



SYSTEMS ANALYSIS

ASST

DECLASSIFIED IN FULL  
Authority: EO 13526  
Chief, Records & Declass Div, WHS  
Date: JAN 05 2012

Ch. III  
FY 70  
Budget

28  
2/5/69

# MEMORANDUM FOR SECRETARY OF DEFENSE

SUBJECT: Adequacy of the FY 70 Budget for Support of Operations in Southeast Asia (U)

In developing the FY 70 Budget in support of operations in Southeast Asia (SEA) two explicit assumptions were made. First, the presently approved forces in SEA (Program #6) would be maintained indefinitely. Second, air and ground operational activity would decline during FY 70 from the average 1968 post-Tet levels to the levels believed to be occurring in the fourth quarter; this projected decline in activity was expected to result in decreased operating costs and ammunition expenditures. For air operations, it was assumed that operating costs would drop about 20% and bomb consumption about 10%. For ground operations, it was assumed that the variable part of operating costs would drop about 20% and ammunition expenditures about 10%.

Implicitly the Secretary and Deputy Secretary assumed that U.S. troop reductions would probably begin and the Paris negotiations would lead to some diminution in the level of violence during FY 70. For various reasons, including the concern that assumptions regarding reduced U.S. troop strength would harm the peace talks, these implicit assumptions were not stated in writing. As the situation now stands, however, the explicit assumption on which the budget was reduced, namely reduced activity levels, is unlikely to result in the estimated savings for three reasons: (1) friendly ground operations were not in fact significantly lower than average (in terms relevant to operating costs) in the fourth quarter of 1968; (2) ground ammunition consumption depends mainly on enemy activity and on our own artillery firing practices. Based on past patterns and current evidence, we believe consumption is unlikely to remain as low as the fourth quarter of 1968; and (3) no action has been taken to reduce the level of air sorties; if the current sortie level continues, neither the projected bomb production nor operating budget will be adequate.

If U.S. troop levels, tactical air forces, and naval forces are maintained in SEA through FY 70 at our currently estimated activity levels, more funds (\$700 million at a minimum) will be needed to support the war. The alternatives to requesting added funds from the Congress would be to: direct the field commanders to hold down consumption of ground ammunition and spare parts and reduce the level of air operations; reprogram funds from non-SEA programs; or make selective reductions in SEA forces, beginning with marginal units.

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Date: 05 JAN 2012 Authority: EO 13526  
Declassify: X Deny in Full:  
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MDR: 12-M-0411

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Table 1 summarizes the funds provided to support the war in FY 69 and FY 70 according to the President's Budget, compared with two alternative estimates that assume maintenance of present US troop levels and continued combat at the levels of CY 1968, post-Tet.

TABLE 1

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JAN 05 2012

DEFENSE BUDGET FOR SEA

(NOA in Billions)

	President's		FY 70 Alternatives	
	FY 70 Budget		Probable	Pessimistic
	FY 69	FY 70		
Military Personnel	5.7	5.7	5.7	5.7
Operations & Maintenance	9.7	8.8	9.3	9.5
Ammunition	6.2	5.0	5.2	5.6
Aircraft Attrition	1.5	1.2	1.2	1.2
Equipment & Spares	3.5	1.7	1.7	1.8
Military Construction	.3	-	-	-
Research & Development	.8	.6	.6	.6
Total	27.6	23.0	23.7	24.4

Air Operations The FY 70 Budget assumes reductions in the number of B-52 and tactical air sorties during CY 1969 and 1970.

Funding for air ordnance was reduced to 110,000 tons per month from the average of 125,000 tons per month for CY 1968. Of this 15,000 ton/month reduction, about 6,000 tons per month is accounted for by a reduction in the B-52 sortie rate which has already been directed (although not agreed to by the JCS). The remaining reduction of 9,000 tons per month was based on an assumed cut of about 13% in the number of tactical air sorties.

Funding for operating costs was based on assumed reduction of about 20% in tactical air sorties and on additional reduction of 10% in B-52 sorties (over and above the B-52 reduction already directed).

Table 2 shows the past trend of sorties, and the projections underlying the FY 70 Budget.

