Army rate in both provinces by a narrow margin in 1968 (4% and 7%). But the Army rate exceeded the Marine rate in two of the four quarters of 1968 in Quang Tri while in Quang Nam the Army exceeded the Marines in only one of the four quarters.

The relatively uniform pattern in 1968 is broken in 1969. In first quarter 1969, Marine death rates exceeded Army rates by over 130% in both provinces, but Army rates rose sharply in the second quarter (based on preliminary June data) and exceeded the Marine rates. The net result for 1969 shows the Marines with higher casualty rates in Quang Tri while the Army has higher rates in Quang Nam.

Thus we conclude that the Marine combat death rates have been on the average only slightly greater than rates for Army units in comparable situations since January 1968. Moreover, the overall Marine combat death rate has been steadily decreasing relative to Army rates over the last three years.

TABLE 3

ARMY AND MARINE KIA PER 1000 MEN IN MANEUVER BATTALIONS
QUANG TRI AND QUANG NAM PROVINCES
(Monthly Average)

	1968	1969	1968				1969	
			1Q	2Q	3Q	4Q	1Q	2Q
QUANG TRI								
ARMY								
KIA a/	45	18	65c/	76	32	11	12	24
Mn. Bn. Str. (000) b/	4.7	2.8	4.6	4.6	6.7	2.8	2.8	2.8
KIA/1000 Mn. Bn. Str.	9.6	6.4	14.1	16.5	4.8	3.9	4.3	8.6
MARINE								
KIA a/	151	94	234c/	263	104	33	97	91
Mn. Bn. Str. (000) b/	15.0	10.6	15.6	17.2	14.0	12.0	9.6	11.6
KIA/1000 Mn. Bn. Str.	10.0	8.9	15.0	15.3	7.4	2.8	10.1	7.8
% Difference - (Marine greater or less than Army)	+4	+39	+6	-7	+54	-28	+135	-9
QUANG NAM								
ARMY								
KIA a/	23	16	56	18	13	4	5	26
Mn. Bn. Str. b/	2.5	1.4	2.8	2.4	2.8	1.8	1.8	.9
KIA/1000 Mn. Bn. Str.	9.2	11.4	20	7.5	4.6	2.2	2.8	28.9
MARINE								
KIA a/	113	134	84	120	139	111	132	135
Mn. Bn. Str. b/	11.5	16.4	8.4	10.4	12.8	14.4	16.8	16.0
KIA/1000 Mn. Bn. Str.	9.8	8.2	10.0	11.5	10.9	7.7	7.9	8.4
% Difference - (Marine greater or less than Army)	+7	-28	-50	+53	+137	+250	+182	-71

Source: OSD/Comptroller SEA Statistical Summary.
SEAFA Computer File.

a/ KIA in maneuver battalions approximated as 82% of total KIA for the Army and 81% of total KIA for Marine Corps.

b/ Average maneuver battalion strength estimated from number of maneuver battalions by assuming strength for an Army battalion at 920 and a Marine battalion at 1200.

c/ Quang Tri first quarter 1968 data for February and March only.

d/ Army KIA for June is preliminary.

US COMBAT DEATHS IN VIETNAM

Summary. The geographical distribution of US combat deaths did not change significantly from past patterns during the low activity levels of July and most of August; I Corps accounted for about half of the total US KIA and about one-third came from III Corps. Small arms and mines/booby traps accounted for about half of the US combat deaths. Over 80% of the deaths came from US Army and Marine major combat units. The Americal, 1st Marine, and 101st Airborne Divisions (all in I Corps) had the highest KIA rates.

This paper gives a detailed breakdown of US combat deaths suffered in Vietnam for the 9 weeks from June 22 through August 23, 1969. It presents the data by area in South Vietnam, by the type of action and weapons causing the deaths, and by type of US unit. Except where noted, all the US KIA figures are the same as those released to the press.

a. US COMBAT DEATHS BY AREA.

Table 1 shows that about half (48%) of the US combat deaths during the 9 weeks occurred in the I Corps area. About one-third (34%) of the deaths came from III Corps. The I Corps area has consistently accounted for 49-56% of all US killed in action in 1967, 1968, and the first 7 months of 1969 (it has about half of the US combat strength in SVN). The III Corps area has accounted for 27-32%. Thus, except for some additional casualties in III CTZ, the recent pattern is not unusual. The enemy's concentration on III CTZ is evident in the "high point" during the week ending August 16, when the III CTZ share of US combat deaths rose to 38% of the Vietnam total.

TABLE 1

US COMBAT DEATHS BY CTZ
(June 22 - August 23, 1969)

Corps Area	US Deaths	% of SVN Total
I CTZ	722	48
II CTZ	146	10
III CTZ	509	34
IV CTZ	51	3
Non-CTZ	71	5
Total	1499	100

The 9 provinces which accounted for about 75% of the US deaths during the past two months are shown in Table 2. All five I CTZ provinces are on the list, along with 4 provinces in III CTZ. Eight of the provinces have ranked among the top 9 provinces in US KIA in 1968 and in 1969. Binh Long (in III CTZ next to Tay Ninh and the Cambodian border) took over the 9th spot from Kontum (II CTZ), in the only deviation from the past pattern.

The map shows the distribution of US KIA geographically. The shaded provinces are the ones shown in Table 2. The dots on the map provide a sharper focus by showing where US combat deaths were concentrated in the first six months of 1969 (not July and August, because this particular "plot" data is not yet available in Washington). Table 7 (in the annex) shows the US combat deaths by province and corps area for each of the 9 weeks.

TABLE 2

PROVINCES WITH HIGH US DEATH RATES
(June 22 - August 23, 1969)

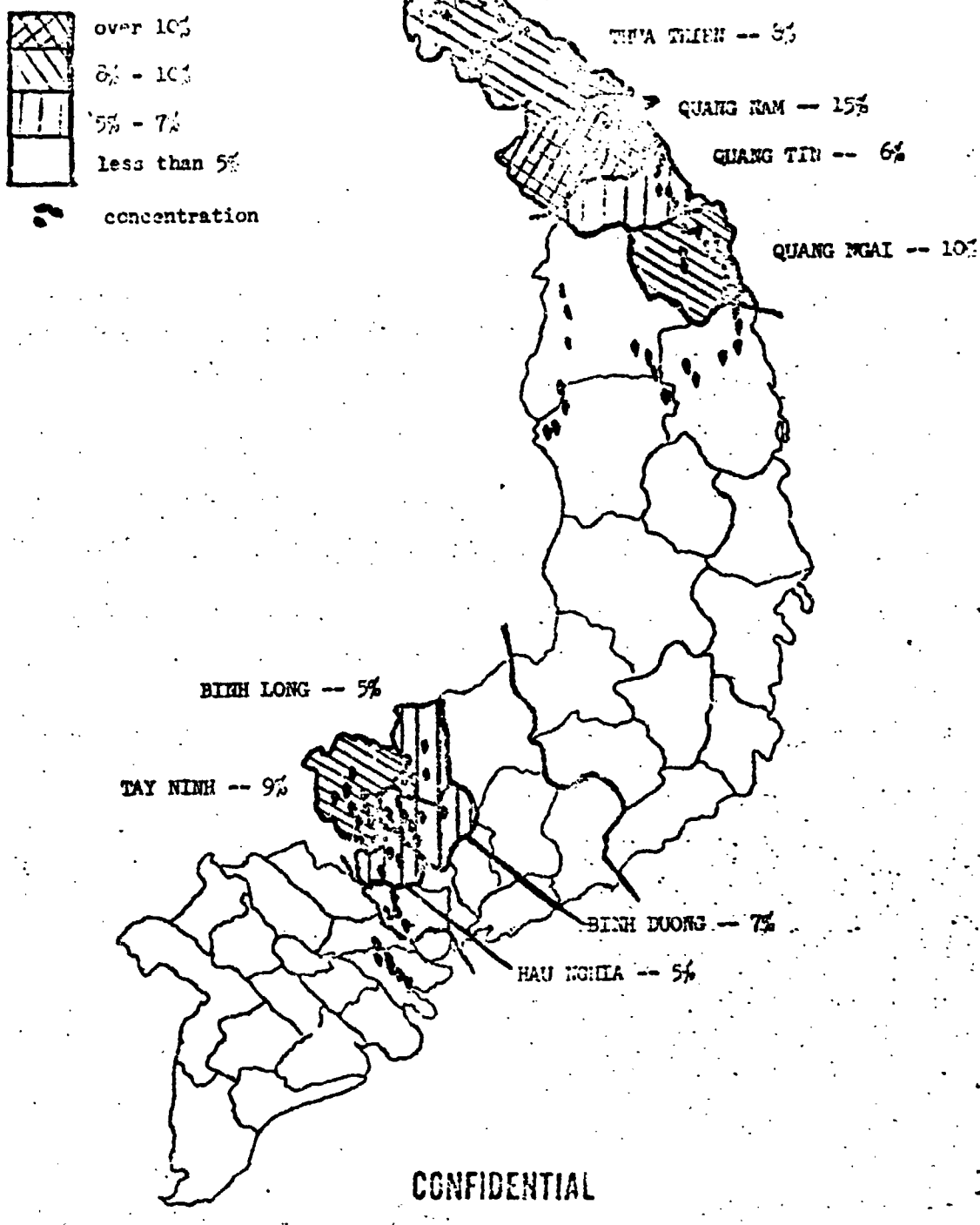
	US Deaths	% of SVN Total
I CTZ:		
Quang Tri	143	10
Thua Thien	117	8
Quang Nam	226	15
Quang Tin	88	6
Quang Ngai	148	10
III CTZ:		
Binh Long	76	5
Tay Ninh	140	9
Binh Duong	111	7
Hau Nghia	67	5
	1116	75

b. US COMBAT DEATHS BY TYPE OF ACTION AND WEAPON CAUSE

Type of Action

Table 3 shows US combat death figures by type of action. Use of the data, however, requires considerable caution. First, the figures are from preliminary operational reports, cover 1 less week than the other tables, and do not match the official figures released to the press. Second, the distinction between friendly initiated and enemy initiated actions depends partly on the judgment of the analysts who put the table together in Washington. Third, the friendly operations reporting from MACV does not allow a realistic breakdown of different types of friendly operations. For example, in I and II CTZ, practically all large operations are reported as "Search and Clear". In III CTZ they are called "Reconnaissance in Force." Moreover, III CTZ reports no

US ARMY & MARINE COMBAT DEATHS BY PROVINCE
(Jun 28 - August 23)



small unit actions at all in the official reporting system, despite evidence that small unit actions are prevalent there.

Thus, from the statistics available, it is not possible to draw a clear distinction between US deaths incurred in operations that are clearly offensive and those lost in operations that are clearly defensive.

With the foregoing caveats in mind, Table 3 indicates that US initiated actions accounted for 63% of the US KIA, with enemy ground and indirect fire attacks accounting for most of the rest. I CTZ reports 76% of the US combat deaths occurred in friendly initiated actions; the range for the rest of South Vietnam is 47-55%. (Tables 8 and 9 in the annex show the US KIA for each week by type of action, and by CTZ.)

TABLE 3

US COMBAT DEATHS BY TYPE OF ACTION a/
(June 22 - August 16, 1969)

Type of Action	I CTZ	II CTZ	III CTZ	IV CTZ	SVN Total
Friendly Initiated					
Large Unit	359	43	285	9	697
Small Unit	22	4	0	0	26
Subtotal	381	47	286	9	723
Enemy Initiated					
Ground Attacks	91	8	89	0	188
Indirect Fire	25	25	128	10	188
Mining	4	5	47	0	56
Subtotal	120	38	264	10	432
Total	501	85	550	19	1155
% Friendly Initiated	76	55	52	47	63
% Enemy Initiated	24	45	48	53	37

a/ Source: Hand sort of preliminary operational reports, primarily OPREP-4 and telecons.

NOTE: KIA data is preliminary and operational. It therefore does not agree with refined US KIA figures released to the press.

In an effort to gain insight into how US combat deaths occurred during July and August, we have furnished excerpts from weekly operational reports in Table 4. Again, caution is required, because the items listed do not account for all US casualties, and the individual KIA numbers are from operational, not refined data. Thus, no attempt should be made to add the KIA numbers with each item in order to compare them with the totals shown in parentheses.

TABLE 4

EXCERPTS FROM WEEKLY CASUALTY REPORTS
(June 22 to August 23)

June 22 - 28 (241 KIA)
Army rifle company engages enemy force northwest of Saigon, 4 KIA
Marine helicopter downed by ground fire northwest of Danang, 8 KIA
Two 122mm rockets hit US training center at Chu Lai, 5 KIA
Mechanized rifle company engaged enemy platoon southwest of Saigon, 3 KIA
Enemy mortar attack on friendly camp in west Kontum, 3 KIA
Army helicopter downed north of Bien Hoa, 2 KIA
Named large unit operations, 5 KIA
Company size operations, 5 KIA
Small unit operations, 8 KIA

June 29 - July 5 (153 KIA)
Airmobile rifle company engaged an enemy force in east Tay Ninh, 2 KIA
Army helicopter hit by ground fire on a reconnaissance mission west of Chu Lai, 3 KIA
Named large unit operations, 29 KIA
Small unit operations, 12 KIA
Enemy small unit assaults, 9 KIA

July 6 - 12 (148 KIA)
Two armored cavalry troops engaged an enemy force in east Tay Ninh, 3 KIA
Escorted US convoy ambushed in Binh Long province, 4 KIA
Airmobile rifle company ambushed by an enemy company west of Chu Lai, 9 KIA
Enemy assault on a MACV compound in Binh Thuan province, 6 KIA
Named large unit operations, 23 KIA
Small unit operations, 17 KIA

July 13 - 19 (180 KIA)
Two rifle companies made contact with an enemy company south of Quang Ngai, 5 KIA
Army helicopter shot down by ground fire southwest of Danang, 3 KIA
Three US companies with fire support engaged an enemy force near Tay Ninh, 7 KIA
Named large unit operations, 16 KIA
Company size operations, 4 KIA
Small unit operations, 16 KIA

July 20 - 26 (108 KIA)
Army helicopter detonated land mine in Kien Tuong province, 9 KIA
Rifle company and reconnaissance platoon engaged an enemy force near A Shau, 5 KIA
Secondary explosion downed helicopter near Bien Hoa, 2 KIA
Rifle company engaged enemy company south of Quang Ngai, 4 KIA
Named large unit operations, 27 KIA
Small unit contacts, 15 KIA
Enemy small unit assaults, 1 KIA

Source: MACC Operational Summary

TABLE 4 (Cont)

July 27 - August 2 (139 KIA)
Marine helicopter on medevac shot down during take off south of Danang, 11 KIA
Enemy force south of Danang attacked a Marine rifle platoon, 6 KIA
Airmobile infantry company hit by two enemy platoons near A Shau, 8 KIA
Three Army companies engaged enemy forces 25 miles west of Saigon, 9 KIA
Marine Air-evac helicopter shot down by anti-tank grenade, 3 KIA
Named large unit operations, 35 KIA
Company size operations, 15 KIA
Small unit operations, 19 KIA

August 3 - 9 (96 KIA)
Airmobile rifle company received heavy fire in landing zone southwest of Chu Lai, 5 KIA
Marine rifle company engaged two enemy companies, 4 KIA
Rifle company engaged enemy forces east of Bien Hoa, 3 KIA
Enemy sappers struck Cam Ranh Air Base with satchel charges, 2 KIA
Named large unit operations, 32 KIA
Company size operations, 8 KIA
Small unit operations, 9 KIA

August 10-16 (244 KIA)
Two separate Marine rifle platoons in Con Thien area attacked by two company enemy force while in night defensive position, 19 KIA
Rifle company attacked by enemy forces at night in central Tay Ninh province, 4 KIA
Enemy mortars struck rifle company near Tay Ninh, 3 KIA
A Marine infantry battalion engaged a large enemy force southwest of Danang, 15 KIA
An Army cavalry troop & artillery battalion position southeast of Danang assaulted by enemy forces, 7 KIA
Enemy force attacked an infantry brigade base camp in Binh Long, 7 KIA
Ground and mortar attack on infantry battalion perimeter in Tay Ninh, 13 KIA
An Army helicopter was shot down northwest of Saigon, 7 KIA
Army helicopter near Quang Ngai downed on a troop carry mission, 10 KIA
Named large unit operations, 31 KIA
Company size operations, 19 KIA
Small unit operations, 9 KIA
Enemy ground assaults, 22 KIA
Enemy attacks by fire, 3 KIA

August 17-23 (190 KIA)
Enemy forces and mortars struck an infantry fire support base, 3 KIA
Helicopter was brought down by ground fire west of Chu Lai, 7 KIA
Mechanized rifle company engaged enemy force in Hau Nghia, 5 KIA
Marine rifle company engaged an enemy force, 6 KIA
Named large unit operations, 32 KIA
Company size operations, 3 KIA
Small unit operations, 4 KIA
Enemy ground assaults, 4 KIA
Enemy attacks by fire, 3 KIA
Enemy anti-aircraft fire, 4 KIA

Weapon Cause

Table 5 shows the official (released to press) combat death figures for the 9 week period by weapon cause. Small arms and mines/booby traps accounted for about half (49%) of the US combat deaths during the period.

TABLE 5

US COMBAT DEATHS BY WEAPON CAUSE
(June 22 - August 23, 1969)

Weapons Cause	Deaths	% of Total
Small Arms	427	29
Grenades	65	4
Mines/Booby traps	306	20
Arty, Rocket, Mortar	160	11
Fragments	258	17
Other	283	19
Total	1499	100

US deaths from mines and booby traps tend to remain at about the same levels, lull or not, and seem to be the kind of deaths most under US control. This is because mines and booby traps are passive weapons, seldom requiring anyone to operate them, and they inflict casualties only when friendly forces operate in an area where they have been set. There is some evidence that deaths from this cause tend to fluctuate slightly in the same direction as measures of the US tempo of operations. For example, when US battalion days of operation decline, US mine/booby trap deaths tend to decline. Such deaths also declined markedly in IV CTZ as US forces withdrew.

As expected, US deaths from enemy rockets and mortars tend to fluctuate more with enemy activity. As enemy indirect fire attacks declined in the lull, US deaths from artillery, rocket and mortar fire declined in similar fashion.

US combat deaths from small arms do not show as clear a relationship with US and enemy activities as the categories above. Here, the US deaths appear to be related to a mixture of the tempo of enemy ground attacks and fire fights initiated by US forces.

Table 10 in the annex shows US combat deaths by weapon cause for each of the 9 weeks, and for each corps area.

c. US COMBAT DEATHS BY UNIT

Table 6 shows that over 80% of the US combat deaths in Vietnam during July and August came from US Army and Marine major combat units (previous studies of long term US KIA patterns have shown that about 80% of all US combat deaths in Vietnam consistently occur in maneuver battalions). Marine units accounted for 13% of the total and Army units 64%. The balance of the deaths came from US Army advisors, Special Forces and other Army units, plus Air Force and Navy KIA.

As expected, the 3 units with the most casualties were in the I Corps area. In order, they were the Americal Division (192 KIA or 13% of SVN total), the 1st Marine Division (158 KIA - 11%), and the 101st Airborne Division (148 KIA - 10%). Table 11 in the Annex shows the US combat deaths by major US unit and corps area for each of the 9 weeks.

TABLE 6

US COMBAT DEATHS BY UNIT
(June 22 - August 23, 1969)

	Deaths	% of SVN Total	Primary CTZ Of Operation
Marines			
1st Division	158	10.6	I
3rd Division	99	6.6	I
9th Amphibious Bde	14	.9	I
Subtotal	271	18.1	
Army			
Divisions			
101st Abn (Airmobile)	148	9.9	I
Americal	192	12.8	I
1st Cavalry	140	9.3	III
25th Infantry	122	8.1	III
9th Infantry	57	3.8	III & IV
1st Infantry	86	5.7	III
4th Infantry	57	3.8	II
Brigades & Regiments			
11th Armd Cavalry	42	2.8	III
199th Infantry	34	2.3	III
173rd Airborne	37	2.5	II
1st Brigade (5th Inf Div)	35	2.3	I
3rd Brigade (82nd Abn Div)	11	.7	III
Subtotal	961	64.1	
Other KIA	267	17.8	
TOTAL	1499	100	

ANNEX

US COMBAT DEATHS IN VIETNAM
June 22 - August 23, 1969

TABLE 7

US ARMY AND MARINE COMBAT DEATHS BY PROVINCE
(For Week Ending)

	June 26	July 3	12	19	26	Aug 2	9	16	23	Total	% of RVN of Total
I CTZ											
Quang Tri	35	17	11	11	5	14	8	30	12	143	9.5
Thua Thien	14	4	8	31	13	12	11	12	12	117	7.8
Quang Nam	23	16	22	22	9	43	12	40	39	226	15.1
Quang Tin	16	13	18	7	8	2	6	9	9	88	5.9
Quang Ngai	14	25	9	21	10	11	3	26	29	148	9.9
Total	102	75	68	92	45	82	40	117	101	722	48.2
II CTZ											
Binh Dinh	4	2	9	6	3	11	7	10	1	53	3.5
Kontum	6	4	5	6	4	-	2	4	2	33	2.2
Pleiku	6	3	6	2	2	1	4	1	1	26	1.7
Phu Yen	-	-	1	3	-	-	-	1	1	6	.4
Binh Thuan	1	1	5	4	-	-	1	4	4	20	1.3
Other a/	2	-	-	-	-	1	3	2	-	8	.5
Total	19	10	26	21	9	13	17	22	9	146	9.7
III CTZ											
Phuoc Long	3	4	3	5	-	-	2	4	1	22	1.5
Long Khanh	9	3	7	3	1	1	1	5	5	35	2.3
Binh Tuy	-	-	-	-	1	1	-	-	-	2	.1
Binh Long	12	5	8	3	6	2	3	20	17	76	5.1
Tay Ninh	32	15	3	24	8	3	2	35	18	140	9.3
Binh Duong	24	9	15	7	3	13	8	19	13	111	7.4
Gia Dinh	-	-	-	5	-	-	-	-	1	6	.4
Bien Hoa	1	2	2	-	-	-	1	1	3	10	.7
Phuoc Tuy	1	-	-	-	1	-	-	-	-	2	.1
Long An	6	7	7	4	6	1	2	-	5	38	2.5
Hau Nghia	8	6	4	2	11	14	10	8	4	67	4.5
Total	96	51	49	53	37	35	29	92	67	509	33.9
IV CTZ											
Dinh Tuong	5	3	3	3	5	1	2	1	2	25	1.7
Kien Hoa	3	1	-	-	-	-	-	-	-	4	.3
Kien Phong	2	-	-	-	-	-	1	-	-	3	.2
Kien Tuong	1	4	-	-	7	-	-	-	2	14	.9
Vinh Dinh	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	-	2	-	1	-	-	1	5	.3
Total	11	9	3	5	12	2	3	1	5	51	3.4
Army and Marine Not Tabulated	1	3	1	2	2	2	1	5	3	20	1.3
Navy and Air Force	12	5	1	7	3	5	6	7	5	51	3.4
Total	241	153	148	180	108	139	96	244	190	1499	100

Source: Army - DA Casualty File Data Cards. Marine - Form 1300.
a/ Provinces which have only an occasional KIA have been grouped into "Other".