TABLE 2

SOUTHEAST ASIA AIR OPERATIONS  
(Monthly Average)

	CY 1968				FY 70 Budget	
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	O&M <sup>a/</sup> Funded	Ordnance <sup>b/</sup> Funded
Sorties						
Attack	32.5	34.4	35.0	31.7	26.5	28.0
B-52	1.4	1.8	1.8	1.8	1.4	1.6
Ordnance Consumption(000)	110	129	127	124	105	110

a/ Based on funds provided for Air Force, Navy and Marine aircraft in O&M Budget request.

b/ Ordnance funded in FY 70. Greater consumption is feasible by

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As indicated in the above table, the reductions underlying the budget are not likely to occur unless the field commanders are directed to hold down sorties, or some of the forces are withdrawn. The assumed tactical air sortie rates for FY 70 are about 12.5% below the number we would expect based on past sortie rates. Sorties and ordnance consumption were somewhat lower than usual in October and November, but returned to normal levels in December (32,000 attack sorties, and 131,000 tons of ordnance consumed) and the January totals will be similar.

The deficit in ordnance production could be met by foregoing increases in worldwide inventories; the worldwide air ordnance inventory is increasing during CY 1969 and thus will greatly improve our ability to meet contingencies outside SEA (e.g., Europe or Korea). If we are willing to forego this improvement in capabilities, we could avoid increasing the assumed FY 70 ordnance funding by drawing down our inventories to the current (Jan 1969) level.

The projected savings in operating costs, amounting to about \$300 million, cannot be realized however, without a directed reduction in sortie rates or a selective withdrawal of forces.

Aside from political considerations, we believe it would be preferable to withdraw forces rather than limit the sortie rate while keeping deployments constant. If nine tactical air squadrons (162 aircraft) were withdrawn from SEA, sorties and ordnance consumption would be reduced to about the levels assumed for FY 70 in the Budget, and added savings of about \$300 million would result.

We believe such a reduction could be made without significantly reducing combat effectiveness. The present air campaign in Laos includes large numbers of jet sorties (about 14,000 per month) that have a small payoff in terms of enemy materiel destroyed or effective disruption of his logistics system. Jet aircraft are poorly suited for this type of mission because they lack the maneuverability and loiter time required to find and destroy fleeting targets. Therefore, most jet sorties are used against chokepoints and fixed targets in Laos. Such strikes have little real impact as the roads can be repaired quickly, and adequate bypass roads are available to avoid the interdiction points. A cut in tactical air sorties in South Vietnam (SVN) could also be made with only a minor impact on combat effectiveness. Only about 20% of the sorties are in support of ground forces in contact with the enemy.

Ground Operations The budget assumes a reduction in ground combat operations during FY 70 to approximate the "lower operational levels" experienced during the fourth quarter of CY 1968. Reductions of \$300 million in operating funds and \$300 million in ground ammunition were made based on this assumption. Our analysis raises serious question as to the basis of these cuts.

Consumption of ground ammunition is determined mainly by the level of combat intensity and the number of contacts with the enemy, and secondarily by our own firing policy for artillery. Operating costs, however, are determined mainly by our own operational activity. Selected data on these factors are shown in Table 3.

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TABLE 3

FRIENDLY OPERATIONS -- Q4 1968  
(Monthly Averages)

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
VC/NVA Attacks	512	422	198	174
US KIA	1616	1575	982	682
Friendly Bn. Days of Operations	6199	7520	8264	8890
Friendly Large Operations	369	583	669	639
Friendly Small Unit Opns (000)	99	182	184	205
Army/USMC Helicopter Flying Hours (000)	195	191	200	193
Ground Ammunition Consumption (000 tons)	117	112	101	91
Friendly Force Strength (000)	1384	1507	1588	1606

Source: OSD(C) SEA Statistical Summary.

OASD(SA) SEA Statistical Tables.

We believe it is unlikely that consumption of ground ammunition will remain at the low level of the fourth quarter of 1968. Instead, the evidence suggests that combat intensity will probably continue at average 1968 post-Tet rates if US force levels in Vietnam remain unchanged. First, the VC/NVA have sufficient military capability to continue the 1968 post-Tet levels of combat for at least several years. There are about as many enemy combat forces in South Vietnam today as a year ago, and they are at least as well armed and supplied as last year. Second, the enemy still retains the tactical initiative in Vietnam and can control the level of combat within a wide range (note the close correlation between enemy attacks and US KIA as shown on Table 3). If the VC/NVA want to fight, they have the ability to rapidly escalate the conflict. Finally, recent intelligence indicates the enemy is actually planning to sustain a high level of combat activity. Troop infiltration from North Vietnam continues at high levels, truck traffic through Laos is almost identical to last year's pre-Tet build-up, and aM-source intelligence indicates current preparations for a renewed offensive in South Vietnam.