TABLE 8

US COMBAT DEATHS - TOTAL SVN a/

From Friendly Initiated Actions:

Large Unit
(Battalion or Larger)

Week Ending	Clear & Search	Recon in Force	Screening	Sub Total
16 Aug	67	71		138
9 Aug	42	16		58
2 Aug	53	35		88
26 Jul	34	15	1	50
19 Jul	62	35		97
12 Jul	55	36		91
5 Jul	52	40	1	93
28 Jun	44	38		82
Subtotal	409	286	2	697

Small Unit
(Company or Smaller)

Week Ending	Ambush	Recon & Sweep	Patrol	Sub Total
16 Aug			7	7
9 Aug	1		1	2
2 Aug	1	3		4
26 Jul	0			0
19 Jul			1	1
12 Jul		6	2	8
5 Jul		1		1
28 Jun	1	2		3
Subtotal	3	12	11	26

From Enemy Initiated Actions

Week Ending	Harassing Fire	Mining	Attack By Fire	Assault	Ambush	Sub Total
16 Aug	11	5	3	137	2	158
9 Aug	10	2				12
2 Aug	20	8				28
26 Jul	26	7	1	8	1	43
19 Jul	22	10	6		1	39
12 Jul	35	17	1	5	4	62
5 Jul	12	3	3	6		24
28 Jun	34	4	4	23	1	66
Subtotal	170	56	18	179	9	432

a/ Battlefield KIA figures released to the press and preliminary nature of the data. which are not the same as figures because of different accounting

TABLE 9

US COMBAT DEATHS - BY CTZ a/

From Friendly Initiated Actions

Large Unit
(Battalion or Larger)

CTZ	Clear & Search	Recon in Force	Screening	Sub Total
I	359			359
II	41		2	43
III		286		286
IV	9			9
Subtotal	409	286	2	697

Small Unit
(Company or smaller)

CTZ	Ambush	Recon & Sweep	Patrol	Sub Total	Friendly Total
I	3	8	11	22	381
II		4		4	47
III				-	286
IV				-	9
Subtotal	3	12	11	26	723

From Enemy Initiated Actions

CTZ	Harrassing Fire	Mining	Attack by Fire	Assault	Ambush	Enemy Total	Grand Total
I	16	4	9	88	3	120	501
II	23	5	2	6	2	38	85
III	121	47	7	85	4	264	550
IV	10					10	19
Subtotal	170	56	18	179	9	432	1155

a/ Battlefield KIA figures which are not the same as figures released to the press because of different accounting periods.

TABLE 10

US ARMY AND MARINE COMBAT DEATHS BY WEAPON CAUSE
(For Week Ending)

	June 28	July 5	12	19	26	Aug 2	9	16	23	Total	% of SVN Total
I CTZ											
Small Arms	27	23	18	28	21	24	17	42	35	235	15.7
Grenade	12	7	1	1	6	7	6	8	4	52	3.5
Mines, booby traps	19	23	23	23	10	18	12	14	16	158	10.5
Arty, rocket, mortar	14	10	8	6	-	5	1	31	15	90	6.0
Fragments	7	6	9	22	4	15	1	17	10	91	6.1
Other	23	6	9	12	4	13	3	5	21	96	6.4
Total	102	75	68	92	45	82	40	117	101	722	48.2
II CTZ											
Small Arms	5	2	6	6	3	4	4	3	-	33	2.2
Grenade	-	-	1	-	1	-	-	-	-	2	.1
Mines, booby traps	2	4	9	4	1	7	5	2	2	36	2.4
Arty, rocket, mortar	3	1	3	2	1	-	2	6	-	18	1.2
Fragments	6	3	2	4	1	-	3	6	1	26	1.7
Other	3	-	5	5	2	2	3	5	6	31	2.1
Total	19	10	26	21	9	13	17	22	9	146	9.7
III CTZ											
Small Arms	23	14	14	21	3	15	10	25	19	144	9.6
Grenade	1	-	1	2	1	1	1	3	1	11	.7
Mines, booby traps	20	13	7	14	13	2	3	18	7	97	6.5
Arty, rocket, mortar	7	7	3	3	8	1	3	9	8	49	3.3
Fragments	32	8	15	10	10	11	8	18	22	134	8.9
Other	13	9	9	3	2	5	4	19	10	74	4.9
Total	96	51	49	53	37	35	29	92	67	509	33.9
IV CTZ											
Small Arms	2	5	-	2	3	2	1	-	-	15	1.0
Grenade	-	-	-	-	-	-	-	-	-	0	0
Mines, booby traps	6	2	1	1	1	-	2	1	1	15	1.0
Arty, rocket, mortar	-	-	2	1	-	-	-	-	-	3	.2
Fragments	2	1	-	1	1	-	-	-	2	7	.5
Other	1	1	-	-	7	-	-	-	2	11	.7
Total	11	9	3	5	12	2	3	1	5	51	3.4
Army & Marine not tab	1	3	1	2	2	2	1	5	3	20	1.3
Navy and Air Force	12	5	1	7	3	5	6	7	5	51	3.5
Total	241	153	143	160	103	139	96	244	190	1499	100

Source: Army - EAM casualty file data cards.
Marine - Form 1300.

TABLE 11

US ARMY AND MARINE COMBAT DEATHS BY UNIT
(For Week Ending)

	June 27	July 5	12	19	26	Aug 2	9	16	23	Total	% of SVN Total
I CTZ											
Army											
Americal Div	16	35	10	23	13	17	3	31	44	192	12.8
101st Abn Div a/	8	10	21	34	15	13	16	13	12	144	9.6
1st Bde, 5th Inf Div	11	4	1	4	-	7	2	3	3	35	2.3
173rd Abn Bde b/	-	-	-	-	-	-	-	-	2	2	.1
Marine											
1st MAR Div	18	9	17	11	7	31	9	35	21	158	10.5
3rd MAR Div	25	10	10	6	5	7	5	24	7	99	6.6
9th Marine Amp Bde	-	3	4	2	1	2	1	-	1	14	1.0
Other c/	24	4	5	12	4	5	2	11	11	78	5.2
Total	102	75	68	92	45	82	40	117	101	722	48.2
II CTZ											
4th Inf Div	8	5	6	9	5	6	7	7	4	57	3.8
101st Abn Div a/	-	-	1	1	-	-	-	-	-	2	.1
173rd Abn Bde b/	2	1	7	6	2	5	6	5	1	35	2.3
Other Army c/	9	4	12	5	2	2	4	10	4	52	3.5
Total	19	10	26	21	9	13	17	22	9	146	9.7
III CTZ											
1st Cav Div	26	14	12	16	10	3	3	36	20	140	9.4
1st Inf Div	22	6	6	15	2	11	7	9	8	86	5.7
3rd Bde, 9 Inf Div	6	5	4	3	1	1	1	-	6	27	1.8
25th Inf Div	26	14	6	7	12	16	12	15	14	122	8.1
82nd Abn Div	1	1	-	6	2	-	-	1	-	11	.7
101st Abn Div a/	-	1	-	-	1	-	-	-	-	2	.1
199th Lt. Inf Bde	4	4	8	3	4	-	2	3	6	34	2.3
11 Armd. Cav Regt	9	4	8	2	5	-	1	10	3	42	2.8
Other Army c/	2	2	5	1	-	4	3	18	10	45	3.0
Total	96	51	49	53	37	35	29	92	67	509	33.9
IV CTZ											
1 & 2 Bde 9 Inf Div	9	8	3	1	3	1	2	1	2	30	2.0
Other Army c/	2	1	-	4	9	1	1	-	3	21	1.4
Total	11	9	3	5	12	2	3	1	5	51	3.4
Army & Marine Not Tab d/	1	3	1	2	2	2	1	5	3	20	1.3
Navy and Air Force	12	5	1	7	3	5	6	7	5	51	3.5
Total KIA	241	153	148	100	106	139	96	244	190	1499	100

Source: Army-Adjutant General's individual casualty reports (punched cards).
Marine - Form 1300's.

a/ The 101st Airborne is based in I CTZ. However, some casualties are reported in other CTZ's for this unit.
b/ The 173rd Airborne is based in II CTZ but sometimes operates in I CTZ.
c/ Other includes men in support units, advisors, special forces, etc.
d/ Those Army and Marine KIA for which detailed data was not available.

US COMBAT DEATH PATTERNS IN OCTOBER

Summary. During October 1969, US combat deaths dropped to their lowest level since October 1966, but the patterns follow those of July and August. Combat deaths in IV Corps fell to practically zero following redeployment of the 9th Division Brigades. US KIA in II Corps declined the least, and the US 4th Infantry Division and 173rd Airborne Brigade suffered about the same combat deaths in October as they did in July and in August. Combat deaths from mines and booby traps dropped sharply in October, perhaps from less enemy traps being set and/or a slower pace of US operations. US combat deaths can be expected to increase in November if past patterns persist.

US KIA By Area. Table 1 shows that our combat deaths in IV Corps have averaged only 1 a week during the month of October as a result of US troop withdrawals and the low level of enemy activity. Overall levels of US Army and Marine combat deaths are down sharply in all corps areas. The distribution of KIA among the Corps is similar to the July-August period with a slight percentage shift from I Corps to II Corps.

TABLE 1

US ARMY AND MARINE COMBAT DEATHS BY CTZ - 1969
(weekly average)

	June 22 - August 23		September 28 - October 25	
	Number	%	Number	%
I CTZ	80	50	35	47
II CTZ	16	10	10	13
III CTZ	57	35	26	35
IV CTZ	6	4	1	1
Non-CTZ	2	1	3	4
Total	161		75	

The provinces which account for about 75% of US KIA during each period are shown in Table 2. The I Corps provinces of Thua Thien and Quang Tin have fallen from the list in October, and the II Corps provinces of Binh Dinh and Pleiku have been added. The II Corps provinces were added not because US combat deaths increased there, but because they did not decline as sharply as in the rest of the country. This may reflect the relatively low level of combat there already.1/

US combat deaths were more concentrated in October, with the top 9 provinces accounting for 82% of US Army and Marine KIA instead of 75% in July and August. US withdrawals from IV Corps and re-adjustments in I Corps undoubtedly caused part of this concentration, although the enemy may have contracted his own area of operations somewhat during the October lull.

1/ The action around the Bu Prang CIDG Camp in Duc Lap province had not begun during the time period covered in this study.

TABLE 2

PROVINCES WITH HIGH US ARMY AND MARINE DEATH RATES - 1969
(weekly average)

	June 22 - August 23		September 28 - October 25	
	Number	%	Number	%
I CTZ				
Quang Tri	16	10	10	14
Thua Thien	13	8	(2)	-
Quang Nam	25	15	11	15
Quang Tin	10	6	(2)	-
Quang Ngai	16	10	10	14
II CTZ				
Binh Dinh	(6)	-	5	7
Pleiku	(3)	-	4	5
III CTZ				
Binh Long	8	5	4	5
Tay Ninh	16	9	7	9
Binh Duong	12	7	6	8
Hau Nghia	7	5	4	5
Total	123	75	61	82

Numbers in parenthesis shown for reference only - not included in totals.

US KIA by Weapon Cause. Table 3 shows that, while no major change occurred in the distribution of US Army and Marine combat deaths among weapons causes between July-August and October, US KIA from mines and booby traps have dropped sharply.

TABLE 3

US ARMY AND MARINE COMBAT DEATHS BY WEAPON CAUSE - 1969
(weekly average)

	June 22 - August 23		September 28 - October 25	
	Number	%	Number	%
Weapons Cause				
Small arms	47	29	22	29
Grenades	7	4	5	7
Mines/booby traps	34	21	17	23
Arty, rocket, mortar	18	11	8	11
Fragments	29	18	13	17
Other	26	17	10	13
Total	161		75	

Previously we reported that mine and booby trap KIA remained relatively constant despite the level of enemy activity.1/ However, Table 4 indicates that, as the lull continued after July, the number of US KIA from mine and booby traps declined in all four Corps areas.

TABLE 4

US Army and Marine KIA from Mine and Booby Traps
(Weekly Average)

	June	July	August	October
I CTZ	21	20	15	10
II CTZ	4	5	4	2
III CTZ	11	12	8	5
IV CTZ	5	1	1	0
Countrywide	41	38	28	17

The reason for this decline is not clear. The IV Corps decline is directly traceable to US troop withdrawals, and some of the I Corps decline may be as well. Other explanations offered include: (1) the population is less receptive now to having the VC place mines and booby traps in their areas, (2) US forces have changed their method of operations, and (3) enemy forces may have set fewer mines and booby traps during the lull months.

Weekly figures for October show a rising trend for mine and booby trap deaths in all Corps areas, except IV Corps. US KIA from this cause averaged about 13 a week during the first two weeks of October and 21 a week during the last two. This rise coincided with increased enemy preparation of the battlefield and presumably increased friendly operations. For now, we conclude that the drop in mine and booby trap combat deaths was due to the reduced level of enemy and friendly activity rather than any fundamental shifts in attitudes toward the VC.

US KIA by Unit. Table 5 shows that Marine combat units accounted for a slightly higher percentage of KIA in October, compared with the July-August period. As expected, 3rd Marine Division combat deaths have declined sharply with redeployment. The 9th Amphibious Brigade (III MAF) KIA have increased primarily because of actions involving combined action platoons which report to this unit.

Among Army divisions, the 101st Airborne Division deaths have plunged 75% from their July-August level. The 11th Armored Cavalry and 199th Infantry division had very few KIA in October, and the 9th Division combat deaths dropped sharply after redeployment. On the other hand, both the 4th Infantry Division and the 173rd Airborne Division in II Corps have maintained the same rate of KIA in October as in the summer; they now account for almost 15% of all US KIA, versus only 6% in July and August.

1/ See "US Combat Deaths in Vietnam," CNA Analysis Report, September 1969, p. 16.

TABLE 5

US ARMY AND MARINE COMBAT DEATHS BY UNIT - DATE OF REPORT
(Weekly Average)

	June 22-August 23		September 28-October 25		Primary CTZ of Operation
	Number	%	Number	%	
Marines					
1st Division	18	10.8	9	11.3	I
3rd Division	11	6.6	4	5.0	I
9th Amphibious Bde	2	1.2	4	5.0	I
Subtotal	31	18.6	17	21.3	
Army					
Divisions					
101st Abn (Airmobile)	16	9.9	4	5.0	I
Americal	21	12.8	8	10.1	I
1st Cavalry	16	9.3	8	10.1	III
25th Infantry	14	8.1	9	11.3	III
9th Infantry	6	3.8	.5	.6	III
1st Infantry	10	5.7	3	3.8	III
4th Infantry	6	3.8	7	8.9	II
Brigades & Regiments					
11th Armd Cavalry	5	2.8	.5	.6	III
199th Infantry	4	2.3	.5	.6	III
173rd Airborne	4	2.5	4	5.0	II
1st Bde (5th Inf Div)	4	2.3	3	3.8	I
3rd Bde (82nd Abn Div)	1	.7	1	1.3	III
Subtotal	107	64.0	48.5	61.1	
Other Army & Marine KIA	24	14.4	10	12.6	
Navy and Air Force KIA	5	3.0	4	5.0	
Total	167		79.5		

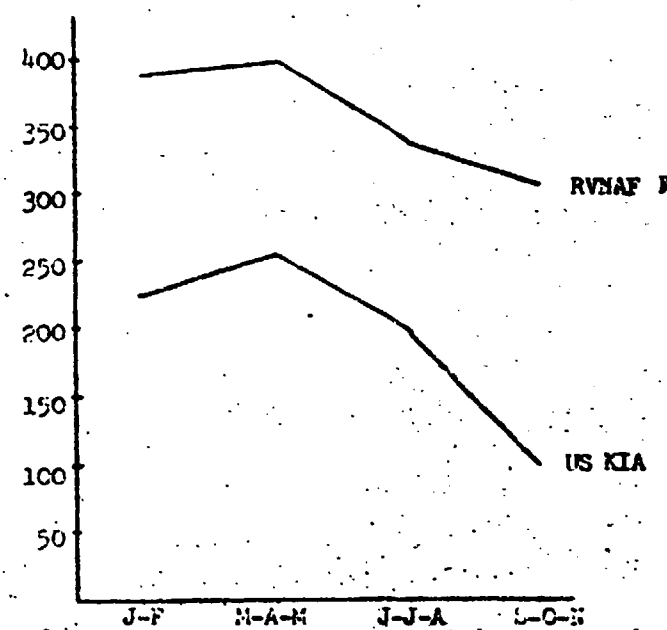
COMBAT DEATHS IN SVN

The patterns of US and RVNAF combat deaths suggests that the burden of combat was shifting from US forces to RVNAF during the September-November period.

US combat deaths averaged 93 per week during September-October-November, the lowest rate in 3 years, and only 44% of the rate (204) for the first 8 months of 1969. In contrast, RVNAF combat deaths have remained high, at 309 per week for September-October-November, compared to a rate of 373 per week during January-August. (See graph and table.)

In November, US deaths increased 27%, RVNAF deaths 55%, and enemy deaths 3% over October. The large RVNAF increase tends to support intelligence reports and enemy incident statistics, which both indicate increasing enemy emphasis on targeting RVNAF units.

The casualty patterns indicate that the combat burden was shifting to RVNAF during the September-November period. However, this may have been due more to heavier enemy targeting of RVNAF than to RVNAF going on the offensive.



COMBAT DEATHS IN SVN
(Weekly Average)
1969

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
US KIA	179	268	297	178	273	257	144	160	111	85	104
RVNAF KIA	320	455	407	346	444	370	293	354	410	293	314
Enemy KIA	2474	3582	4472	3392	3939	3926	2312	2794	2419	1975	2716

US COMBAT DEATHS AND WOUNDED

Summary. Both US combat deaths and wounded declined during 1969, but the ratio of wounded to killed increased steadily during the first 3 quarters of 1969. The rise probably stems from increased enemy use of attacks by fire, booby traps and sapper tactics. Non-combat deaths accounted for 33% of all US deaths in SVN during the 4th quarter; 27% of such deaths in Oct-Nov 1969 came from helicopter crashes.

Table 1 indicates that the ratio of US wounded to killed increased in 1969 over 1968. Moreover, the ratios increased steadily through the first 3 quarters of 1969 and then dropped slightly during the 4th quarter. Examination of monthly and weekly figures indicates that the ratios vary significantly from month to month and from week to week. From August to September the total WIA/KIA ratio went from 6.6 to 11.4, for example. At present we have no explanation for the wide monthly and weekly swings, but they are probably related to defects and delays in the reporting system and to the tempo and type of enemy activity.

TABLE 1

RATIO OF US WOUNDED TO KIA

	1968	1969	1969 1Qtr	2Qtr	3Qtr	4Qtr
Totals (000)						
Total WIA	92.8	70.1	19.4	25.0	16.7	9.0
Hospitalized WIA	46.8	32.9	8.3	12.3	8.1	4.2
US KIA	14.6	9.5	3.2	3.2	1.9	1.2
Ratios						
Total WIA/KIA	6.4	7.4	6.1	7.8	8.8	7.5
Hospitalized WIA/KIA	3.2	3.5	2.5	3.8	4.3	3.5

However, the higher WIA/KIA ratio in 1969 may be partially explained by Table 2, which indicates that fragment type wounds are now accounting for most of the US combat deaths in 1969. From January 1967 through September 1968, enemy small arms accounted for about half of the US KIA, with fragments and other causes accounting for the other half. In the last half of 1969, small arms fire accounted for only 30% of the US KIA with fragments and other causes accounting for the rest. Thus, we suspect that the higher ratio of US WIA to KIA in 1969 is related to increased enemy use of attacks by fire, booby traps, and sapper tactics.

TABLE 2

US ARMY AND MARINE COMBAT DEATHS
BY WEAPON CAUSE
(Percentage)

	Jan 67-Sep 68	22 Jun 69-30 Sep 69	Oct 69-Dec 69
Small Arms	49	30	29
Fragments			
Mine/Booby Trap	24	18	22
Arty/Rocket/Mortar	20	12	11
Grenades	3	5	4
Misc Fragments	NA	17	18
Total	47	52	55
Other	4	18	16

As a sidelight, Table 3 indicates that US deaths from non-combat causes have remained quite constant at about 40 per week in both 1968 and 1969. Thus, as combat deaths have fallen, non-combat deaths have accounted for a steadily increasing share of total US deaths in South Vietnam; from 14% of the total in 1st quarter 1969 to 33% in the fourth quarter. Stated another way, US non-combat deaths were half as large as US combat deaths in the 4th quarter.

TABLE 3

US NONCOMBAT DEATHS
(000)

	1968	1969	1969 1qtr	2qtr	3qtr	4qtr
Totals						
US Non Hostile Deaths	2.0	2.2	0.5	0.6	0.5	0.6
US KIA	14.6	9.5	3.2	3.2	1.9	1.2
Total Deaths	16.6	11.7	3.7	3.8	2.4	1.8
Non Hostile as % of Total Deaths	12	19	14	16	21	33

Table 4 shows that the leading cause of non-hostile deaths in Vietnam during October-November 1969 was aircraft crashes, which accounted for 38% of all non-hostile deaths; 27% of such deaths came from helicopter crashes. (Non-hostile helicopter crashes killed 103 US troops in October-November, compared to 71 killed in combat crashes--the cumulative total for the war is: non-combat--1450 deaths, combat--1953 deaths.) Other major causes of non-hostile deaths in SVN are drowning and suffocation, illness and disease, accidental homicide, and vehicular crashes; together with aircraft losses, these causes are responsible for 72% of non-hostile deaths in recent months.

TABLE 4

US NON-HOSTILE DEATHS IN SVN
BY CAUSE

	Cumulative Thru Sep 1969		Oct & Nov 1969	
	Deaths	%	Deaths	%
Major Causes				
Air-Fixed Wing	544	8	42	11
Air-Helo	1,347	20	103	27
Total Air	1,891	28	145	38
Drowned/Suffocated	671	10	43	11
Illness[a/]	615	9	39	10
Accidental Homicide	554	8	29	7
Vehicle Loss/Crash	536	8	24	6
Subtotal	4,267	64	280	72
Other Causes	2,411	36	107	28
Total	6,678	100	387	100

a/ Includes stroke, heart attack, hepatitis, malaria, and other illnesses.

US ARMY COMBAT DEATHS IN VIETNAM

Summary. During the four month period from 26 April through 29 August 1970, US Army combat deaths averaged 70 per week, representing 84% of total US deaths in SVN. Combat deaths declined 30% during the second half of the period due to reduced enemy activity and the monsoon rains in the south. MR I accounted for 66% of the Army deaths; six provinces, four of them in MR I, accounted for 70%. The 101st and Americal Divisions, both operating in MR I, accounted for 45% of all the Army KIA.

The major causes of deaths on the ground were small arms fire (20%) and mines and booby traps (20%). Helicopter losses accounted for a 20% share of US Army deaths -- up sharply from 1968-69. The absolute number of deaths from helicopters this year is above the comparable periods of 1968 (up 80%) and 1969 (up 40%). Helicopter sorties and losses have been steady over the past three years, despite the overall decline in military activity, indicating that deaths from helicopter crashes will not decline appreciably until sorties decline.

This analysis deals only with US Army combat deaths in South Vietnam. No other US combat deaths are covered in any detail. Combat deaths incurred in Cambodia are excluded. The analysis concentrates on the Army deaths because they comprise the bulk of US combat deaths in South Vietnam, and detailed data on them are readily available and easily retrievable from an existing computer file. The analysis essentially covers the 4 month period of May through August of this year.

Table 1 shows the total US combat deaths in SEA from April 26-August 29, 1970. Army personnel account for 84% of the deaths in SVN.

TABLE 1

US DEATHS IN SEA: APRIL 26-AUGUST 29, 1970
(Total and Weekly Average)

	Number	Weekly Average
Cambodia a/	362	20
Army (Less Cambodia)	1266	70
Navy	24	2
USMC	181	10
Air Force	38	2
Total Deaths	1871	104
SVN Deaths	1509	84

Source: OSD (Comptroller).
Note: These data differ slightly from the ARMIA file since they are based on reported date of death, not actual date.
a/ All deaths in Cambodia are assumed to be Army personnel. A weekly average is shown only for completeness of the table.

US Army combat deaths in SVN averaged 70 per week from April 26 through August 29, 1970. As in previous years, enemy military activity was low in July and August compared to May and June. As a consequence, US Army combat deaths were 29% lower in July-August than in May-June (58/week vs 82/week).

Where US Army Combat Deaths Occur

Six provinces accounted for about 70% of the US Army KIA during the May-August period. Four of them are in MR I, and, by themselves, accounted for over half of the countrywide total, as shown in Table 2.

TABLE 2

US ARMY COMBAT DEATHS IN SELECTED RVN PROVINCES
MAY-AUGUST 1970

	MR	Weekly Average	Percent of RVN Total (Army only)
Thua Thien	I	15.1	21.4
Quang Tin	I	9.3	13.2
Quang Ngai	I	7.1	10.1
Quang Tri	I	5.9	8.4
Subtotal		37.4	53.1
Binh Dinh	II	6.8	9.7
Tay Ninh	III	4.9	7.0
6 Province Total		49.1	69.8
RVN Total		70.4	100

Source: ARKIA Computer File.

MR I, as a whole, accounted for 55% (692 of 1,268) of the Army deaths in RVN during the period, compared to a share of 40% (1,111 of 2,830) for the same period last year. The shift into MR I this year probably stems from the following factors:

- US Army redeployments, which cut troop exposure elsewhere in the country.

- US Marine deployments out of MR I, which left areas to be covered, to some extent, by the remaining Army forces. (Marine KIA are about 20% of what they were in the same period last year - 10 vs 48 per week.)

- A higher level of enemy threat than in the other MRs.

- Less favorable impact from the Cambodian operations than in the other MRs.

Combat Deaths by Unit

The major US Army units operating in the 6 top provinces are:

- The 101st Airborne Division (Quang Tri, Thua Thien)
- The Americal Division (Quang Tin, Quang Ngai)
- The 4th Infantry Division and the 173rd Airborne Brigade (Binh Dinh)
- The 25th Infantry Division (Tay Ninh).

The 101st accounted for 26% of total US combat deaths during the period, followed by the Americal (19%), the 4th Infantry and the 173rd (which together had 9% of the total), and the 25th Infantry (6%). The map and Table 3 summarize these results.

The two divisions operating in MR I -- the 101st and the Americal -- each accounted for less than 15% of total Army deaths in the comparable periods of 1968 and 1969. This year, the share of the 101st rose to 26% (even though its absolute number of deaths declined 14% - 333 vs 387 in May-August 1969). The Americal Division held at prior year levels of about 15% until July and August, when its share rose to equal that of the 101st at about 25% (because its absolute number held steady at 14/week in the face of declines in other units).

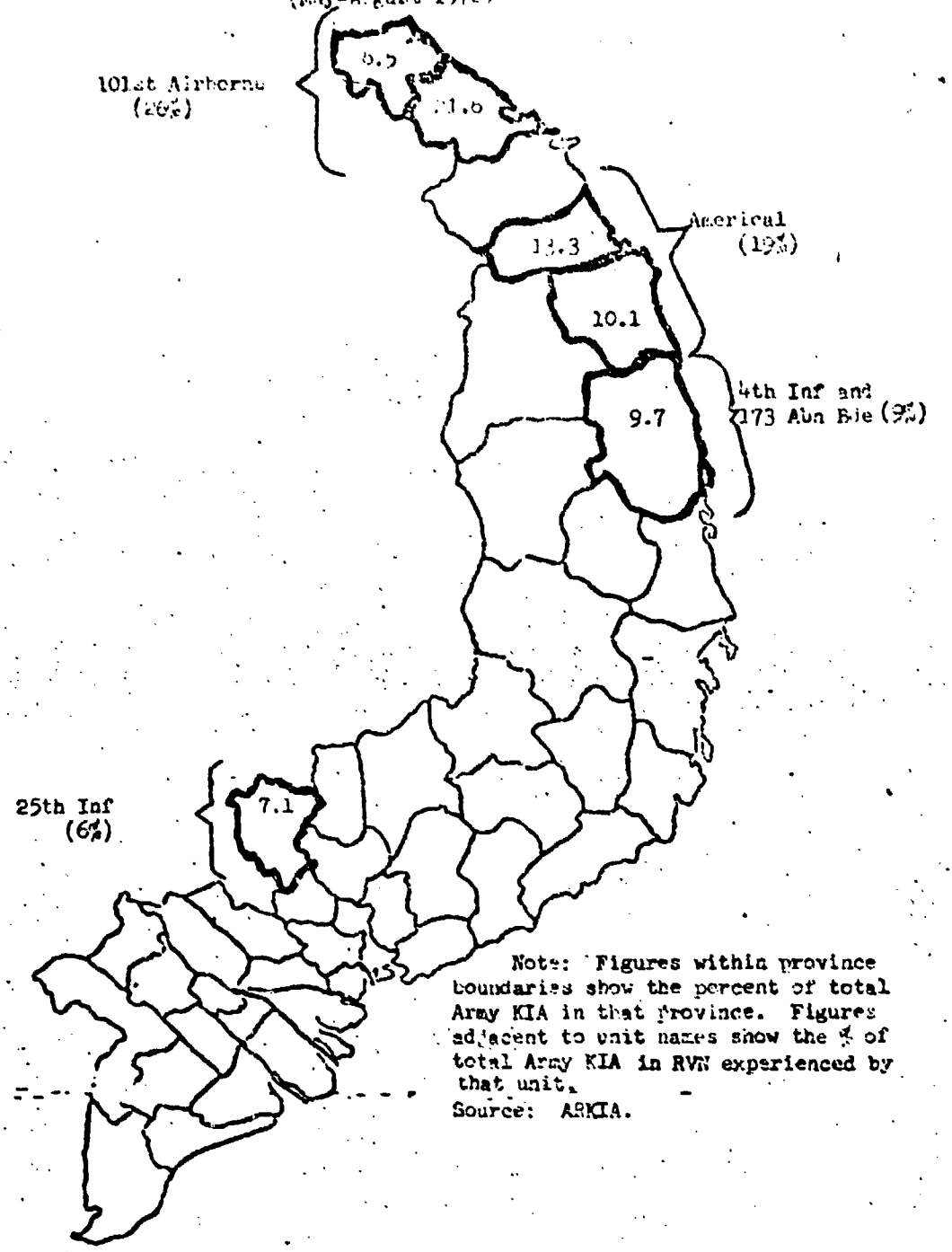
TABLE 3

ARMY KIA BY SELECTED UNITS

	May-June			July-August		
	1968	1969	1970	1968	1969	1970
Weekly Average						
101st Airborne	28	27	23	17	16	14
Americal	24	26	13	9	17	14
4th Infantry	17	12	4	8	6	3
173rd Abn Bde	10	5	4	3	4	2
1st Cav	26	24	4	14	15	7
25th Inf	36	20	5	18	12	4
All Other	94	85	29	61	46	14
Total	235	199	82	130	116	58
Percentage						
101st Airborne	12	14	28	13	14	24
Americal	10	13	16	7	15	24
4th Inf Div	7	6	5	6	5	5
173rd Abn Bde	5	2	5	2	3	4
1st Cav	11	12	5	11	13	12
25th Inf	15	10	6	14	10	7
All Other	40	43	35	47	40	24
Total	100	100	100	100	100	100

Source: ARMIA Computer File.

FIGURE 1
US ARMY COMBAT DEATHS IN VIETNAM
(May-August 1970)



Note: Figures within province boundaries show the percent of total Army KIA in that province. Figures adjacent to unit names show the % of total Army KIA in RVN experienced by that unit.
Source: ARKIA.

Causes of Combat Deaths

Table 4 indicates that total US Army deaths in ground actions are down substantially from previous years, but deaths from helicopter losses have risen about 40% above the comparable period of 1969.

On the ground:

- The major cause of death was small arms fire, which accounted for about 30% of the total.

- Mines and booby traps accounted for about 20%. Such deaths are lower than in the comparable periods of 1969, but about the same as in 1968.

- Deaths from small arms, mines, and booby traps increased during the "lull" period of July and August. Their share of the total rose from 53% to 67%, as all other categories fell (the shift may stem partly from a reporting anomaly, since deaths from "fragments" and "other" dropped 92%).

In the air:

Deaths resulting from helicopter losses through September 1970 are about 10% higher than in the first nine months of 1969 and are about 25% above the same period in 1968.

Comparing May-August of 1970 with the same four months in 1968 and 1969:

- Helicopter losses accounted for about 20% of total US Army combat deaths, up sharply from their share of 4% and 6% in the same periods of 1968 and 1969, respectively.

- Helicopter deaths were 40% above the 1969 levels and 80% higher than in 1968.

TABLE 4

ARMY KIA BY CAUSE OF DEATH

	May-June			July-August		
	1968	1969	1970	1968	1969	1970
Weekly Average						
Helicopter	9	11	16	6	8	11
Small Arms	91	57	19	49	36	24
Mines/Traps	15	25	13	15	19	15
Rockets/Mortars	18	23	9	11	10	6
Fragments	63	56	16	34	28	1
Other	39	27	9	25	15	1
Total	235	199	82	130	116	58
Percentage						
Helicopter	4	6	20	5	7	19
Small Arms	39	29	23	38	31	41
Mines/Traps	6	13	16	11	16	26
Rockets/Mortars	8	11	11	9	9	10
Fragments	27	28	20	26	24	2
Other	16	13	10	11	13	2
Total	100	100	100	100	100	100

Source: ARKIA Computer File.

The level of helicopter activity seems to be a function of helicopter assets on hand. A steady level of more than 3,000 US Army helicopters have been flying in SVN since December 1968. Table 5 shows that helicopter sorties increased each year, and leveled off in 1969 and 1970.

Moreover, the allocation of missions has been constant over the years:

- Attacks: 11% of total sorties.
- Combat assaults: 22% of total sorties.
- Combat cargo lifts: 10% of total sorties.
- Other combat missions: 22% of total sorties.
- Other missions: 35% of total sorties.

TABLE 5

HELICOPTER SORTIES IN SVN
(Monthly Average)

Thousands of Sorties	1966	1967	1968	1969	1970 a/
All Services	250	460	613	703	689
Army only	211	419	556	655	648

a/ Through August. 1966-69 figures are for entire year.
Source: OSD (Comptroller) SEA Statistical Summary, Tables 6 and 314.

Helicopter losses follow a pattern almost identical to the inventory and activity trends - an increase in 1966 and 1967 to a rather constant level first attained in 1968. Table 6 shows the number of helicopters lost per month during the first seven months of each year. We have lost helicopters at the rate of about 90/month during the first seven months of each year for the last three years regardless of variations in the ground war. Army helicopters account for about 90% of both sorties and losses.

TABLE 6

HELICOPTER LOSSES IN SEA
(Monthly Average, Jan through July)

	1966 a/		1967		1968		1969		1970 b/	
	All Services	Army	All Services	Army	All Services	Army	All Services	Army	All Services	Army
Combat Losses (SVN)	10	8	20	14	45	43	41	41	43	45
Other Losses	16	11	30	25	47	36	50	39	44	37
Total	26	19	50	39	92	79	91	80	87	81

a/ Average for the entire year; monthly data not available.
b/ Adjusted to exclude 26 helicopters presumed lost in Cambodian operations.
Source: OSD(Comptroller) SEA Statistical Summary, Tables 6, 350, 351.

Combat deaths from helicopter losses are likely to decline only as sorties are reduced. Sorties will be reduced only if the number of available aircraft are reduced. Current plans call for a 30% decline in available helicopters by December 1971.

Moreover, helicopter deaths are likely to account for an increasing share of the combat death total, as other causes decline during continued US redeployments.

US DEATH RATES IN RVN: A FORECAST

An analysis of US combat deaths in Vietnam from 1965 to present reveals two bases for forecasting:

- A regular yearly cycle which peaks during early spring and ebbs in late summer and fall.

- The level of US troop strength which, during periods of low activity, seems to establish a "floor" or minimum level of combat deaths (additionally, nonhostile deaths also appear to be purely a function of troop strength).

Using these two observations as a starting point, we estimated the number of combat deaths by month. The technique (a ratio-trend method) begins with last year's data averaged around a given month and adjusts it for current trend and magnitude. The results of this exercise are portrayed in Figure 1 which shows actual combat deaths (dashed line) and estimated combat deaths (solid line) over a four year period. Although the technique appears to work well, the uncertainty associated with the forecast is still great - the chances are estimated to be one in three that the actual number of combat deaths in any given month will be outside the range we have indicated.

The Forecast

- During 3rd qtr 1970, combat deaths averaged 67 per week; the 4th qtr 1970 rate is currently 37 per week.

- We expect combat deaths to range between 29-54 per week during 1st qtr 1971; the average weekly rate should be about 42.

- US combat deaths will probably reach a peak in April (but of much lesser magnitude and less clearly defined than in any year since 1966 - about 50 combat deaths per week) followed by a gradual decline in May and June. The decline should continue through the second half, reaching about 20 combat deaths per week in September or October.

- In the past six years, we have never averaged fewer than 9 combat deaths per week per 100,000 men. At end November strength (about 374,000) the computed minimum is 34 per week; at the projected strength level for next May (284,000), we can expect the minimum to average 26 per week.

- Any given week may, of course, fluctuate widely from the estimate. The numbers cited are averages that should hold most of the time. Furthermore, the estimates depend upon repetition of the existing pattern of activity. Policy decisions by either side which would cause activity to run counter to its past pattern could render the forecast meaningless.

A word about nonhostile deaths. As noted earlier, these seem to be strictly a function of troop strength, averaging 3-4 per 10,000 troops per month. With the continued redeployment of US forces scheduled for 1971, we expect nonhostile deaths to gradually decline, reaching about 23 per week in June.

TABLE 1

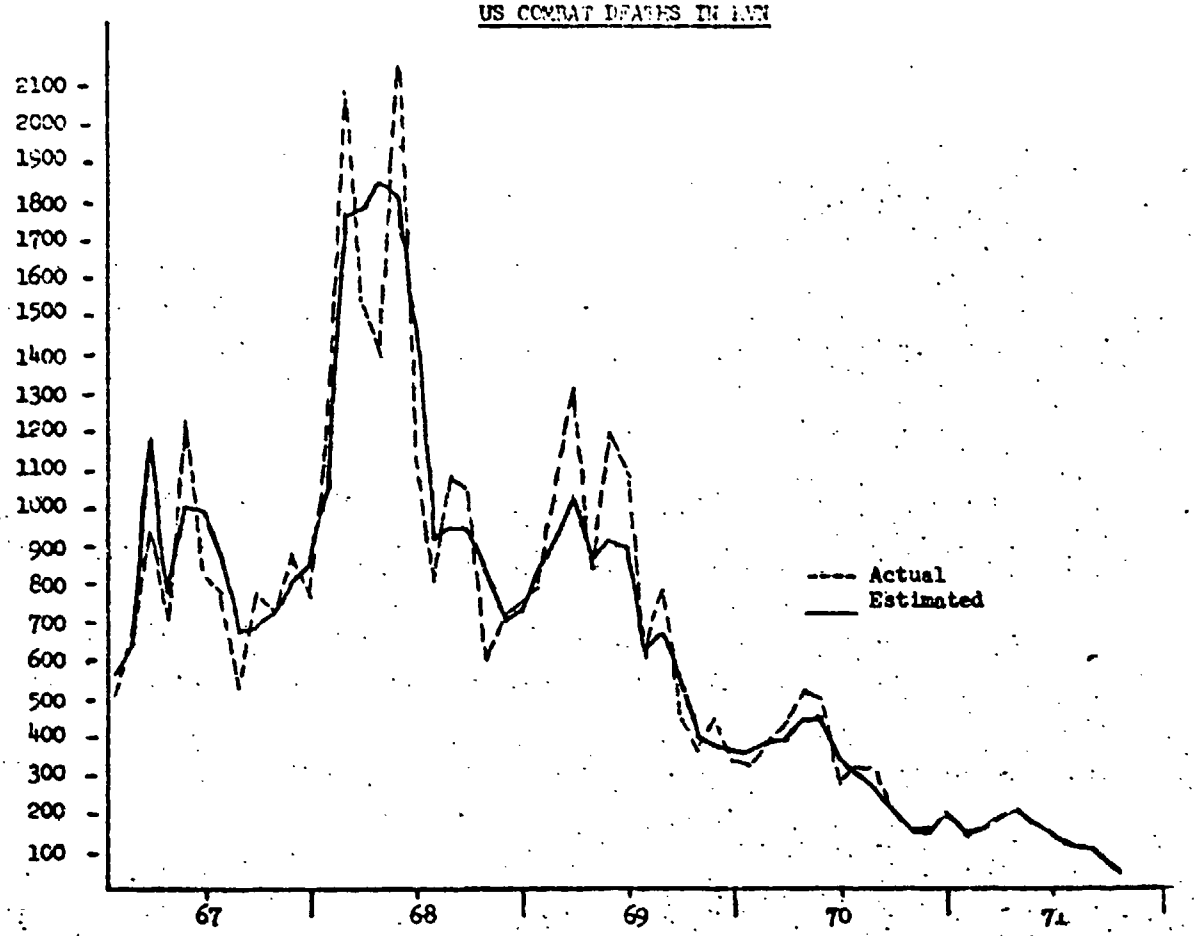
FORECAST OF US COMBAT DEATHS IN RVN
(Weekly Average)

	1971 Jan	Feb	Mar	Apr	May	Jun
US Strength (000) a/	332	320	308	296	284	260
Combat Deaths						
Estimated Minimum	30	29	28	27	26	23
Estimated Total	37	43	45	51	40	34
Range b/	29-45	34-52	36-54	40-62	32-48	27-41
Nonhostile Deaths	31	32	28	28	26	24
Total Deaths	68	75	73	79	66	58

a/ Straight line reduction projected through May; June figure based on preliminary fiscal guidance.
b/ There is a 67% chance the actual value will fall in the range stated.

FIGURE 1

US COMBAT DEATHS IN IVN



NON-HOSTILE US DEATHS IN RVN

Summary. Non-hostile deaths sustained by US forces in Vietnam are largely a function of force strength. Unlike deaths resulting from hostile action, non-hostile deaths show no direct relation to the patterns and levels of enemy or friendly activity.

An analysis of data from 1966-1970 also shows:

- We have averaged 3-4 non-hostile deaths per 10,000 troops per month for the last five years.

- There has been a slight rise in the US non-hostile death rate in 1970; presumably this is the result of inactivity (and related morale problems) and the increased percentage of support forces in the troop mix.

- The largest single cause of non-hostile deaths has consistently been aircraft losses (31% in 1970).

- An examination of the causes of non-hostile deaths revealed no significant change in the proportion due to each cause in the past four years.

- There is no evidence of change in the reporting criteria by which casualties are categorized as hostile or non-hostile.