If combat intensity remains at the average for 1968 post-Tet, about \$200 million of additional ammunition would be required. (This takes into account the projected saving due to a more restrained policy on artillery fire.) As in the case of air ordnance, this deficit could be met by drawing down on worldwide inventories, but this would hurt our capability to meet contingencies in Europe, Korea and elsewhere.

In addition, it is unlikely that the projected \$300 million saving in operating costs will occur, regardless of combat intensity. The principal US strategy continues to be one of combat attrition (find, fix, and destroy the enemy), and US forces will undoubtedly search aggressively for the enemy. For example, while the level of violence during the fourth quarter was clearly lower (US/KIA was down 30% from the third quarter and ammunition consumption

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down 9%), operational activities (offensive sweeps, patrols, helicopter flights, etc.) did not decline. In fact, activity levels actually increased as shown in Table 3. Therefore, even if combat intensity remains low, US operations will continue at average 1968 rates and an additional \$200 million in O&M funds will be required; if combat intensity increases about \$300 million will be needed.

Naval Operations Reductions in naval operating funds and ammunition procurement were made during the development of the FY 70 Budget assuming reduced activity in FY 70. However, like air operations, naval operations (including gunfire support) vary only moderately as the pace of combat changes. Therefore, assuming ship deployments remain comparable to CY 1968 levels, it is likely that a minimum of \$10 million in additional gun ammunition and \$15 million in operating funds will be required.

#### Areas Where Funds Appear Adequate

FY 70 funds budgeted for pay, allowances, and direct support of SEA personnel should be adequate as long as the present manpower ceilings in SVN, Thailand and other areas of WESTPAC are maintained. Each added man deployed to Vietnam costs about \$30,000 per year and each additional man elsewhere in the Western Pacific costs about \$20,000.

The FY 70 Budget assumed a sharp drop in aircraft losses, reflecting the decision to stop bombing NVN and reduced the excessively high attrition forecasts made shortly after Tet. Aircraft losses are running near or below the projections used as the basis for the FY 70 Budget as shown below. Barring a resumption of the bombing of NVN or a series of large scale Tet-type attacks on our air bases in SVN, we should not need additional funds for aircraft procurement in FY 1970.

#### TOTAL AIRCRAFT LOSSES IN SEA (Nov 68 - Jan 69)

	<u>Projected</u>	<u>Actual</u>
Fighter/Attack	83	79
Recco	9	7
Helicopters	265	201
Other Fixed Wing	59	36
Total	416	323

#### Possible Reductions in South Vietnam Cost

There are several ways to reduce the cost of the Vietnam conflict. Some small savings could be made without reducing the combat forces deployed in Southeast Asia; e.g., cuts in SVN overhead and support (headquarters, engineer, and logistic personnel), a phasedown of construction forces in Thailand, and withdrawal of naval gunfire vessels used against North Vietnam.

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coastal targets prior to the November 1 bombing halt. However, any substantial reduction in the cost of the conflict requires reductions in troops in South Vietnam, Thailand, or the Naval forces offshore. A number of possible actions are shown below.

<u>ACTIONS TO REDUCE THE COST OF THE WAR</u>			
	<u>Personnel (000)</u>		<u>Annual Savings</u> <u>(\$ Millions)</u>
	<u>SVN</u>	<u>Other</u>	
<u>Minor Reductions</u>			
Overhead/Support	15	-	300
Thailand Construction	-	1	20
Naval Gunfire	-	2	96
<u>Tactical Air Reductions</u>			
162 Jet attack aircraft <u>a/</u>	2	8	700
1 Carrier Task Force <u>c/</u>	-	5	57
<u>Ground Force Reductions</u>			
Army Div and Support <u>b/</u>	48	-	940
Marine Div and Support <u>b/</u>	34	-	735
Equipment Turnover to RVNAF	11	-	230

<sup>a/</sup> Includes closing two air bases.

<sup>b/</sup> Includes slice of tactical air support.

<sup>c/</sup> Assumes no overall reduction in carrier based sorties would result if one carrier is withdrawn; therefore, no aircraft operation attrition or ordnance costs are included.

A reduction in tactical air operations was discussed previously. If nine jet squadrons were returned from SEA, we doubt that the impact would be significant. One of the three attack carriers normally flying missions off Vietnam could also be withdrawn without a major impact on sorties as the Navy sortie rates have dropped sharply since the halt in the bombing of NVN (from about 1700 to 1300 attack sorties per carrier per month). In fact, I understand that the Navy has recently proposed this to avoid slipping the carrier overhaul schedule.