Details

The redeployment of US forces from RVN and the assumption of the major burden of the war by GVN forces have brought about a dramatic decline in US combat deaths. The decline has been followed closely by the public and observers of the war.

In contrast, non-hostile deaths suffered by US forces have not declined as rapidly, and this has prompted a charge that hostile deaths are being shifted to the non-hostile category to keep the combat death figure low.

The charge is without foundation. It stems from an incomplete understanding of the factors involved.

Hostile deaths have declined more than 70% from the peak reached during 1968 (4221 vs 14,592). But non-hostile deaths have remained nearly steady; last year they were only 5% below 1968 levels. (Table 1) This has increased the non-hostile share of total deaths from 18.3% in 1969 to 30.4% in 1970. This is the statistic that has drawn a notice recently, leading to the charge noted above.

Hostile deaths are primarily a function of the tempo of military activity. The number of hostile deaths per 1000 troops follows the well known trend of military activity in RVN, building to a peak in 1968 and then dropping dramatically to the lowest point in five years during 1970.

Non-hostile deaths, on the other hand, are directly related to US troop strength. This is indicated by the relatively steady behavior of the number of non-hostile deaths per 1000 troops in the past five years. The slight rise during 1968 and 1969 is not the result of number juggling but is more likely related to the following factors:

- troops previously in combat are engaged more and more in non-combat related duties (e.g. maintaining equipment, training, construction). Accidents related to these activities would contribute to non-hostile death rates and could be expected to rise slightly;

- with fewer combat operations, more free time is available to the troops, possibly resulting in more mishaps during off-duty hours;

- the lowering of morale, the drug and race problems in RVN and easy access to alcoholic beverages (and greater opportunities to use them) could all contribute to a rise in non-hostile deaths;

- the mix of US forces has changed as combat troops are withdrawn more rapidly than support forces. Combat troops accounted for 29% of the total US force in July 1969; In January 1971, 24% were combat troops. By May 1971, combat forces in RVN will have been reduced by 59% compared to an overall reduction of 48% of total US forces.

In short, a proportionately greater number of people are present in cities and densely populated US support installations as the war winds down and redeployments and Vietnamization proceed. These environments are where deaths from non-hostile causes are probably more likely to occur.

Finally, if we assume that a "normal" level of non-hostile deaths should be 3.7 per 1,000 troops per year (the average during 1966-1968), then the ratio for 1970 shows an "inflation" of about 327 deaths during the year, or about 6.3 deaths per week, hardly a number to support a conspiracy argument.

TABLE 1

HOSTILE VS NON-HOSTILE DEATHS
(Yearly Data)

	1966	1967	1968	1969	1970
Deaths					
Hostile	5008	9378	14592	9414	4221
Non-hostile	1045	1680	1919	2113	1844
Total	6053	11058	16511	11527	6065
Non-hostile deaths as % of total	17.3	15.2	11.6	18.3	30.4
Deaths/1000 Troops a/					
Hostile	18.42	20.96	27.85	17.82	10.09
Non-hostile	3.71	3.72	3.64	4.07	4.54

Source: OSD Comptroller

a/ Computed on a monthly basis using end of month strength and cumulating over the year.

Table 2 shows no significant trends or changes in the relative proportion of non-hostile deaths by cause of deaths. The largest single cause in the past four years has been non-hostile aircraft losses (about 30%).

TABLE 2

NON-HOSTILE DEATHS BY CAUSE
(Percent of Yearly Total)

Cause	1967 a/	1968	1969	1970 b/
Aircraft loss	35	26	26	31
Vehicle crash	7	9	7	6
Drowning/suffocation	8	11	10	8
Burns	1	2	1	1
Illness	8	9	10	8
Self-destruction	5	7	11	10
Homicide	6	10	9	7
Other c/	30	26	26	29
	100	100	100	100

Source: OSD Comptroller

a/ Ten months data (March-December)

b/ Eleven months data (January-November)

c/ Includes accidental deaths not included in the self-destruction and homicide categories and deaths from miscellaneous or unknown causes.

A detailed examination of the ratio of non-hostile deaths per 1,000 troops on a month by month basis shows that the rate has remained remarkably steady. The ratio has never been below .21 per 1,000 per month, or above .54 per 1,000 per month. Table 3 shows the minimum and maximum value of the ratio from 1965 through 1970.

TABLE 3

NON-HOSTILE DEATHS IN RVN
(deaths per 1000 men per month)

Deaths Per 1000 Per Month	1966	1967	1968	1969	1970
Minimum Value	.22	.21	.24	.28	.30
Maximum Value	.42	.54	.39	.43	.48

Over the last five years we have averaged 3-4 non-hostile deaths per 10,000 troops per month. In only one month (July 1967) has the number risen to 5 per 10,000 per month.

A final observation: A troop commander has no incentive to report hostile deaths as non-hostile. The latter are a sign of carelessness and bad morale. Commanders tend to get relieved for such things.

COMBAT DEATHS IN SOUTHEAST ASIA

Summary

US combat deaths in Southeast Asia have declined nearly 90% from the peak levels of early 1969. After a decline following Tet 1968, Vietnamese combat deaths leveled off in 1969 and early 1970. They peaked sharply during the Cambodian and Laotian campaigns.

US Combat Deaths:

- Have followed an annual cycle which diminishes each year.

- Showed their most recent upturn during the support of GVN forces in Laos. The increase was extremely mild compared to US losses in Cambodia and before that, during TET '68. The minimal losses during Lam Son 719 obviously resulted from restricting US troops to a support role.

- The most significant decline in US combat deaths has occurred in MR 1 - the scene of heaviest US main force action in past years.

- MR 3 combat deaths have declined to a point where, in 1970, the cyclical pattern broke.

- MR 4 declines are attributable to the withdrawal of most US troops in 1969.

Vietnamese Combat Deaths:

- Vietnamese deaths established a base level of 300-400 per week following TET '68.

- Combat deaths peaked sharply above the base during the Cambodian and Laotian campaigns.

- More Vietnamese are killed in MR 4 than anywhere else. Most of these are territorial forces (RF/PF) receiving enemy pressure as a counter to ARVN operations in traditional enemy base areas.

- Approximately equal number of Vietnamese combat deaths occur in MR's 1, 2, and 3.

Enemy Combat Deaths:

- Enemy deaths show a gradual downtrend with abrupt peaks during Spring activity and the three major military operations (TET '68, Cambodian operations, Lam Son 719).

- Enemy deaths are about evenly distributed among RVN's military regions.

- The downtrend in enemy combat deaths is probably due to his strategy of avoiding main force actions combined with the reduction of US involvement. The downtrend is moderated by an increase in RVNAF initiative in carrying the war to the enemy.

Details

US combat deaths in Southeast Asia have declined sharply in the past three years. They are nearly 90% below the peak reached in early 1968 (46 per week in 1st Qtr 1971 vs 374 per week in 1st Qtr 1968).

Vietnamese 1/ combat deaths declined rapidly during 1968, after reaching an all time high during the enemy's 1968 TET offensive. Since 1969 they have been fairly steady, interrupted by sharp upward surges during the Cambodian and Laotian operations.

US Combat Deaths

Graph #1 shows the combat death rates for free-world forces in Southeast Asia from the beginning of 1968 through the present. The curve for US forces shows:

- A down trend over the last 3½ years.

- An annual cycle - higher KIA in the first half of each year - paralleling the cyclical pattern of enemy activity.

- Each new cycle is lower than the past one and the fluctuation of each new cycle narrows.

- The most recent upturn reflects increased combat activity, especially US support to ARVN operations in Laos. It is the smallest upturn in US casualties associated with the three major military operations (TET 68, Cambodia and Lam Son 719).

Graph #2 shows where US combat deaths occur.

- Military Region 1 has been the area of heaviest US main force involvement, and highest casualties. It has also been the region most affected by US redeployments, resulting in the sharpest downtrend in US combat deaths.

- Military Region 2 has never been the scene of fighting on a scale comparable to MR 1. US presence and combat deaths have consistently been well below MR 1 levels. Declines as US troops redeployed have been more modest.

- The steady drop in US KIA in MR 2 since 1st Qtr 1969 is the combined result of US redeployments and a definite reduction in enemy activity. These two factors caused the cyclical pattern to break in 1970, producing an almost linear downtrend until this year.

1/ Deaths of the Regular, Regional and Popular Forces. No paramilitary or civilian deaths are included

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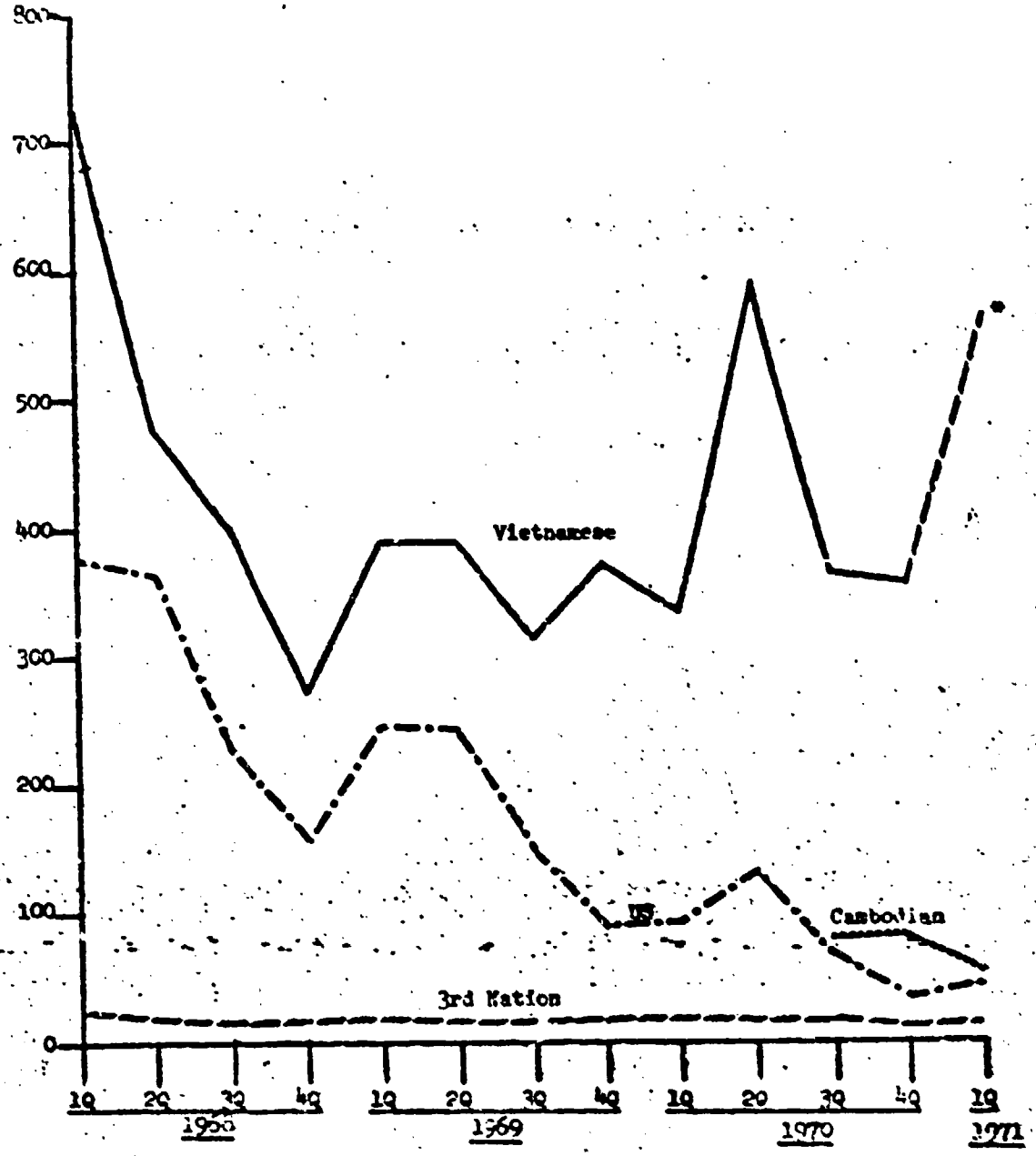
GRAPH #1

FREEWORLD FORCES COMBAT DEATHS IN SOUTHEAST ASIA
(Weekly Averages)



* 1Qtr 1971 RVNAF KIA data is an estimate based on preliminary data.

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GRAPH A2

US DEATHS IN SEA, EAST ASIA
(Weekly averages by Military Region)

17

- US deaths have been lowest in MR 4. Few US forces ever operated in this area. The withdrawal of the US 9th Division left only about 8500 combat support troops and dropped US casualties almost to zero.

A Forecast of US Combat Deaths

In September 1969, US combat deaths dropped below 100 per week. They have stayed below that point--except during US operations in Cambodia--and will probably continue to do so.

In late November we attempted to forecast US combat deaths on the basis of historical trends and cycles of activity. Table 1 shows the six month forecast together with the actual combat deaths of US troops in the last three months.

TABLE 1

FORECAST OF US COMBAT DEATHS IN RVN
(Weekly Average)

	1971 Jan	Feb	Mar	Apr	May	June
Range	29-45	34-52	36-54	40-62	32-48	27-41
Most Likely	37	43	45	51	40	34
Actual	32	55	61	56 P/		
(% Error)	(14%)	(28%)	(36%)	(10%)		

P/ - Preliminary

Vietnamese Combat Deaths

Assumption of the combat burden by the Vietnamese shows in the nearly steady level of their casualties, interrupted by sharp rises when they went into Cambodia and Laos. Returning to Graph #1:

- The highest level of Vietnamese combat deaths occurred during the 1st quarter of 1968 (TET 68).

- Vietnamese deaths then paralleled US deaths (but at a higher level) until mid-1969.

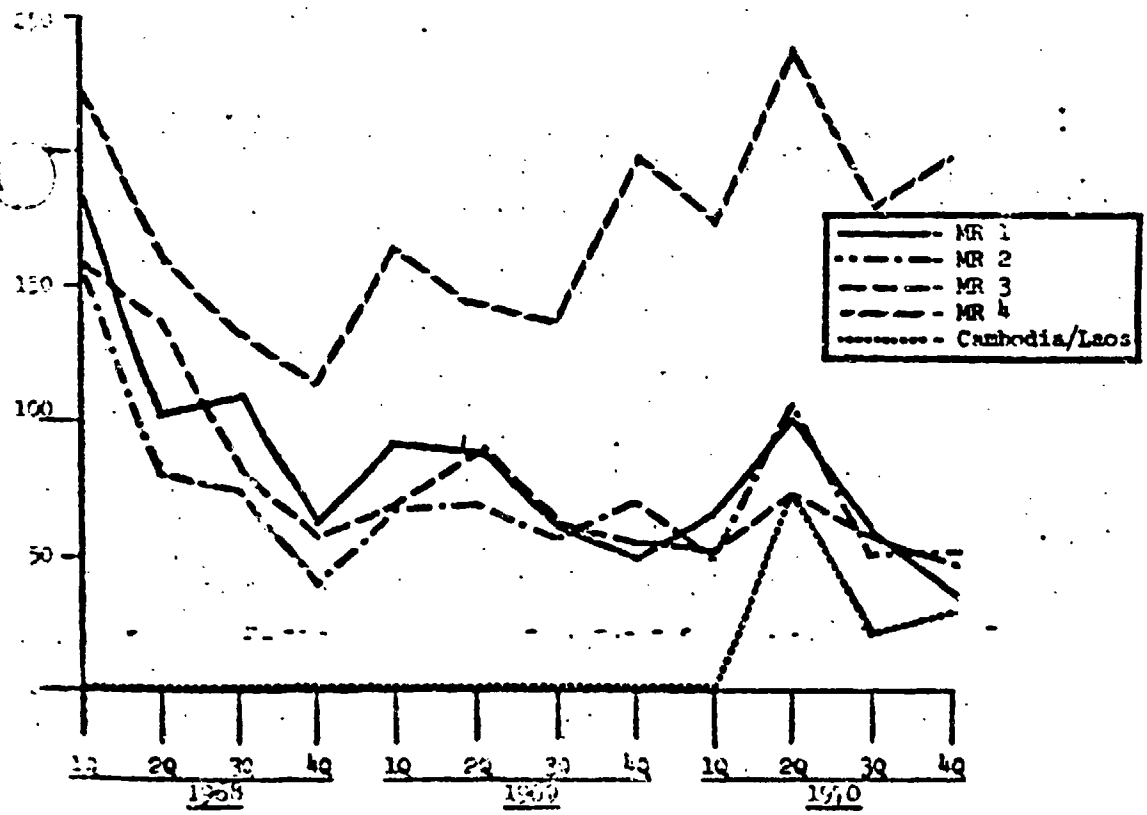
- While US deaths continued their decline, Vietnamese deaths oscillated, showing no discernable trend during the rest of 1969.

- Vietnamese deaths peaked during the first operation in Cambodia and, more recently, in Laos (but both peaks were about 20% below the TET 68 level).

Graph #3 shows where Vietnamese combat deaths occur.

GRAPH #3

RVNAF COMBAT DEATHS IN SOUTHEAST ASIA
(Weekly averages by Military Region)



- MR's 1, 2 and 3 show about the same levels. There is a gradual downtrend. (Note that, unlike US deaths, MR 1 does not account for a high proportion of Vietnamese KIA).

- MR 4 is a different story. More Vietnamese soldiers are killed there than anywhere else--and the trend is up. Analysis of detailed data shows that this results from:

-- Vietnamese army operations in the tough enemy base areas of the delta.

-- Enemy response by bringing pressure on territorial forces (RF/PF).

A Note on Cambodian Combat Deaths

Cambodian casualties have been reported only for the past 9 months. Although the data is too recent to establish trends, we can observe (from Graph #1) that Cambodian combat deaths have been slightly higher than US deaths in each of the last three quarters.

Total Friendly Combat Deaths

Graph #4 shows the total friendly combat deaths since the beginning of 1968. The increases in the last year are the result of:

- US and Vietnamese deaths in Cambodia in May and June 1970.

- Vietnamese deaths in Cambodia after US troops returned to South Vietnam, together with Cambodian casualties.

- Vietnamese deaths in Laos this year.

- Territorial forces (RF/PF) deaths in MR 4.

Enemy Combat Deaths

Enemy deaths are declining, although not as fast as US deaths. Graph #5 shows:

- Enemy deaths follow the annual cycle.

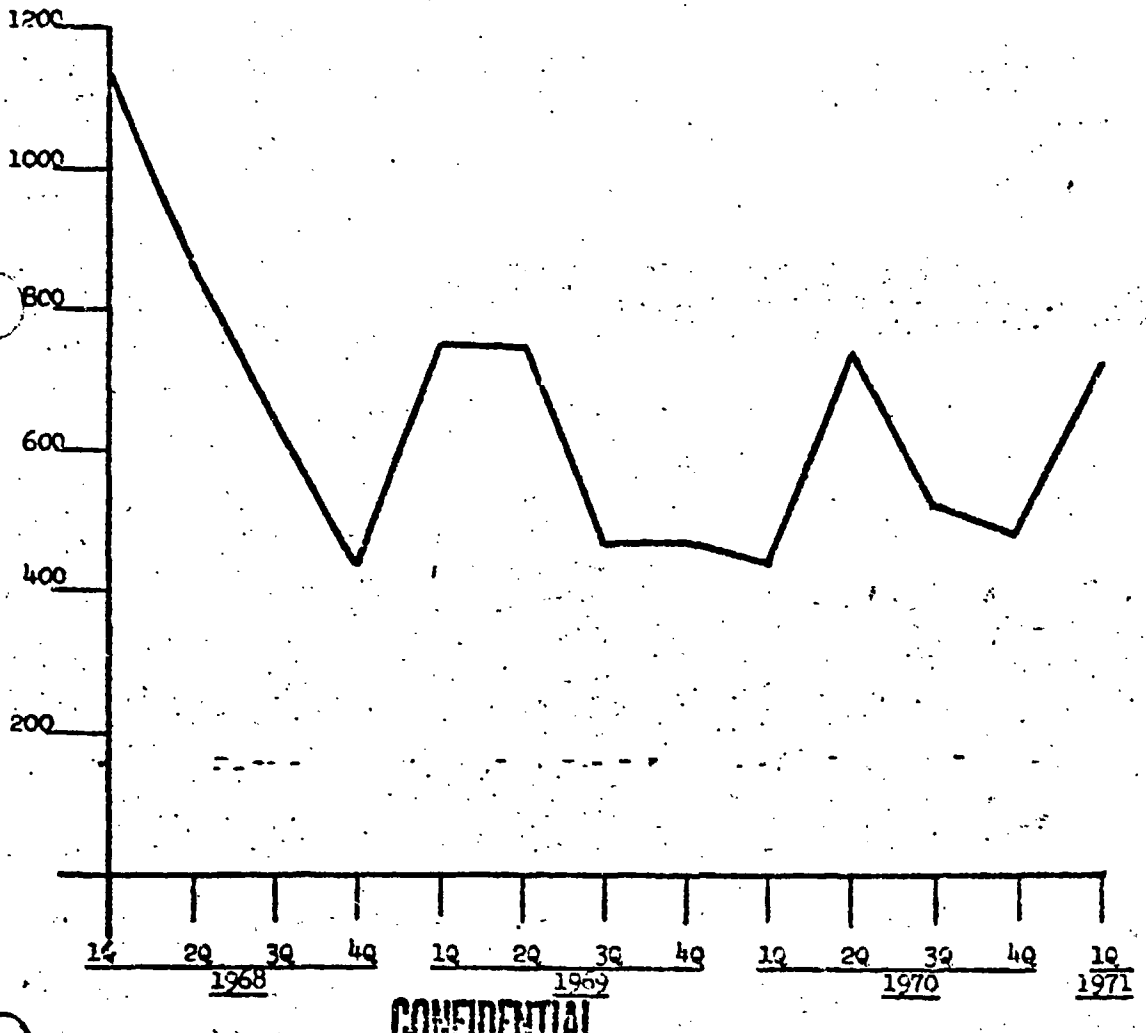
- Where upturns occur, they are sharp.

- Much more even distribution among the MR's than friendly deaths.

The trend in MR 3 is most striking. This region accounted for the most enemy deaths from 1 April 1969 through 31 March 1970. In the last six months the fewest enemy were killed there. Graph #5 also shows:

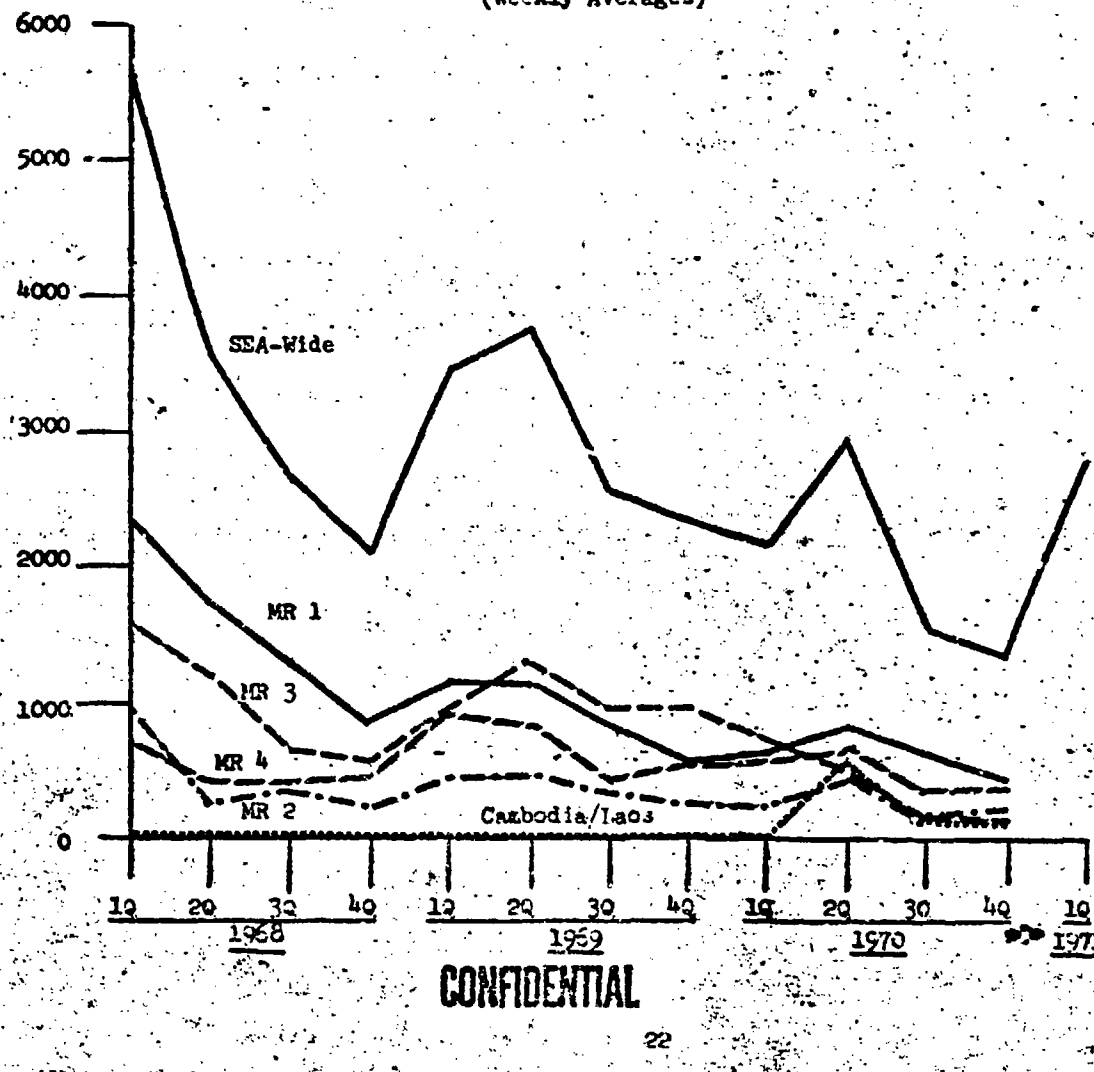
GRAPH #4

TOTAL FRIENDLY COMBAT DEATHS IN SEA
(Weekly Averages)



GRAPH #5

ENEMY COMBAT DEATHS IN SOUTHEAST ASIA
(Weekly Averages)



- MR 1 remains consistently high in enemy deaths.

- MR 4 does not reflect the number of enemy KIA one would expect from the RVNAF KIA figures, showing the difficulty of rooting him out of his guerrilla strongholds.

- There is a definite downtrend in enemy KIA in MRs 2 and 3. The trends in MRs 1 and 4 are mixed, but down.

- Many enemy KIA occur outside RVN. Subtracting the KIA in Cambodia and Laos would produce almost a smooth downward curve for enemy KIA.

A Final Note

Much of the winding down of the war is due to reduced US activity in MR 1. US redeployments and reduced enemy activity lowered deaths for both sides. The Vietnamese forces in MR 1 have not prosecuted the war at its former level of intensity--but neither has the enemy.

MR 3's real progress shows in the KIA rates. The enemy appears unable to sustain activity.

The war in MR 2 seems to just drag along. Neither side has taken really large casualties there; neither side seems to have hurt the other much.

In MR 4 the enemy has held his losses to about the same levels as in the other three regions while exacting a higher toll in RVNAF KIA. We feel that, instead of directly responding to RVNAF initiative in his base areas (by standing and fighting the GVN regular forces) the enemy has chosen to:

- Fight the regulars only where he has the edge, or has no choice.

- Concentrate on attacking the territorial forces and harassing civilians, hoping to draw ARVN away from the base areas to protect the populace. These enemy tactics imply that, while he lacks the capability to face ARVN, he can still fight a guerrilla war, inflicting high casualties on RF/PF, paramilitary forces and the population.

US DEATH RATE IN RVN

A Forecast for June-December 1971

In mid-December 1970, we attempted to forecast the level of US combat deaths in Vietnam.1/ At that time we observed that two factors established a basis for such a forecast:

- The regular yearly activity cycle which peaks during early spring and ebbs in late summer or fall.

- A relationship between US troop strength and combat deaths.

Table 1 shows that our forecast of combat deaths was more accurate than the projection for non-hostile deaths (the average absolute error for combat deaths was 15% compared to 21% for non-hostile deaths). Perhaps more important, the combat death forecast accurately traced the month-to-month patterns.

The June-December Forecast

During the next six months we expect US deaths to reflect the cyclical drop in activity and continued US redeployments. The forecast is that:

- US combat deaths will average about 35 per week in June, 25 per week this summer, and 15 per week this fall.

- Non-hostile deaths are expected to decline steadily from about 21 per week in June to 15 per week in December as US troops redeploy. They will probably be well below the combat death rates during the summer.

- The non-combat death rate will equal or exceed the combat death rate by October, if past patterns persist.

Table 2 shows the detailed forecast for the next seven months.

1/ US Death Rates in RVN: A Forecast, OASD/SA, December 21, 1970.

TABLE 1

FORECAST VS ACTUAL US DEATHS: Jan-May 1971
(Weekly Average)

Combat Deaths	Jan	Feb	Mar	Apr	May	
Actual	32	55	61	53	37p	
Forecast	37	43	45	51	40	
Difference	+5	-12	-16	-2	+3	
Error (as % of actual)	+16	-22	-26	-4	+8	average absolute error = 15%
Non-hostile Deaths						
Actual	23	34	23	23		
Forecast	31	32	28	28	26	
Difference	+8	-2	-5	-5		
Error (as % of actual)	+35	-6	-22	-22		average absolute error = 21%

p = preliminary

TABLE 2

FORECAST OF US COMBAT DEATHS IN RVN
(Weekly Average)

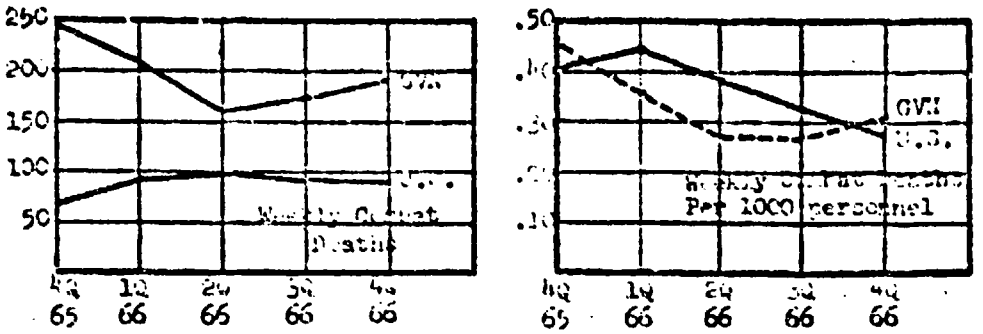
	June	July	August	Sept	Oct	Nov	Dec
US Strength (000) a/	255	242	230	218	205	195	184
Combat Deaths							
Forecast weekly average	35	28	26	21	16	15	13
Range b/	28-42	22-34	21-31	17-25	13-19	12-18	10-16
Non-hostile deaths	21	20	19	18	17	16	15
Total deaths	56	48	45	39	33	31	28

a/ Rounded to nearest 1000; July, August, September and November entries are straight line reductions based on SEA Deployment Program #13 which published goals for June, October and December.

b/ There is a 67% chance the actual value will fall within this range.

Jan67.

COMPARISON OF US AND GVN COMBAT DEATH RATES



US AND GVN COMBAT DEATH RATES
(Weekly Average)

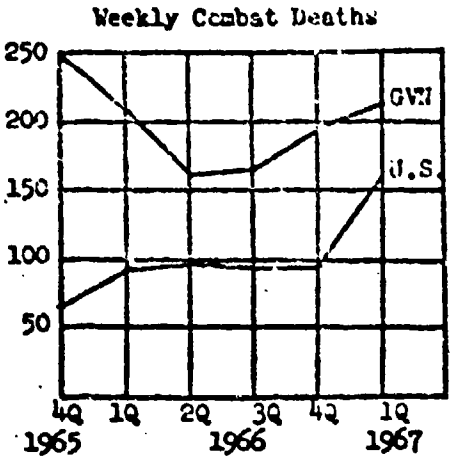
	1965 4th Qtr	1966 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1966 Total
GVN						
Avg Strength(000) (Reg, RF & PF)	565.1	561.7	583.4	602.9	617.7	597.7
Combat Deaths	249	208	161	165	194	182
Weekly Deaths/1000	.44	.36	.27	.27	.31	.30
US						
Avg Strength(000)	169.1	211.9	256.0	295.6	360.5	281
Combat Deaths	69	94	99	96	96	96
Weekly Deaths/1000	.41	.44	.39	.32	.27	.34

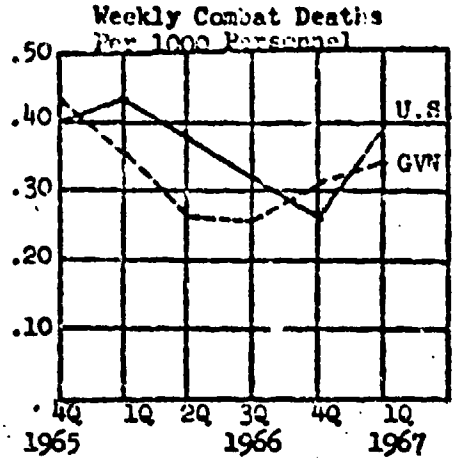
The Combat Deaths per week graph and the table indicate that the GVN weekly death rate was about twice the US weekly rate throughout CY 1966. They also show that, while the GVN KIA fluctuated somewhat, the US KIA remained remarkably constant at 96 per week throughout the year, despite a 200,000 man increase in US forces in Vietnam.

The Weekly Combat Deaths per 1000 strength graph and the table show that the US weekly deaths per 1000 in CY 1966 exceeded the GVN rate until the fourth quarter, when the GVN weekly rate of .31 per 1000 exceeded the US rate of .27 per 1000.

The data indicate that the US combat death rate is not likely to increase as US forces grow to peak Program 4 levels during CY 1967. If US weekly deaths remain constant as forces increase, it is likely that the GVN combat deaths per 1000 rate will continue to exceed the US rate (and by larger amounts) in the future.

COMPARISON OF US AND GVN COMBAT DEATH RATES





US AND GVN COMBAT DEATH RATES
(WEEKLY AVERAGE)

	1965	1966					1967
	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Ave 1966	1st Qtr
GVN							
Avg. Strength(000) (Reg, RF & PF)	565.1	581.8	588.4	602.9	618.8	598.0	607.8
Combat Deaths	249	208	161	165	194	182	214
Weekly Deaths 1000 Strength	.44	.36	.27	.27	.31	.30	.35
US							
Avg. Strength(000)	169.1	211.9	256.0	295.6	360.5	281.0	417.2
Combat Deaths	68	94	98	96	96	96	163
Weekly Deaths 1000 Strength	.40	.44	.38	.32	.27	.34	.39

Source: SEASS

The number of U.S. combat deaths per week was 70% higher in January-March 1967 than for CY 1966. GVN losses were up 18%. However, the GVN forces continued to lose more men per week than the U.S. (214 vs 163).

The U.S. weekly deaths/1000 strength exceeded that of the GVN by 11%, reversing the relationship existing in the last quarter of 1966.

COMPARISON OF US AND GVN COMBAT DEATH RATES

April-May US combat deaths per week equaled GVN combat deaths for the first time and were more than double the 1966 weekly average.

TABLE 1

US AND GVN COMBAT DEATH RATES
(WEEKLY AVERAGE)

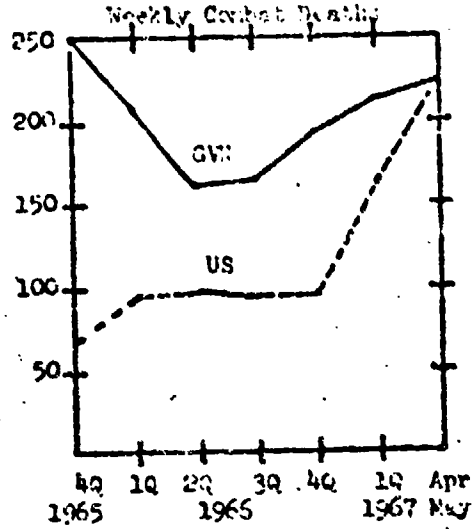
	1965	1966					1967	
	4Q	1Q	2Q	3Q	4Q	Avg. 1966	1Q	Apr May
Avg Strength (000)								
GVN (Reg, RF, PF)	565.1	581.8	588.4	602.9	618.8	598.0	609.1	606.4
US	169.1	211.9	256.0	295.6	361.2	281.2	418.6	454.7
Combat Deaths								
GVN	249	208	161	165	194	182	214	225
US	68	94	98	96	96	96	163	223
GVN/US Ratio	3.66	2.21	1.64	1.72	2.02	1.90	1.31	1.01
Weekly Death/1000 Strength								
GVN	.44	.36	.27	.27	.31	.30	.35	.37
US	.40	.44	.38	.32	.27	.34	.39	.49
GVN/US Ratio	1.10	.82	.71	.84	1.15	.88	.90	.76

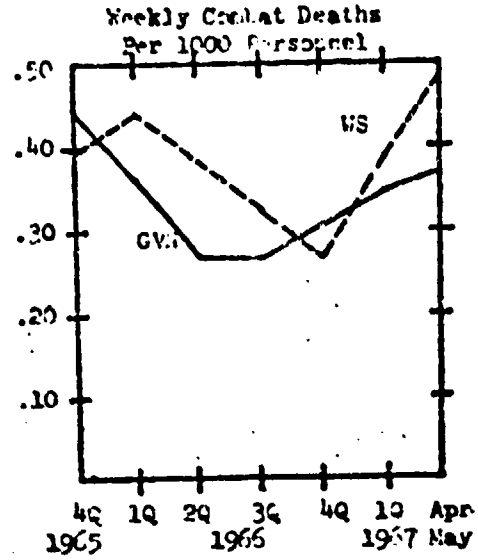
Source: SEASS Table 1, 12 June 1967, and Table 2, 13 June 1967.

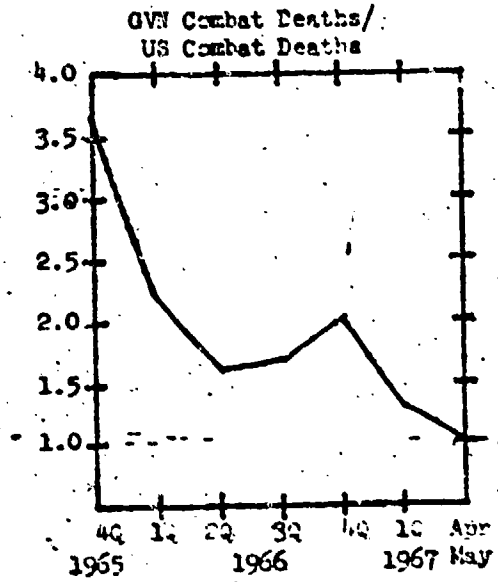
Two key points should be noted from the above table and the graphs on the next page:

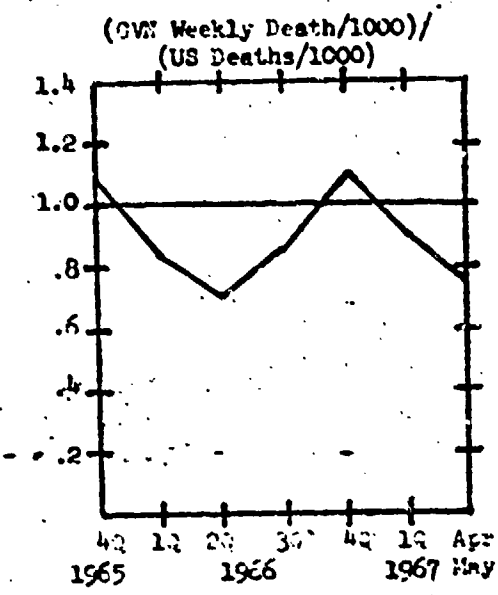
1. Unless US losses level-off or GVN losses sharply climb, the US will consistently suffer more losses per week than will the GVN. US combat deaths per week hit a new 2-month peak of 223 in April-May and a new one month peak of 278 in May. The April-May weekly average was more than double the 1966 weekly average. GVN deaths, while up 24% from last year's average, were still below 4th Q CY65.

2. The gap between US and GVN combat deaths per 1000 troops is growing. The US weekly death rate per 1000 strength in April-May exceeded the GVN rate by 32% (.49 vs .37) compared to 11% in Jan-Apr and 13% in CY 66. The gap in April-May is almost as great as in April-June 1966, during the turmoil of the "struggle movement".


250
200
150
100
50
GVN
US
4Q 1Q 2Q 3Q 4Q 1Q Apr
1965 1966 1967 May


Weekly Combat Deaths
Per 1000 Personnel
.50
.40
.30
.20
.10
US
GVN
4Q 1Q 2Q 3Q 4Q 1Q Apr
1965 1966 1967 May


GVN Combat Deaths/
US Combat Deaths
4.0
3.5
3.0
2.5
2.0
1.5
1.0
4Q 1Q 2Q 3Q 4Q 1Q Apr
1965 1966 1967 May


(GVN Weekly Death/1000)/
(US Deaths/1000)
1.4
1.2
1.0
.8
.6
.4
.2
4Q 1Q 2Q 3Q 4Q 1Q Apr
1965 1966 1967 May

COMPARISON OF FRIENDLY CASUALTIES IN VIETNAM

Cumulative RVNAF KIA since 1960 is four times the U.S. total, but the U.S. KIA rate has risen steadily and is comparable to RVNAF for 1967. The U.S KIA rate is well below the Korean War peak but exceeds the 1952-53 Korean figures.

TABLE 1

FRIENDLY CASUALTIES IN SVN
(Yearly Totals)

	60	61	62	63	64	65	66	67[b]	Cumulative Total[b]
U.S.									
Killed[a]	-	11	31	78	147	1369	5008	5680	12324
Wounded	-	3	78	411	1039	6114	30093	37384	75122
Missing/Captured[c]									661
RVNAF									
Killed[a]	2223	4004	4457	5665	7457	11243	9469	6174	50692
Wounded	2788	5449	7195	11488	17017	23118	20975	16319	104349
Missing/Captured	2515	3233	1270	3137	6036	7848	3283	1333	28655
Third Nation									
Killed[a]					1	31	566	570	1168
Wounded						139	1591	1281	3011
Missing/Captured									18

a/ Includes Died of Wounds; excludes non-combat deaths.
b/ Through July 31, 1967.
c/ 489 currently missing and 192 currently known to be captured.

Source: SEA Statical Summary, Table 15, "Comparative Casualties," August 8, 1967, and "Third Nation Casualties Vietnam."

Table 1 indicates that the RVNAF cumulative killed is more than four times the U.S. However, U.S. KIA increased more than three and a half times from 1965 to 1966. If the number of U.S. KIA for 1967 continues at the rate for the first half of the year, the yearly total will be twice that of 1966. The RVNAF KIA statistics dropped between 1965 and 1966, but the 1967 rate shows promise of returning to 1965 levels.

Figures for wounded cannot be compared because the U.S. counts all who are treated, while RVNAF and third nation forces count only the seriously wounded. Statistics for U.S. missing and captured are updated weekly to show the current situation only.

Table 2 below compares friendly KIA per 1000 friendly troop strength. While U.S. and Third Nation killed in 1967 have already exceeded their total KIA for 1966 and RVNAF has not (Table 1), all three groups show an increase in KIA per 1000 troops in the first two quarters of 1967 over the last three quarters of 1966. This reflects the increased combat activity in 1967. Earlier high KIA rates such as fourth quarter 1965 and first quarter 1966 also reflect high levels of combat activity. U.S. KIA per 1000 troops reached a record high of 6.3 in second quarter 1967. The RVNAF ratio was highest in 1965, dropped in 1966, and is up again in 1967 at 3.8 though still well below the 1965 rate.