We could begin reducing US ground combat forces in SEA during FY 70. Some US troops could be withdrawn this summer as their equipment (helicopters, river boats and artillery pieces) are turned over to the Vietnamese troops. In addition, as RVNAF combat capability continues to improve, other US combat units could be redeployed without reducing the total Allied combat capability in Southeast Asia. Vietnamese forces should provide the equivalent of 30 US maneuver battalions (about three divisions) of added combat capability in 1969. Each US division and its support that is redeployed saves from \$750 million to nearly \$1 billion a year.

Enclosures (6)

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Key Factors Affecting the Cost of the SEA Conflict

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The cost of the Southeast Asia conflict is determined largely by three factors: the number of troops deployed; the number of deployed tactical aircraft and the intensity of the ground war. The number of troops and tactical aircraft deployed in Southeast Asia are matters under our control; decisions can be made and the cost of the war changed accordingly. The ground operations activity level is only partially under our control as the level of violence is largely determined by the enemy. When the Viet Cong/North Vietnamese forces are unwilling to stand and fight, combat intensity drops. During periods when he is willing to attack or to react to our sweep operations, combat intensity increases and war costs increase.

Costs respond radically to changes in troop strength and aircraft strength because of the high costs associated with keeping men and aircraft in the field. Combat intensity is a lesser determinant, because of the low variable-to-fixed cost ratio associated with combat operations. The costs that actually vary with changes in combat intensity play a surprisingly small role in total war costs. Nevertheless a cease fire would result in sizeable savings as ordnance consumption (\$6 billion a year) and a major part of the other variable operation expenses would drop to about zero.

Troop deployments

Each man deployed to South Vietnam costs \$25,000 to \$35,000 per year, depending on whether he is a support or combat man. These costs include pay and allowances, food, clothing, training costs, rotation costs, ammunition and maintenance costs. If 100,000 personnel were deployed to or removed from South Vietnam, the cost of the war would change about \$3 billion per year.

The approved deployment program to Southeast Asia (Program #6 through Change 39) authorizes a force of 549,500 US troops in South Vietnam, 48,000 in Thailand, and approximately 167,000 elsewhere in the off-shore Vietnam fleet and the WESTPAC area (ie Okinawa, Japan, Taiwan, Guam and the Philippines). No significant changes in these forces are planned for FY1970, and no further funds should be necessary. On the other hand, if any meaningful reductions in the war cost are to be made it will require withdrawals of troops.

Tactical Aircraft Deployments. Air operations cost about \$6.0 billion per year. Present programs call for about 1150 US fighter and attack aircraft deployed in Southeast Asia, 650 in SVN, 300 in Thailand, and 200 aboard the three carriers that operate offshore in the Tonkin Gulf. In addition, 105 B-52s and 150 Vietnamese and Australian fighter aircraft support the war. Three elements of cost relate directly to aircraft strength: (1) air ordnance consumption; (2) air operations and maintenance costs; (3) aircraft attrition.

1. Air ordnance consumption. Air ordnance expenditures are directly related to the number of sorties flown. Further, the number of sorties appears to be largely a function of the number of aircraft deployed. Since mid-1967, US tactical aircraft in SEA fly about 28 sorties per month per aircraft. This sortie rate has remained constant throughout the period of our involvement in SE.

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OASD(SA)  
February 5, 1969

*Encl 1*

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A minor variable in ordnance consumption is the size bomb loads carried by the tactical aircraft. The average load per sortie has tended to increase over time as aircraft capable of carrying heavier loads enter the forces. In 1966 the average tactical sortie carried 1.4 tons. This rose to 1.7 in 1967 and presently is about 1.9 tons. Load sizes can, of course, be changed if the commanders wish. But, in the absence of such direction, the average loads will probably continue to increase slowly.

2. Air operations and maintenance costs. Fuel, supplies, transportation, maintenance and communications are the main elements of air operations and maintenance (O&M) cost. A large residual fixed cost component representing about 60% of total air O&M is determined by the size and number of air bases utilized; this, in turn, is a direct function of the number of aircraft deployed. Base supplies & maintenance, communications and transportation are the main fixed costs. The variable costs (40%) comprise mostly fuel and aircraft maintenance, which vary directly with the number of sorties flown. Since the sortie rate itself is a function of aircraft population, then the reasonable conclusion is that all primary air O&M costs are tied directly to the number of aircraft deployed.

3. Aircraft attrition. Aircraft losses are a function of the number of sorties and the locations of the targets. Losses were heavier during a period of bombing of North Vietnam (NV) than at present. Assuming that the present bombing halt will continue indefinitely, then attrition is solely a factor of sortie rate and, thus, the number of aircraft deployed. Loss rates in both SVN and Laos have been stable for several years; in SVN, we lose about .5 aircraft per 1000 attack sorties and in Laos the rate is slightly higher, about .6 per 1000 sorties.

Ground War Costs - In addition to the costs that are dependent on the personnel associated with ground forces, there are two other major cost elements, ammunition and operations and maintenance costs.

1. Ground ammunition. Our analysis indicates that the major portion of ammunition consumption is determined by the numbers of rifles, mortars and artillery pieces that are deployed in the combat zone. The fixed cost component of total ground ammunition consumption is about 78,000 tons per month, roughly 75% of total consumption. The balance of ground ammunition consumption appears to be directly related to enemy activity.

GROUND ACTIVITY - CY 1968  
(Monthly Average)

	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Enemy Attacks (Index)	512 (1)	422 (.82)	198 (.39)	174 (.34)
Fixed Ammo Exp (Tons-000)	78	78	78	78
Variable ammo Exp (Index)	39 (1)	33 (.85)	22 (.57)	13 (.34)
Total Ammo Exp	117	111	100	91

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rate will be 50,000 tons, about the level experienced during fourth quarter 1968. About \$300 million was cut from the budget based on the assumption that ground combat intensity will hold at the fourth quarter 1968 level throughout 1969 and 1970. During the fourth quarter 1968, only 2 VC/NVA battalion-sized attacks were reported, the lowest number since 1964. There were fewer total attacks than in any quarter since Jan-Mar 1967, and enemy incidents were the lowest since the second quarter of 1965. A budget based on this level of combat activity implicitly assumes that the enemy will return to their 1964-65 combat activity levels. It is questionable whether this low level of combat activity will, in fact, continue. Our analysis indicates the intensity of the fighting in FY 1970 will probably be close to 1968 post-Tet for three principal reasons.

First, there has been no significant decrease in the VC/NVA combat troops in South Vietnam despite heavy casualties. MACV estimates about 162,000 combat troops were in SVN in December 1968, better armed and equipped than in 1967.

Second, the enemy has the tactical initiative in Vietnam and can control the intensity of combat within a wide range. The combat "lull" during the fourth quarter 1968 was probably used to prepare for a new offensive. In fact, during January 1969 the pace of combat may be increasing over the level during Oct-Dec 1968, following a pattern similar to last year. A total of 1600 US/Free World troops were killed in January compared to a monthly average of only 1470 in the last quarter 1968. Enemy troop infiltration and truck traffic in Laos are substantially above the Oct-Dec 1968 levels.

Finally, it is unlikely combat intensity will decline significantly in FY 1970 because the principal US strategy continues to be one of combat attrition (find, fix, and destroy the enemy in large numbers). Our combat units will undoubtedly continue to aggressively pursue the enemy wherever possible, and unless the VC/NVA continuously avoid combat, activity levels will approximate 1968.

2. Ground Operations Maintenance. Ground O&M costs are determined only in small part by variations in ground combat intensity for two reasons.

First, there is a high relative incidence of fixed cost determined by the requirement to support the field forces regardless of whether they are in combat. Most supplies are in this category, along with civilian personnel costs, contractor services costs, base operations, and communications.

Second, the variable ground O&M costs (including equipment maintenance, transportation, medical and combat related supplies) are determined by the level of friendly operations not combat intensity. The following table shows that allied field activity is practically independent of the level of combat intensity.

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CY 1968 QUARTERLY AVERAGES

	<u>1st Qtr.</u>	<u>2nd Qtr.</u>	<u>3rd Qtr.</u>	<u>4th Qtr.</u>
I. Factors Reflecting Combat Intensity				
VC/NVA Attacks	512	422	198	174
US KIA	1016	1575	982	682
II. Friendly Operations				
Friendly Bn. Days of Opn.	6199	7520	8264	8890
Friendly Large Operations	369	583	669	639
Friendly Small Unit Ops (000)	99	182	184	205
Army/USMC Helo Flying Hrs (000)	195	191	200	193

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