TABLE 2

FRIENDLY KIA PER 1000 TROOPS IN SVN
(Quarterly Totals)

	1965				1966				1967	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
U.S.										
KIA[a]	72	144	261	892	1224	1287	1250	1247	2126	2773
Strength[b] (000)	26	49	105	169	211	256	296	362	419	449
KIA/1000 troops	2.8	2.9	2.5	5.3	5.8	5.0	4.2	3.4	5.1	6.3
RVNAF										
KIA[a]	2535	2851	2623	3234	2701	2095	2148	2525	2776	2732
Strength[b] (000)	610	619	650	691	695	698	710	730	722	726
KIA/1000 troops	4.2	4.6	4.0	4.7	3.9	3.0	3.0	3.5	3.8	3.8
Third Nation										
KIA[a]					191	90	106	179	226	242
Strength[b] (000)					23	29	37	52	53	54
KIA/1000 troops					8.3	3.1	2.9	3.4	4.3	4.5

a/ Quarterly total.
b/ Quarterly average.
Source: OSD Statistical Services, Tables 1 and 2.

Another comparison of combat deaths is shown in Table 3, Friendly KIA per Battalion Day of Operation. The ratios of all three groups in the last four quarters are very similar with U.S. increasing slightly, RVNAF decreasing slightly and third nation showing a variable pattern. All range between 3 and 4 KIA per battalion day with one exception (Third Nation in 3rd quarter 1966 with .2).

TABLE 3

FRIENDLY KIA PER BATTALION DAY OF OPERATION IN SVN
(Quarterly Totals)

	1965		1966				1967	
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
U.S.								
KIA	261	892	1224	1287	1250	1247	2126	2773
Bn Day	-	787	1624	2028	3021	4454	6092	6637
KIA/Bn Day	-	1	.8	.6	.4	.3	.4	.4
RVNAF								
KIA	2623	3234	2701	2095	2148	2525	2776	2732
Bn Day	4973	4511	5279	6291	5543	6030	8108	8851
KIA/Bn Day	.5	.7	.5	.3	.4	.4	.3	.3
Third Nation								
KIA			191	90	106	179	226	232
Bn Day			128	513	621	497	736	582
KIA/Bn Day			1.5	.2	.2	.4	.3	.4

Source: OSD Statistical Services, Table 2, and MACV Military Report, MACV Weekly Summary, and OPREP 5 Ground Operations Report.

A Korean War vs. Vietnam comparison of U.S. KIA per 1000 troops (Table 4) shows that we are still well below the ratio reached at the height of the Korean conflict in 1950-51 (21.0 vs. 6.3) but above the 1952-53 rates there.

TABLE 4

KOREA VS. VIETNAM
U.S. KIA Per 1000 Troops

	1950		1951				1952				1953	
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
KOREA												
KIA[a]	2954	3807	3104	3135	1734	3020	926	924	1311	1641	1021	1108
Force Strength[b]	162	181	220	258	280	286	293	304	305	298	297	319
KIA/1000 Troops	18.2	21.0	14.1	12.2	6.2	10.6	3.2	3.0	4.3	5.5	3.4	3.6

	1965				1966				1967	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
VIETNAM										
KIA[a]	72	144	261	892	1224	1287	1250	1247	2126	2773
Force Strength[b]	26	49	105	169	212	256	296	362	419	440
KIA/1000 Troops	2.8	2.9	2.5	5.3	5.8	5.0	4.2	3.4	5.1	6.3

a/ Quarterly totals.
b/ Quarterly average.

Sources: Korea - OASD/SA, Jan. 9, 1967, U.S. Forces - By Location and OASD/Manpower, "Casualties Incurred by U.S. Military Personnel," 13 Dec 1966, revised 9 Jan 1967.

Vietnam - OSD Statistical Summary, Tables 1 and 2.

US VERSUS GVN COMBAT DEATHS: REVISED DATA

MACV recently provided information which indicates that RVNAF combat deaths are about 30% higher than previously reported.[1] The new data (apparently provided by MACV J1) includes those regular, regional and popular force personnel who die of wounds. These losses were not included in previous MACV information used in press releases and official OSD records (that data comes from MACV Combat Operations Center weekly summaries). MACV reports that the J1 figures are accurate and the ones which should be used. We still have some questions about them and are requesting additional clarification. In the meantime, the new figures are sufficiently larger than the official Washington figures to warrant interim comment.

Table 1 shows that the new figures for 1966 exceed the old figures by 2909 or 31% (12,378 versus 9469). For 1967, through August, the RVNAF KIA figure increases by 2015 or 29%. Table 1 also shows that, using the revised figures, RVNAF combat deaths exceed US combat deaths during every month through August 1967. If we use the old (and still official) figures, US deaths exceed RVNAF deaths in May, June, July, and September 1967. Graph 1 illustrates the difference.

Moreover, Graph 2 and Table 2 show that use of the revised figures reverses our previous finding that US combat deaths per 1,000 strength consistently exceed RVNAF combat deaths per 1,000 strength. With the new data, the RVNAF figures exceeds the US figure in every quarter except 2nd quarter 1967.

TABLE 1

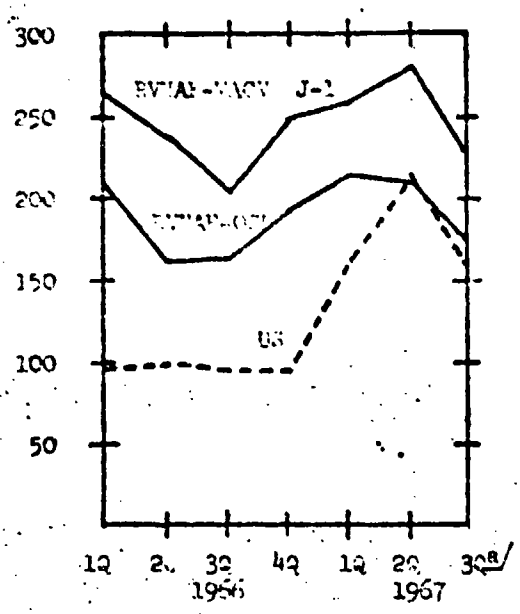
US Versus RVNAF Combat Deaths

1966	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1966 Total
US	282	433	506	311	462	503	435	395	419	338	473	432	4989
RVNAF:													
MACV J1	903	1359	1145	945	961	1185	1006	832	803	1103	1076	1060	12378
OSD[a]	747	1016	938	574	661	860	860	722	566	906	804	815	9469

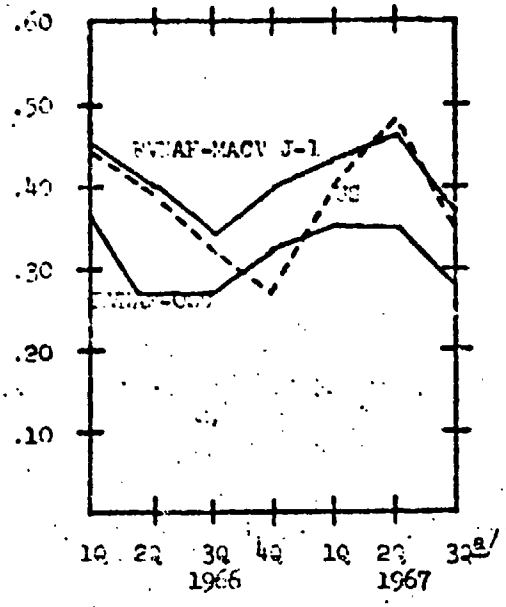
1967	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	67 Tot Thru Aug
US	512	658	943	710	1232	828	781	535	775	732	878		
RVNAF:													
MACV J1	996	944	1427	1151	1354	1139	963	1167	NA	NA	NA		9041
OSD[a]	887	771	1118	935	1026	771	666	852	740	753	1112		7026

a/ OSD SEA Statistical Summary, Table 2. Based on MACV Combat Operations Center reports in weekly CpRep 5 summaries.

Graph 1
Weekly Combat Deaths



Graph 2
Weekly Combat Deaths
Per 1,000 Personnel



a/ 3rd quarter is an average of July and August only.

TABLE 2
Revised
US and GVN Combat Death Rates
(Weekly Average)

	1966					1967		
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1966 Total	1st Qtr	2nd Qtr	3rd Qtr
RVNAF								
Avg Strength (000) (Reg, RF & PF)	581.7	588.4	602.9	618.8	597.9	609.1	607.6	613.3
MACV J1 Combat Deaths/Week	262	238	203	249	238	259	280	229 a/
MACV J1 Weekly Deaths/1000	.45	.40	.34	.40	.40	.43	.46	.37
OSD Combat Deaths/Week	189	159	102	192	179	213	213	172
OSD Weekly Deaths/1000	.36	.27	.27	.31	.30	.35	.35	.28
US								
Avg Strength (000)	211.9	256.0	295.6	360.5	281	412.6	442.6	462.0
Combat Deaths/Week	94	98	96	96	96	163	213	161
Weekly Deaths/1000	.44	.39	.32	.27	.34	.40	.48	.35

a/ Avg for July and August.

FAR 63

US VERSUS RVNAF COMBAT DEATHS: CORRECTED DATA

Final corrections of MACV data show that confirmed RVNAF combat deaths during 1966-67 were 23% higher than the official OSD figures indicated. The data also indicate that RVNAF and US combat deaths per 1000 troops were closely comparable during 1966 and 1967.

In December we reported on refined MACV information indicating that RVNAF combat deaths were about 30% higher than previously reported. The new data (provided by MACV J1) included died of wounds losses for regular, regional, and popular forces personnel. Died of wounds losses were not included in the previous MACV information used in press releases and official OSD records (that data comes from MACV J-3 operational summaries).

Additional MACV refinement of the RVNAF combat death data has eliminated GVN civilian combat deaths which were included in the December figures. The figures now exceed the OSD official 1966-67 figures by 23%. For 1966, Table 1 shows that the latest MACV figures exceed the OSD figures by 2,484 or 26% (11,953 versus 9,469). For 1967 (through November) the RVNAF combat death figure exceeds the OSD figure by 1,882, or 20% (11,513 versus 9,631). In absolute numbers, RVNAF combat deaths exceed US combat deaths during every month except May and July 1967. If we use the old (and still official) figures, US deaths exceed RVNAF deaths in May, June, July, and September 1967. Graph 1 shows that total RVNAF weekly combat deaths exceed US combat deaths during every quarter of 1966 and 1967.

Graph 2 and Table 2 show that RVNAF combat deaths per week per 1000 strength exceed the US rate in all but the first and second quarters of 1967; only the second quarter of 1967 shows a significant difference (.48 to .41). The OSD (MACV J-3) data shows US combat deaths per 1000 troops consistently exceed RVNAF combat deaths per 1000 troops.

In view of the high degree of concern that the Vietnamese forces carry their share of the load in fighting the war, it is clear that the refined MACV figures should be reported regularly and used as the official figures in Washington.

TABLE 1

US Versus RVNAF Combat Deaths

1966	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1966 Total
US	[illegible]	433	[illegible]	311	[illegible]	[illegible]	435	[illegible]	419	[illegible]	473	[illegible]	[illegible]
RVNAF:													
MACV J1	903	1359	1245	945	961	1185	1006	914	803	844	907	981	11353
OSD a/	747	1016	938	574	661	860	860	722	566	906	804	815	9469
1967													**67 Tot Thru Nov**
US	512	658	943	710	1232	828	781	535	775	732	878		8954
RVNAF:													
MACV J1	910	885	1297	1057	1184	981	675	1068	1090	1066	1299		11513
OSD a/	887	771	1118	935	1026	771	666	852	740	753	1122		9641

a/ OASD SEA Statistical Summary, Table 2. Based on MACV Combat Operations Center reports in Weekly OpRep 5 summaries.

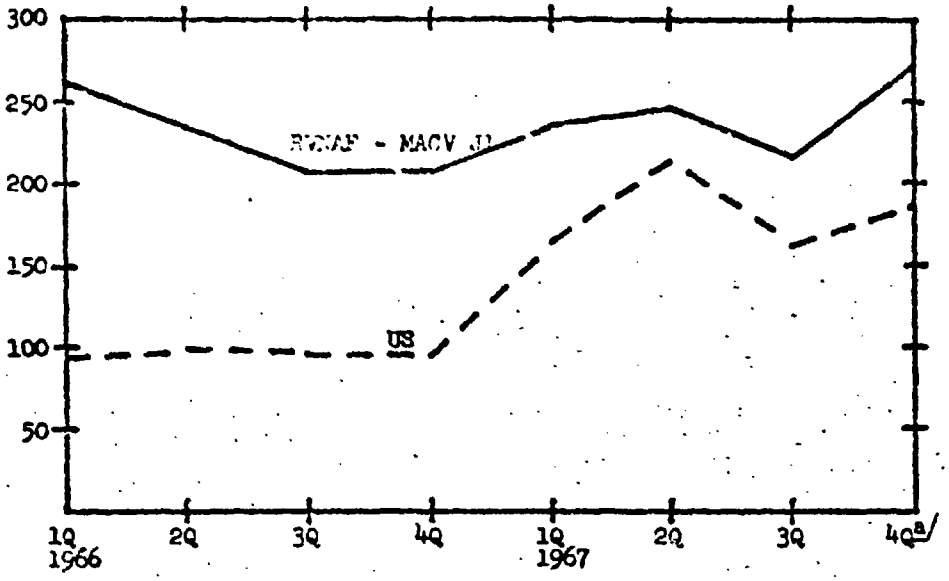
TABLE 2

Revised
US and RVNAF Combat Death Rates
(Weekly Average)

	1966 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1966 Average	1967 1st Qtr	2nd Qtr	3rd Qtr	Oct Qtr	1967 Average
RVNAF										
Avg Strength (000) (Reg, RF & PF)	581.7	588.4	602.9	618.8	597.9	609.1	607.6	613.3	625.0	613.8
MACV J1 Combat Deaths/Week	262	238	209	210	230	238	248	218	271	244
MACV J1 Weekly Deaths/1000	.45	.40	.35	.34	.38	.39	.41	.36	.43	.40
US										
Avg Strength (000)	211.9	256.0	295.6	360.5	281	412.6	442.6	462.0	466.6	446
Combat Deaths/Week	94	98	96	96	96	163	213	161	185	181
Weekly Deaths/1000	.44	.38	.32	.27	.34	.40	.48	.35	.40	.41

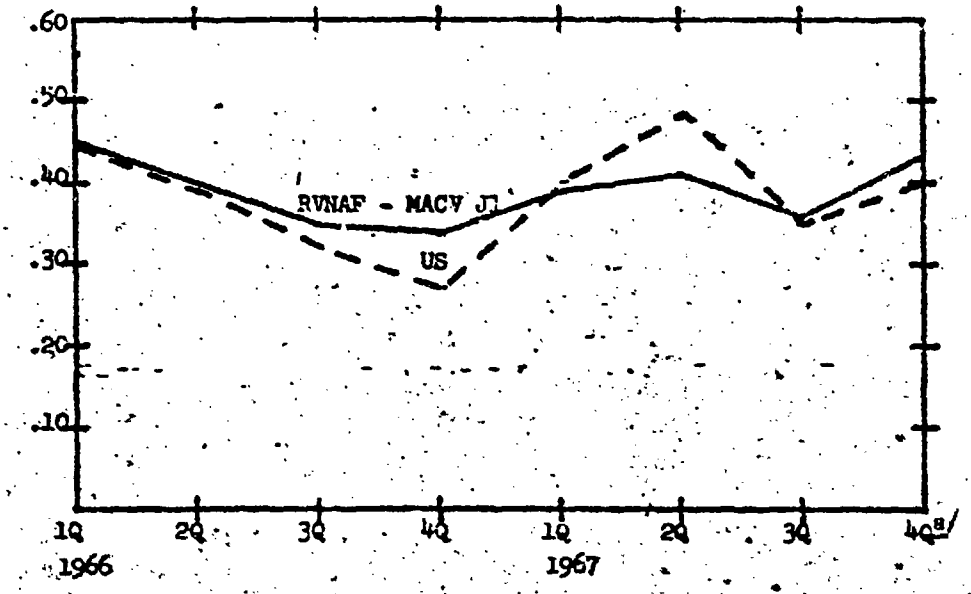
Graph 1

Weekly Combat Deaths



Graph 2

Weekly Combat Deaths Per 1000 Personnel



a/ 4th qtr 1967 is an average of October and November only.

May 68

US KIA IN SVN VS KOREA

Trend analysis indicates that US personnel killed in action (KIA) in South Vietnam during 1968 may approach 20,000, and will surpass the 1967 total in June. Moreover, in November 1968 the total US KIA in SVN is likely to exceed the Korean War total of 33,629. In the Korean War, more US were killed before the negotiations (20,929) than after they began (12,700).

US KIA in SVN

Through 18 May 1968 there have been 7,656 US KIA during 1968. At this rate (386 per week) there will be 19,800,000 US KIA during 1968 and the 1967 total of 9358 will be exceeded in June. An additional projection* based on monthly US KIA data from January 1967 through April 1968 yields the same 1968 total. Table 1 shows that in November the projected totals will exceed the Korean War total of 33,629 US KIA.

TABLE 1

PROJECTED US KIA - 1968

	Actual[a] Through 1967	Jan-Apr 1968	Projected May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1968 Total
	15967	6256	1467[b]	1525	1582	1640	1698	1755	1813	1871	19607
Cum Total	15967	22223	23690	25215	26797	28437	30135	31890	33703	35574	35574

a/ Source: Table 1, OSD(C) SEA Statistical Summary.
b/ By 18 May the actual KIA already exceeded 1300; the actual May figure may go as high as 2500.

Table 2 (and the January 1967 projection above) indicates that the factors producing the high 1968 US KIA rates have been operating since the end of 1965. US KIA increased abruptly in 1966, doubled suddenly in 1967 and again in 1968. The average weekly KIA rates are: 1966, 96 per week; 1967, 180 per week; 1968, 386 per week. Moreover, each increase occurred as each year began; the quarterly range for each year is narrow. Finally, US strength increases do not account for the magnitude of the KIA increases. Thus, the opening of each annual VC/NVA winter-spring campaign may have signaled a significant increase in the enemy's effort to inflict US KIA, and a corresponding willingness to accept heavier casualties themselves in order to do it.

* Linear regression.

TABLE 2

US KIA IN SVN a/

	1965	1966	1967	1968	1967 1Q	2Q	3Q	4Q	1968 1Q
US KIA	1369	4969	9358	14000b/	2113	2770	2091	2384	4847
Ave. US Str (000)	23.3	173.7	443.3	530.1c/	436.3	437.2	458.7	471.6	501.1
KIA/000 Str	16.6	13.2	21.1	27.0	5.2	6.3	4.6	5.1	9.7

a/ Source: Table 1, OSD(C) SEA Statistical Summary.
b/ Estimated.
c/ Based on actual strength through March and Program 6, Change 7 (tentative) through December.

Pre and Post Negotiations Casualties - Korean War

Casualties during the Korean War were extremely heavy during the first year and much lower thereafter. Despite frequent statements to the contrary, Table 3 shows that the US KIA rates after negotiations began in mid-1951 were much lower (average 500 KIA per month) than before the negotiations (1700 per month). The misunderstanding stems from the system used to account for about 6000 US men who disappeared during the Chinese-Communist offensive in October-December 1950. These men were listed as missing in action until the end of the war when they were reclassified as killed in action. When the publicly released casualty data are adjusted retrospectively, losses were much heavier prior to negotiations (20,929) than after (12,700 KIA).

TABLE 3

US CASUALTIES IN KOREA

	Killed		Wounded	
	Actual	Monthly Average	Actual	Monthly Average
1951	20929	1744	52975	4415
1952	6737	561	26630	2219
1953 + July 1953	5963	459	23433	1803
Total	33629	909	103038	2786

RVNAF KIA IN 1968

Summary. RVNAF casualty data recently transmitted by MACV indicate that 1968 RVNAF combat deaths are nearly 50% higher than figures previously held in Washington. The new data also reduce the overall enemy/friendly kill ratio for 1968 by nearly 20% with a 30% cut during the 1968 Tet offensive, and show that RVNAF consistently takes greater losses than American or 3rd Nation forces.

MACV recently transmitted completely revised 1968 RVNAF casualty statistics to Washington. The revised MACV data are final verified statistics compiled from administrative sources by the Vietnamese Joint General Staff. Statistics held in Washington were based upon updated OPREP-5 weekly reports but accurate RVNAF casualty data are not available quickly enough to be included in the updates.

Table 1 presents a comparison of final verified data with the OPREP-5 data for 1968 RVNAF KIA. The final verified statistics show a total of 24,265 RVNAF KIA, an increase of 48% over the 16,353 reported by operational sources. This means that OPREP-5 accounted for only 67% of RVNAF KIA with monthly figures ranging from 54% to 84% of the final verified totals.

TABLE 1

COMPARISON OF RVNAF VERIFIED AND OPREP-5a/ KIA NUMBERS FOR 1968

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Verified	2662	4524	2238	1562	2977	1702	1206	2091	1850	971	1257	1225	24265
OPREP-5	1449	2443	1544	1312	1969	1367	828	1544	1538	678	849	832	16353
Difference	1213	2081	694	250	1008	335	378	547	312	293	408	393	7912
% Reported in OPREP-5	54	54	69	84	66	80	69	74	83	70	68	68	67

Source: OASD(C) Statistical Services.
a/ Includes Regular, Regional and Popular Forces.

The large increase in RVNAF KIA significantly lowers the overall enemy/friendly kill ratio. 1/ As shown in the graph and accompanying table, the overall kill ratio is reduced from 5.7 to 4.6 or a drop of 19%. However, the corrected 1968 ratio is still above the 3.8 reported for 1967. The months of January and February (Tet offensive) show the sharpest reductions (21% in each) and the kill ratios in the last quarter of 1968 are also markedly reduced.

Table 2 indicates that RVNAF KIA were 66% more than US KIA and exceeded them in every month during 1968. Table 3 shows that RVNAF also suffered more KIA per 1000 average strength than either American or 3rd Nation forces. Hence, RVNAF continues to bear the heaviest burden of combat deaths in the conflict.

TABLE 2

US AND RVNAF KIA FOR 1968

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
US KIA	1202	2124	1543	1410	2169	1146	813	1080	1053	600	703	749	14592
RVNAF	2662	4524	2238	1562	2977	1702	1206	2091	1850	971	1257	1225	24265

Source: US - OASD(C) Statistical Services SEA Statistical Tables.
RVNAF - Final verified JGS data (excludes paramilitary forces).

TABLE 3

KIA/1000 AVERAGE STRENGTH - 1968

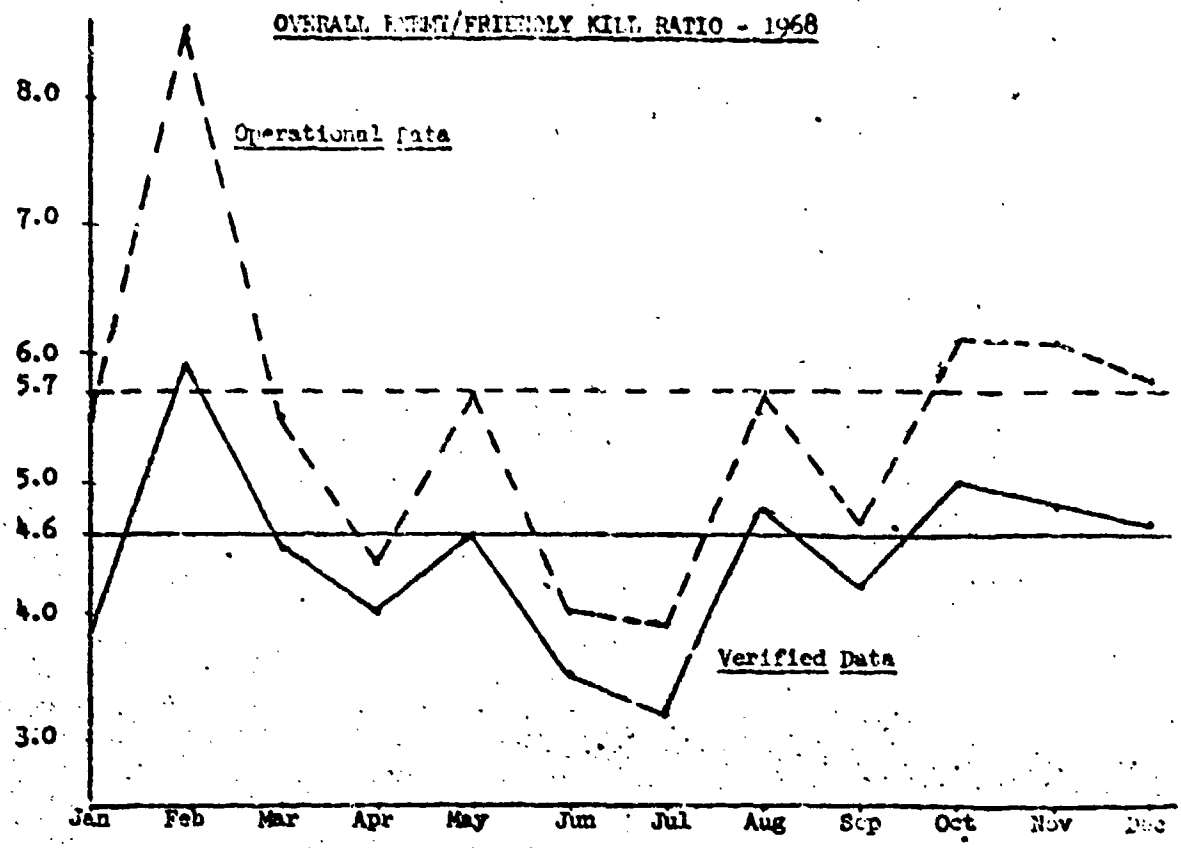
	US	RVNAF	3RD NATION
Approximate Average Strength (000)	527	756	63
KIA	14,592	24,265	979
KIA/1000 Average Strength	27.7	32.1	15.5

Source: Strength, US KIA, 3rd Nation KIA - OASD(C) SEA Statistical Summary.
RVNAF KIA - JGS Final verified data.

1/ RVNAF includes Regular, Regional and Popular Forces but not paramilitary (CIDG, National Police, etc.).

GRAPH

OVERALL ENEMY/FRIENDLY KILL RATIO - 1968



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Verified Data	3.8	5.9	4.5	4.0	4.6	3.5	3.2	4.8	4.2	5.0	4.8	4.7	4.6
Operational Data	5.5	8.5	5.5	4.4	5.7	4.0	[illegible]	5.7	4.7	6.1	6.1	5.8	5.7

Sources: US, 3rd Nation, VC/NVA KIA - OSD([illegible]EA Statistical Summary.
RVNAF - OPREP-[illegible] reports for operational,
SVN JGS (MACV message trasmittal) for verified.

NOTE: RVNAF includes Regular, Regional and Popular Forces but excludes paramilitary.

The reporting system is being modified so that final verified RVNAF data will be transmitted to Washington as soon as it becomes available (two months after the reported month). In the meantime, all operational data from OPREP-4 and OPREP-5 should be considered preliminary and not reflective of actual RVNAF casualties.

For our readers' information, we have prepared the attached 1968 country-wide summary of RVNAF casualties which may be detached and added to your records (Table 4).

TABLE 4

RVNAF CASUALTIES - 1968
(Final Verified Numbers)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Regular Force													
KIA	1134	2632	1227	879	1726	963	608	1127	919	513	546	656	12930
WIA	3715	7484	3465	2705	5059	3131	1818	3835	3399	1924	2308	2492	41335
MIA	62	316	36	56	49	20	6	31	39	7	15	12	649
Total	4911	10432	4728	3640	6834	4114	2432	4993	4357	2444	2869	3160	54914
Regional Force													
KIA	863	1016	481	415	697	462	364	523	450	227	423	325	6246
WIA	1426	1691	922	702	1387	875	671	1192	1054	667	707	956	12250
MIA	108	177	30	8	8	21	23	12	28	5	17	13	450
Total	2397	2884	1433	1125	2092	1358	1058	1727	1532	899	1147	1294	18946
Popular Force													
KIA	665	876	530	268	554	277	234	441	481	231	288	302	5147
WIA	959	1206	709	388	831	455	389	688	664	372	352	486	7499
MIA	131	394	79	22	27	41	18	62	97	11	8	17	907
Total	1755	2476	1318	678	1412	773	641	1191	1242	614	648	805	13553

Source: Vietnam JGS via MACV message 181741Z Mar 69.

ALLIED DEATHS FROM HOSTILE ACTIONS IN SEA

The table on the next page indicates that:

- US combat deaths in SEA continue to decline sharply.

- RVNAF deaths have been rising in 1970 and 1971.

- Third nation deaths are down 3% in 1971.

- Total allied deaths (less Cambodians) remain the same.

There are two problems with the data that require us to examine the findings more closely. First, RVNAF figures for recent weeks are understated until the final counts are in. Second, the cycle of activity in SEA normally inflicts higher casualties during the first half of a year than during the second half (RVNAF deaths in the first half of 1970 were 29% higher than in the second half). Thus, comparing the first 7 months of 1971 with all 12 months of 1970 tends to make 1971 results look relatively high. The proper technique is to compare the same periods in each year. Comparing the first half 1970 with the same period in 1971, we find that:

- US deaths are declining even more sharply than the table indicates (down 64%) and now account for few of the allied deaths.

- RVNAF deaths have risen about 10% as the table indicates (the "first half" comparison does not use the understated data).

- Third nation deaths are down 5% instead of 3%.

- Total allied deaths (less Cambodians) are down about 4% instead of remaining constant.

To summarize, the rise in RVNAF deaths has offset the decline in US deaths, and the Cambodian deaths must now be included in the allied total. These factors could combine to produce a higher allied total in 1971 than in 1970. However, the increase in RVNAF deaths this year stemmed from the high casualties suffered in Laos and Cambodia, and those operations are unlikely to be repeated.

ALLIED
DEATHS FROM HOSTILE ACTIONS IN SEA

	1965	1966	1967	1968	1969	1970	1971 b/
US Forces							
SVN a/	1331	4946	9314	14537	9361	4176	
NVN	34	43	44	24	6	7	
Laos	4	19	20	31	47	38	
Thailand	-	-	-	1	-	4	
Subtotal US	1369	5008	9378	14593	9414	4225	1130
(Monthly Average)	(114)	(417)	(782)	(1216)	(785)	(352)	(163)
RVNAF c/	11243	11953	12716	24323	18938	21385	14161
(Monthly Average)	(937)	(996)	(1060)	(2027)	(1578)	(1782)	(1959)
Third Nation							
Australia/NZ	14	60	76	104	99	70	26
Korea	17	506	1005	824	635	529	346
Philippines	-	-	8	-	-	-	-
Thailand	-	-	16	51	132	105	42
Subtotal Third Nation	31	566	1105	979	866	704	414
(Monthly Average)	(3)	(47)	(92)	(82)	(72)	(59)	(57)
Subtotal Allied	12643	17527	23199	39895	29218	26314	15755
(Monthly Average)	(1054)	(1461)	(1933)	(3325)	(2435)	(2193)	(2179)
FANK (Cambodia)	N/A	N/A	N/A	N/A	N/A	1679 d/	1734 e/
(Monthly Average)	-	-	-	-	-	(280)	(256)
Grand Total Allied	12643	17527	23199	39895	29218	27993	17489
(Monthly Average)	(1054)	(1461)	(1933)	(3325)	(2435)	(2333) f/	(2419) f/

Source: OSD Comptroller Table 50 except US total for 1971 which is from MACC Op Sum 187-71, 12 August 1971.

a/ Includes 364 US deaths from hostile causes in Cambodia during operations in Spring 1970. US deaths in Cambodia are not reported separately by OSD Comptroller.

b/ Thru 7 August 1971. A country-by-country breakout for US forces is available only thru June.

c/ Does not include paramilitary (police, PSDF, etc.) deaths.

d/ From 1 July 70 - 31 Dec 70.

e/ Thru 24 July 1971.

f/ Computed by amortizing FANK KIA over the entire reporting period.

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COMPARISON OF FRIENDLY LOSSES: PACIFICATION VS SEARCH AND DESTROY

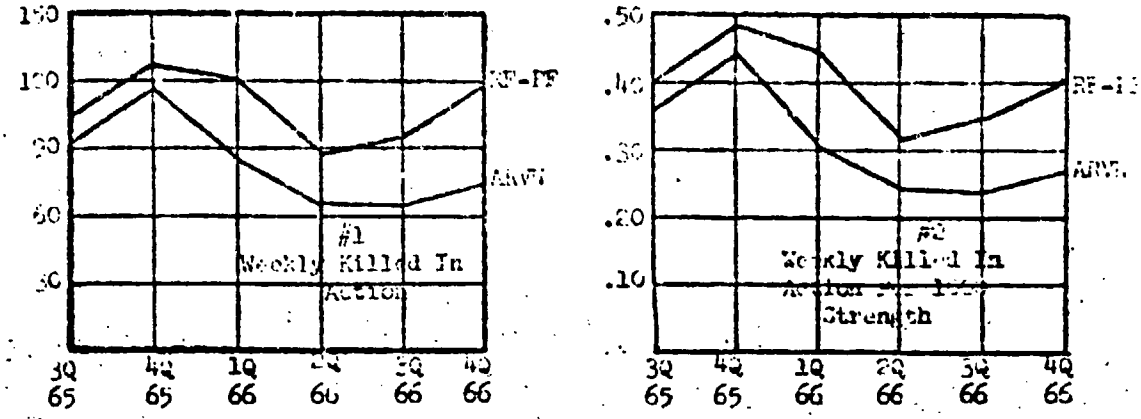

TABLE 1

COMPARISON OF ARVN AND RF-PF COMBAT DEATHS
(Weekly Average by Quarter)

	1965 3rd Qtr	1965 4th Qtr	1966 1st Qtr	1966 2nd Qtr	1966 3rd Qtr	1966 4th Qtr	18-Month Average
Strength (Qtr Avg)							
ARVN (000)	257.8	260.9	271.0	276.9	274.5	273.3	273.1
RF-PF (000)	257.3	265.4	271.5	275.6	283.1	296.9	275.0
Killed in Action							
ARVN: Total KIA	95.9	118.5	85.2	68.0	67.2	74.9	85.0
KIA/1000 Str.	0.37	0.45	0.31	0.25	0.24	.27	.31
RF-PF: Total KIA	105.7	130.2	122.7	89.3	98.3	119.3	110.9
KIA/1000 Str.	0.41	0.49	0.45	0.32	0.35	.40	.40

A major effort planned for CY 1967 is to commit at least half of ARVN to pacification tasks; this has raised the question of what casualty rates ARVN can be expected to incur in the pacification role, as compared to their present search and destroy mission. The Regional Forces and Popular Forces have been primarily involved in pacification operations for the past 18 months, so an attempt has been made (in the graphs and Table 1 above) to compare RF-PF and ARVN combat deaths. The data indicate that RF-PF combat deaths consistently exceed ARVN combat deaths by

about 3% both in absolute terms and in deaths per 1000 strength. When total losses (killed, wounded, captured) are taken into account, the RF-PF weekly average of 365 exceeds the 151 figure for ARVN. The RF-PF incurred 1.33 weekly losses per 1000 strength versus 1.20 for ARVN. In considering the killed per thousand calculations, we should remember that about 120,000 (40%) ARVN troops are support personnel who probably never engage in combat, whereas the RF-PF support structure is much smaller. Thus, the killed per 1000 figure for ARVN, calculated on the basis of combat strength would likely exceed the RF-PF figure (.56 to .80) for the 15 month period.

TABLE 2

FRIENDLY KILLED AND CAPTURED INCURRED IN SEARCH AND DESTROY AND CLEARING OPERATIONS

(Aug-Dec CY 1966)

	ARVN	3rd Nation	US	Total
Search & Destroy				
KIA & Capt.	935	118	1047	2100
Bn Days	8678	559	6358	15595
Deaths/Bn Day	.11	.21	.16	.13
Clearing Operations a/				
KIA & Capt.	1	6	70	77
Bn Days	31	147	356	534
Losses/Bn Day	.03	.04	.20	.14

a/ Includes Clear and Hold, Clearing, and Search and Clear Operations.

Table 2 employs tenuous data to show comparative loss rate for search and destroy and clearing operations. During the five month period, about 97% of the battalion days shown were devoted to search and destroy operations which resulted in a killed and captured rate of .13 per battalion day. The clearing operations yielded a rate .14 per battalion day, due to the high rate of US losses in this type of operation. While very tenuous (both numbers and classification of operations by type), the data do indicate that ARVN may suffer fewer casualties in the pacification role than in the search and destroy role.

In South Vietnam during 1965 and 1966, U.S. Army maneuver battalions under experienced commanders suffered battle deaths "in sizeable skirmishes" at only two-thirds the rate of units under battalion commanders with less than six months' experience in command.

Increased command experience of the rifle company commander also led to fewer battle deaths in his unit, but the effect was not as great. This may reflect the predominant role in combat of the battalion commander.

The rate of company commander loss because of hostile death or serious wound, after rising in each of the first 4 months of command in what appears to be a "learning period," drops markedly from the fifth month onwards to a rate of one-third as great.

Even with allowance for the one year tour in country, the typical tenure of a maneuver battalion or a rifle company commander was surprisingly short. Over half the battalion commanders in Vietnam were routinely relieved without cause prior to the end of their sixth month in command in country; over half the company commanders were similarly relieved before they completed four months in command.

Battalion Commanders

Data cover 34 maneuver battalions in the five Army divisions and separate brigades in South Vietnam in 1965 and 1966. Table I compares the rate of battle deaths in rifle companies whose battalion commanders were in their initial months of command in country with the rate after six months of command. We draw particular attention to rates based upon totals of those killed in action in sizeable skirmishes. Five or more battle deaths suffered by one company on one calendar day plus the battle deaths occurring in other rifle companies of the same battalion on the same day constitute this total. Groups killed in action are more fairly attributable to the performance of the battalion commander. Deaths of less than five per day are mostly due to snipers, mines, booby traps, etc.; they are as high under an experienced battalion commander as under an inexperienced one.

Table I

Bn Cdr Exper In Command	Nr. of Bn. Cdr. Months	Total KIA	KIA in Sizeable Skirmishes a/	Other KIA	KIA/Bn. Cdr. Month Total	In Sizeable Skirmishes a/	Other
Less than 6 months	434	2160	1068	1092	4.98	2.46	2.52
6 months or more	50	213	81	132	4.25	1.62	2.64
Total	484	2373	1149	1224			

a/ Five or more battle deaths suffered by one company on one calendar day plus the battle deaths occuring the same day in other rifle companies of that battalion.

The question here is not one of success or failure, for U.S. Army units seldom fail in any given mission. When a unit commander's performance is ineffective, a senior replaces him. Nor is avoidance of battle deaths the primary objective: we would not be in SVN if it were. Rather it is a matter of success at a cheaper price. The rate of battle deaths is a measure of the cost of success.

The mean tenure of 118 Lieutenant Colonels who routinely completed command tours of these battalions from 1965 to 1967 was 9.6 months. Temporary ("acting") tours, and those terminated by death, serious injury, illness or for other cause (both poor performance and promotion), for a total of 17 tours, are excluded.

Although the Department of the Army in peacetime requires a minimum battalion command tour of 18 months, except for cause, in Vietnam it is solely within the purview of individual field commanders. That over half the battalion commanders in Vietnam are relieved without cause prior to the end of their sixth month in command, as shown in Table II, implies theatre-wide consensus on the desirable tour length.

Table II

Length of Battalion Command Tour in Months, Excluding Tours Ended By Death, Serious Injury, Illness or Other Cause

	1 But Less Than 1	2 But Less Than 2	3 But Less Than 3	4 But Less Than 4	5 But Less Than 5	6 But Less Than 6	(SUB TOTAL)	7 But Less Than 7	8 But Less Than 8	9 But Less Than 9	10 But Less Than 10	11 But Less Than 11	11 But Less Than 12	TOTAL
No. of Bn Cdrs.	2	5	6	9	19	28	(69)	21	14	4	6	3	1	118

A check was made to determine whether initial training in country is responsible for the short command tours. It showed that those who assume command in country were as likely to do so during the early portion of their duty in country as during the latter part. Only commanders who work-up and deploy with their units receive specific preparatory training.

In a test for bias, the longer toured battalion commanders were viewed as a separate group. Tours terminated for cause were excluded. As shown in Table III, battalions under these commanders show the same trend of reduction in the rate of battle deaths during the final months of the commanders' tours.

Table III

"Long Tour" Battalion Commanders

	Mr.Bn.Cdr. Months	Total KIA	KIA in Sizeable Skirmishes	Other KIA	KIA/Bn. Cdr. Month Total	KIA/Bn. Cdr. Month in Sizeable Skirmishes	KIA/Bn. Cdr. Month Other
Init 6 Mo. of Command	156	807	373	434	5.17	2.39	2.78
After 6 Mo. of Cmd	43	151	51	100	3.51	1.19	2.32

Incidentally, the rate of this group in initial months of command is virtually the same as for the short tour commanders, which indicates that the long termers were not better to begin with.

Company Commanders

Data cover the 102 rifle companies of the same battalions. The mean length of company command tour for tenures routinely terminated was a fraction under 4 months. The Department of the Army peacetime minimum tour length for company grade commanders is one year, except for cause, but half the company commanders in Vietnam are relieved without cause prior to the end of their fourth month in command, as shown in Table IV.

Table IV

Length of Company Command Tour in Months, Excluding Tours Ended By Death, Serious Injury, or Illness

	1 Less Than 1	1 But Less Than 2	2 But Less Than 3	3 But Less Than 4	(SUB TOTAL)	4 But Less Than 5	5 But Less Than 6	6 But Less Than 7	7 But Less Than 8	8 But Less Than 9	9 But Less Than 10	10 But Less Than 11	TOTAL
No. of Bn Cdrs.	10	30	36	47	(123)	52	37	13	9	5	3	1	243

High casualties among company commanders themselves may constitute some basis for this turnover pattern. The overall rate of hostile fatalities of rifle company commanders, at 1.5% per month, is 1.5 times the rate for all men in the companies. Field commanders may, with an intent toward justice, spread these hazards amongst those eligible. What is probably not known to adherents of this rationale are the data shown in Table V. The rate of company commander loss because of hostile death or serious wound, after rising in each of the first 4 months of command in what appears to be a "learning period," drops markedly in the fifth month to a rate one-third as great as in the fourth month and remains low during succeeding months in command.

Table V

Company Commander Experience	Percent of company commanders lost Due to battle death or serious wound.	
Less than 1 month	2.04	Consolidated:
1 or more, but less than 2 months	3.07	4.1
2 or more, but less than 3 months	5.61	
3 or more, but less than 4 months	7.60	
4 or more, but less than 5 months	2.00	2.5
5 or more months	2.97	

This implies that a company commander could be left in office 6 more months, for a total of 10, without incurring an additional risk as great as that to which he was exposed during his first 4 months of command.

Other data help determine whether these results might be biased by the manner in which battalions select the company commanders who have longer tours. In particular, they focused on the first 4 months' battle deaths, comparing those in companies whose commanders had short tours with those whose commanders went on to complete 4 or more months in command. The tests failed to show bias and so confirmed the above analysis.

To indicate what precedes and follows a tour of company command, detailed information was available on a sample of 52 officers. Thirty percent assumed command within a month of arrival in SVN; so there appears to be no policy that in-country training or experience must precede command. Two-thirds of those routinely relieved next assumed a staff position. As the mean length of tour indicates, a typical Captain can expect to have three different jobs in the course of his year in Vietnam.

Increased command experience of the company commander also results in fewer battle deaths in his unit. Table VI compares the rate of battle deaths under company commanders who had less than 4 months in command with those whose commanders had more experience.

Table VI

Company Commander Experience in Command	Mr. Co. Cdr. Months	Total KIA	KIA in Groups of 5 or More in One Day	Other KIA	Killed in Action/Co.Cdr. Month Total	Groups of 5 or More Only	Other
Less than 4 mos.	1143	1971	916	1055	1.72	.80	.92
4 or more mos.	217	342	132	210	1.57	.61	.97
Total	1360	2313	1048	1265			

The rates of battle deaths in groups of 5 or more on a single day show some advantage in company commander experience, but not to the degree seen in battalion commanders. Moreover, the results may merely reflect the tendency of new battalion commanders to change their company commanders, so that the higher losses in early months of company command result from the battalion commander's inexperience, not the company commander's.

This is a "battalion commander's war," for he is the officer most often in immediate tactical command in combat. While the ARCOV report shows that in 148 engagements U.S. Army units were of company size in 50% and larger-than-company size in 20% more, the battalion commander determines the situation in which a company finds itself when a skirmish begins. The battalion commander's choice of landing zones and his control of axes of advance, boundaries, sectors, direction of attack, phase lines, and objectives fix the limits within which the company commander may exercise discretion. The battalion commander is frequently overhead in a command helicopter to direct his units as they fight on the ground. The data support the view that effectiveness depends mainly on his decisions.

ODCSOPS Comments

1. (U) The draft article concerning the relationship between experience in command and battle deaths is thought provoking and correctly points out that there is a correlation between the casualty rate and the time in command by company and battalion commanders. I have a number of comments which I believe will place the factors covered in the draft article in proper perspective when viewed with other significant elements which relate to the measurement of success in combat.

2. (C) An analysis of this subject should not only measure the cost of success, but also should define the success that is achieved in relation to the cost. In other words, we should answer the question, "What do we get for the price we pay?" To find the answers to that demanding question, the analyst must consider several factors.

a. The intensity and nature of combat in which a particular unit is engaged should be examined. These factors quite often overshadow the experience or command time of a participating commander in determining the number of friendly casualties.

b. The various missions of the units should be studied in conjunction with other factors. A battalion securing an area for a two week period so that the farmers in Phuoc Tuy Province can harvest their rice in comparative safety cannot be expected to sustain as many casualties as a battalion assaulting the fortified positions of well armed North Vietnamese troops near the South Vietnamese border in Kontum Province.

c. Both the enemy and friendly casualty rates should be determined and compared, since the success of a battle is measured in terms of the relative effect on both forces. As an example, several battalions of the 1st Cavalry Division's action in the Ia Drang Valley in 1965 sustained

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comparatively high friendly casualties. None of the battalion commanders had been in combat longer than three months. However, subsequent evaluation, considering enemy casualties, captured enemy weapons and material, and the intelligence gleaned from captured documents and prisoners proved the action to be a major US victory. Within the parameters of your study, this action could have been classified as less than successful.

3. (C) I realize that the data base for a statistical analysis of this sort is rather limited, but a comparison of your 1965 data with that of subsequent years is questionable. No US Army unit had completed six months in RVN prior to the last two months of 1965, and only three battalions had been in combat six months or more those last two months. This means that all the other Army battalions in combat during 1965 not only had commanders who had been in combat less than six months, but the entire command, from the lowest private to the battalion commanders' superiors, was equally void of combat experience in RVN. No valid comparison can be drawn between a battalion commander operating in those circumstances and one who has had a command in combat over six months or one who assumes command in a unit which has six months of combat experience under its belt.

4. (C) How long should a battalion or company commander command his unit in combat? We know from experience that a commander begins to "burn out" after a period in this hazardous and exacting environment. He becomes reluctant to take calculated risks, and may subconsciously become overly conservative in the employment of his unit. This tendency could result in fewer friendly casualties simply because the commander is not fighting his unit as hard as he did during the first few months of command when he was full of snap, zest and aggressiveness and eager to destroy the enemy. The extreme demands placed on a commander, due to the complex, fluid and vigorous nature of the combat in Vietnam reduce the length of time that he can function with maximum effectiveness.

5. (C) The average of six and four months in command for battalion and company commanders respectively was not determined arbitrarily. Rather, it represents the experience of our senior commanders in Vietnam who, based on over two years' experience with US units in that environment, have determined a command tour of that approximate length to be the most desirable and effective, considering all the factors. While a statistical analysis points out trends which should be considered, it also reveals the extreme difficulty one encounters in attempting to quantify the many facets of combat. I am convinced that our commanders in the field can best judge the length of time an officer should remain in command of a unit in combat.

OASD/SA Comments:

ODCSOPS raises three basic points: (1) other factors should be measured to "define the success that is achieved;" (2) 1965 data should not be included because entire units were "void of combat experience in RVN;" and (3) commanders "burn out" after longer tours.

First, ODCSOPS stresses other factors such as the mission, the nature of combat, and the enemy's casualties, not just friendly casualties must be considered in such evaluation. But, such data are not now available. We can only hope that this and similar articles will lead to improved reporting of this type data both to assist the field commander and to permit further analysis of this question.

Even so, the fact remains that in sizeable skirmishes the experienced battalion commander loses a significantly smaller number of his men. Because this analysis is based upon data which covers an extended time period and the widest possible diversity of Army units and areas of combat, we assume that the other factors cited (differing missions, combat intensity, etc.) should even out in the final results. All of the sensitivity tests we ran to check for biases and reliability of data supported our conclusions.

Second, the exclusion of 1965 data would not materially affect the conclusions. As is shown on the table below, using only 1966 data, the same conclusions emerge.

TABLE 1

KIA/BN CDR MONTH (1966 Only)

Battalion Commander Experience in Command	Total	In Sizeable Skirmishes	Other
Less than 6 months	4.93	2.20	2.73
6 or more months	4.13	1.58	2.55

Third, we can locate no data to indicate that long term commanders "burn out" or are less effective. This does not mean that the phenomenon of burn out does not exist, nor that the senior commander can ignore it, if he feels it does exist. However, we cannot prove its existence and we suspect that the present rotation policy may be based more on considerations of providing a wide base of combat experience than on the "burn out" factor. This study shows clearly that retention of the best battalion commanders has a real payoff. Since lives are at stake, further review of this question is clearly warranted.

Hand OS

EXPERIENCE IN COMMAND AND BATTLE DEATHS: MACV REBUTTAL

We received the following letter from MACV which rebuts our January article on command tenure and related battle deaths. Our article concluded:

> "The rates of battle deaths in groups of 5 or more on a single day show some advantage in company commander experience, but not to the degree seen in battalion commanders. Moreover, the results may merely reflect the tendency of new battalion commanders to change their company commanders, so that the higher losses in early months of company command result from the battalion commander's inexperience, not the company commander's."

MACV comments are set forth below:

1. In your January 1968 SEA Analysis Report, an analysis is made of the relationship between command time of maneuver battalion commanders and the battle losses suffered by their commands.

2. This article has been reviewed and several questions have come to mind which may prove of interest to you.

3. It is a truism that experience in battle will lead to fewer friendly losses from the point of view of the "learning curve." However, such a generality must, of necessity, be tempered with consideration of the many other variables which affect the outcome of battles. The "learning curve" concept has validity because, among other things:

a. The enemy's attack tactics fall into patterns vis-a-vis time and method. These can be learned by experience, particularly where the enemy force is always the same group of units.

b. Certain concepts of air assaults - ie, duration of preparatory fires, type of fires, ground configuration, and others - prove themselves over time.

c. The confidence level and morale of the troops builds as the "old man" learns.

d. The "old man" more correctly assesses his force capabilities over time, and can therefore make more judicious use of his strengths.

4. Whether the benefits of the learning curve equate in magnitude to the findings of your analysis is subject to question. The comments which follow are offered in the interest of pursuing your analysis.

5. Table 1 of your study can be translated into percentages.

	Command Months		Skirmish Losses		
Experience in Command	No	% of Total	No	% of Total	OASD Index
-6 mos	434	89.67	1068	92.95	2.46
+6 mos	50	10.33	81	7.05	1.62
		100.00	1149	100.00	

This shows that the "less than six months" commanders experienced a slightly greater percentage of battle losses than their percentage of the total command time, but the magnitude of the difference does not present as dramatic a picture as does the OASD index.

6. Our concern over this analysis is summarized as follows.

a. You have assumed implicitly that the intensity and other variables of the battles in each instance in the sample have been the same.

b. You have also assumed implicitly that the number of battles is distributed in accordance with the distribution of command time.

c. There is an inconsistency in the series of tables used to substantiate the findings, such that the mathematics cannot be reconstructed.

7. Table II of the study summarizes the distribution of battalion commanders in the sample.

a. By assigning the middle value of each class interval in the "less than six month" grouping, a total of 294.5 battalion commander months is obtained.

Experience in Months	Number of Commanders	Battalion Cmd Months
0.5	2	1.0
1.3	5	7.5
2.5	6	15.0
3.5	9	31.5
4.5	19	85.5
5.5	28	154.0
		294.5

This total is substantially less than the 434 command months cited in Table I. If the maximum value of each class interval were assigned, the

number of command months would total 329, still less than the 434 identified in Table I. Further, if the 49 battalion commanders in the "greater than six months" category are each credited with exactly six months command time, the total command months figure would be 294.5 + 294 = 588.5 substantially greater than the 484 cited in Table I.

b. Continuing this analysis of commanders with greater than six months in command, as shown in the OASD Table II, a total of 375.5 months of command experience has been accumulated by these commanders.

Experience in Months	Number of Commanders	Battalion Cmd Months
6.5	21	136.5
7.5	14	105.0
8.5	4	34.0
9.5	6	57.0
10.5	3	31.5
11.5	1	11.5
		375.5

By subtracting their first six months of command (6 x 49 = 294) a residual of 81.5 command months should have been accumulated by them after the six month mid-point. However, the OASD/SA Table I shows only 50. Further, by the logic of assigning these commanders the bottom value of each class interval, the minimum possible command time of these commanders would have to be 57 command months, as compared to the 50 cited.

Number of Months in Excess of 6	Number of Commanders	Battalion Cmd Months
0	21	0
1	14	14
2	4	8
3	6	18
4	3	12
5	1	5
		57

c. With respect to OASD Table III, the 156 command months does not agree with the 294 previously developed (49 x 6 = 294). Thus, the sample in Table III can not include the total of 49 commanders, but apparently selects only 26. If this is the case, then the average command time in excess of six months for these commanders is only $\frac{43}{26}$ = 1.65 months.

8. This analysis leads to the following questions.

a. What parameters were used to substantiate the assumption that combat intensity and frequency were balanced in the sample? Can a distribution of number of skirmishes and losses in these skirmishes be provided for each of the two groups?

b. On what basis was the data sample changed in progressing from Table I through Table II into Table III?

c. Was there enough data available in the apparently smaller sample of Table III to draw valid conclusions?

9. We would be interested in hearing from you concerning these points.

SEA PRO Comment:

MACV's questions, as summarized in paragraph 8 of this letter, pertain to combat intensity and distribution as well as to apparent inconsistencies in the data between tables.

Combat intensity, and other factors too, would be helpful additions to this study. Regrettably, data are not available. But these other considerations should wash out in the final results because the data cover a wide range of Army units and areas of combat in the time period for which there is information. Tests for reliability and bias tend to bear this out.

The data used in Tables I and II were not identical. The article pointed out that the battle deaths shown in Table I only covered 1965 and 1966. However, Table II used some additional data covering a portion of 1967, as was pointed out in the article. Table III, of course, used the same data as Table I as it dealt with combat deaths.

We agree that more data would be helpful. But Table III included all of the "Long Term" battalion commanders for which we had data. More data might have shown a different picture. But we doubt it. It was our view (and MACV confirms this) that more experienced battalion commanders are more effective: on the average fewer of their men get killed in combat.

RD CADRE ATTRITION

Revolutionary Development cadre are deserting at a rate of 21% per year, higher than for any GVN military force, perhaps because they have a 30% better chance of being killed than the military forces. Adding other losses raises the total RD cadre attrition rate to 32% per year. Project Takeoff is attempting to reduce the attrition rate by improving RD cadre disciplins, morale, and benefits. PF are being trained to play a larger role in RD as territorial security receives more emphasis.

Desertions

Table 1 shows that RD cadre (including Truong Son, montagnard, cadre teams) deserted at a rate of 18 per 1000 per month, or 21% per year, in the second quarter of 1968. Other losses (KIA, captured/missing, resignations and retirements) attrite another 11% a year. Thus the RD program will probably lose 32% of its current strength in 1968 or over 13,000 men.

Table 2 shows that the RD cadre gross* desertion rate is higher than the gross desertion rate for the RVNAF forces in 1967 and 1968. It ranges from 12% to 26% higher for the three half year periods shown, with the gap narrowing in 1968.

KIA Rates

The high RD desertion rate may be due, in part, to a KIA rate which was 35% higher for RD cadre than for other RVNAF in 1968 (and 65% higher in the second half of 1967). Table 2 shows that RD cadre have been killed at the rate of 3.1 per 1000 each month in 1968, versus a rate of 2.3 for the RVNAF forces. An RD cadre in 1968 had twice the chance of getting killed as an RF or PF trooper.

Project Takeoff Program

The high rate of RD cadre desertions is receiving attention in pacification planning. According to CORDS field reports in July 1968, US advisors are trying to get the GVN to reduce RD cadre attrition as a part of Project Takeoff. Among the RD program improvements which are being pushed are the following:

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* We have no data on RD cadre net desertions.

1. Improving discipline by increasing punitive measures for deserting the program, including enforcing current GVN directives, removing AWOLs from the payroll, and drafting AWOL personnel into ARVN.

2. Increasing benefits as incentive for longer service, including giving a bonus for reenlistment.

3. Improving morale and prestige as a means of gaining stronger commitment to the RD program. For instance, the GVN Vietnam Information Service (VIS) is advertising the RD program on its radio/TV broadcasts. Also one corps headquarters reports that it has worked out plans to provide artillery support for RD teams within range of friendly supporting artillery. (We have no data concerning the others.)

4. Selecting better candidates for leadership training classes.

5. Using mobile RD and RF/PF training teams to re-motivate and refresh the training of RD groups regularly.

6. Regularly providing in-province training for recruits before they go to Vung Tau for RD "basic" training.

7. Stimulating interest and knowledge in the RD program among GVN officials.

8. Developing effective means of supervising "stay-behind" cadre after the full 59-man team leaves a completed hamlet. For instance, the 59-man teams may remain in the same village, a short distance away from the completed hamlet.

We do not know how well the programs are succeeding, but the statistics seem to indicate that more protection for the RD cadre might raise morale and lower attrition better than any other measure.

Reevaluation of RD Priorities

The GVN Ministry of Revolutionary Development has directed the 714 RD teams to concentrate on building hamlet security, and to defer, at least temporarily, the hamlet development projects which formerly constituted 6 of the teams' 11 RD tasks. In addition, US advisors are emphasizing integrated territorial security planning at all levels: For instance, 1047 of the 4487 PF platoons have been programmed for training in RD tasks; of these, at least 561 had completed basic, refresher, or in-place RD training by July 31. Presumably the 1047 platoons will be able to assist the 5-man stay-behind RD teams in protecting hamlets already "pacified."

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RD PROGRAM STRENGTH AND ATTRITION a/

	1967 1st Half	2nd Half	1968 1st Half	1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	196 1st Qtr
Average Strength (In Province)								
RD Cadre	22688	26169	32336	22855	22520	24959	27369	30272
Truong Son Cadre	6087	6302	6644	5699	6475	6479	6925	6842
Total	28775	32471	38980	28554	28995	31448	33494	37115
Attrition								
RD Cadre:								
KIA	260	441	617	119	141	174	267	341
Deserted	1865	2224	3030	732	1133	1017	1207	1365
Other	1779	1574	1343	804	975	852	722	675
Total	3904	4239	4990	1655	2249	2043	2196	2381
TS Cadre:								
KIA	93	98	104	23	70	59	39	57
Deserted	491	427	864	86	405	217	210	328
Other	139	249	234	79	60	120	129	138
Total	723	774	1202	188	535	396	378	523
Totals:								
KIA	353	539	721	142	211	233	306	398
Deserted	2356	2651	3894	818	1538	1234	1417	1693
Other	1918	1823	1577	883	1035	972	851	813
Total	4627	5013	6192	1843	2784	2439	2574	2904
Monthly Desertions Per Thousand In-Province Strength								
RD Cadre	13.7	14.2	15.6	10.7	16.8	13.6	14.7	15.0
TS Cadre	13.4	11.3	21.7	5.0	20.8	11.1	11.4	16.0
Both	13.6	13.6	16.6	7.9	17.7	13.1	14.1	15.7
Monthly Attrition Per Thousand In-Province Strength								
RD Cadre	28.7	27.0	25.7	24.1	33.3	27.3	26.7	25.3
TS Cadre	19.8	20.5	30.2	11.0	27.5	20.4	20.6	25.0
Both	26.8	25.7	26.5	21.5	32.0	25.9	25.6	26.1

a/ Source: CORDS.

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1967 1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1968 1st Qtr	2nd Qtr
22855	22520	24969	27369	30272	34400
5699	6475	6479	6325	6847	6441
28554	28995	31448	33494	37119	40841
119	141	174	267	341	276
732	1133	1017	1207	1365	1665
804	975	852	722	675	668
1655	2249	2043	2196	2381	2609
23	70	59	39	57	47
86	405	217	210	328	536
79	60	120	129	138	96
188	535	396	378	523	679
142	211	233	306	398	323
818	1538	1234	1417	1693	2201
883	1035	972	851	813	764
1843	2784	2439	2574	2904	3288
10.7	16.8	13.6	14.7	15.0	16.1
5.8	20.8	11.1	11.4	16.0	27.7
9.5	17.7	13.1	14.1	15.2	18.0
24.1	33.3	27.3	26.7	25.2	25.3
11.0	27.5	20.4	20.6	25.5	35.1
21.5	32.0	25.9	25.6	26.1	26.8

TABLE 2

COMPARISON OF RD AND RVNAF ATTRITION RATES a/

	1967 1st Half	1967 2nd Half	1968 1st Half	1967 1st Qtr	1967 2nd Qtr	1967 3rd Qtr	1967 4th Qtr	1968 1st Qtr	1968 2nd Qtr
Desertions Per 1000 Per Month									
RD/TSRD Cadre	13.6	13.6	16.6	9.6	17.7	13.1	14.1	15.2	16.0
RVNAF:									
Regular Forces	10.7	10.4	15.9	11.7	9.7	9.7	11.0	16.1	15.8
Regional Forces	10.5	9.7	12.0	10.2	10.7	10.0	9.4	10.3	13.4
Popular Forces	13.6	13.1	15.0	14.2	13.0	13.5	12.7	13.3	16.6
Total RVNAF	11.3	10.8	14.8	12.0	10.7	10.6	11.0	14.1	15.4
KIA Per 1000 Per Month									
RD/TSRD Cadre	2.0	2.8	3.1	1.7	2.4	2.5	3.0	3.6	2.6
RVNAF:									
Regular Forces	1.6	1.5	2.9	1.6	1.6	1.3	1.6	3.7	2.2
Regional Forces	1.8	1.5	1.4	1.8	1.8	1.5	1.5	1.1	1.7
Popular Forces	2.0	2.4	1.6	2.0	2.0	2.1	2.7	1.6	1.6
Total RVNAF	1.7	1.7	2.3	1.7	1.8	1.5	1.8	2.6	2.0

a/ Source: CORDS for RD cadre data.
SEA Statistical Tables, Tables 1A, 4A, and 4B for RVNAF data.

RD CADRE ATTRITION: A CORRECTION

Last month we indicated that RD cadre are deserting at a higher rate than for any GVN military force. This was wrong. The rates cited were for RD cadre in provinces and should not have been applied to total RD strength nor compared to rates for total RVNAF strength. Applying two corrected approaches, we find that:

1. In terms of total strengths,

(a) RD cadre are deserting at a rate of 16% per year, below PF and Regular forces but above the RF and well within the noise level of these statistics.

(b) Total RD attrition rate in 1968 is at an annual rate of 26%.

(c) The 1968 RD cadre monthly KIA rate (through June) of 2.5 per 1000 is 79% above the PF rate, 56% above the RF rate, but 16% below the regular forces rate.

2. In terms of combat/in-province strength, RD cadre are deserting at about half the rate of gross desertions from Vietnamese Army and Marine combat units.

Attrition Rates Based on Total Strength

Table 1 shows RD cadre desertion and KIA rates based on total strengths. In 1968, RD cadre are deserting at a rate of 16% per year (13.6 per 1000 per month); adding other losses raises the rate to 26% per year (21.6 per 1000 per month). The RD cadre monthly desertion rate of 13.6 per 1000 strength was less than RVNAF Regular Forces and PF rates (15.9 per 1000 per month and 15.0 per 1000 per month respectively), but higher than the RF rate of 12.0 per 1000 per month.

RD cadre this year have been almost twice as likely (179%) to be killed in action as PF and 156% as likely as the RF, but only 86% as likely as Regular Force personnel.

Attrition Rates Based on In-Province/Combat Personnel

We do not have official data on Regular Force, RF, or PF KIA per 1000 combat (tactical unit) strength. We do have partial data on Regular Force gross desertions per 1000 combat strength.[1] During January through August 1968 (March data not available), gross desertions of ARVN and VNMC regular force combat personnel averaged 31.5 per 1000 per month, compared with 16.6 per 1000 in-province RD cadre per month.

1/ See RVNAF desertions article elsewhere in this issue.

TABLE 1

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RD CADRE AND RVNAF ATTRITION RATES

	1967 1st Half	1967 2nd Half	1968 1st Half
RD CADRE TOTAL STRENGTH a/	34,241	40,416	47,702
MONTHLY RD CADRE ATTRITION:			
KIA	59	90	120
Desertions	393	442	649
Other	320	304	263
Total	772	836	1,032
MONTHLY KIA/1000			
RD Cadre	1.7	2.2	2.5
RVNAF:			
Regular Forces	1.6	1.5	2.9
RF	1.8	1.5	1.4
PF	2.0	2.5	1.6
Total RVNAF	1.7	1.7	2.3
MONTHLY DESERTIONS/1000			
RD Cadre	11.5	10.9	13.6
RVNAF: b/			
Regular Forces	10.7	10.4	15.9
RF	10.5	9.7	12.0
PF	13.6	13.1	15.0
Total RVNAF	11.3	10.8	14.8

a/ Includes RD and Truong Son personnel in province plus those in training.
b/ Gross desertions.

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