<table>
<thead>
<tr>
<th></th>
<th>1965</th>
<th>1966</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feb</td>
<td>Mar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I Corps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>2.0</td>
<td>4.0</td>
</tr>
<tr>
<td>2nd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>TN</td>
<td>.8</td>
<td>.8</td>
</tr>
<tr>
<td>Total</td>
<td>2.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*Excludes tank battalions.*

Table IV-8

South Vietnam: Actual and Projected Deployment of US/Third Nation Maneuver Battalions by Service and Corps Area
February 1965 - June 1967

(In Thousands)
COMPOSITION OF US MANEUVER BATTALION AND ARTILLERY BATTALION STRENGTH TO TOTAL US ARMY AND USMC TROOP STRENGTH
July 1965 - June 1967
(Thousands)

Maneuver Battalion Strength
Artillery Battalion Strength
Indirect Combat Support
Logistics, Construction, etc.

Figure IV-5
APPROXIMATE COMPOSITION OF ARVN MANEUVER BATTALION STRENGTH TO TOTAL ARVN TROOP STRENGTH 1964-June 1967 (Thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Maneuver Battalion Strength</th>
<th>Troop Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>177.0</td>
<td>43.0</td>
</tr>
<tr>
<td>1965</td>
<td>220.0</td>
<td>46.0</td>
</tr>
<tr>
<td>Jun 66</td>
<td>222.0</td>
<td>51.0</td>
</tr>
<tr>
<td>Jun 67</td>
<td>268.0</td>
<td>51.0</td>
</tr>
<tr>
<td>Jun 67</td>
<td>273.0</td>
<td>51.0</td>
</tr>
<tr>
<td>Jun 67</td>
<td>Promoted</td>
<td></td>
</tr>
</tbody>
</table>
### Table IV-9

**South Vietnam: Actual and Projected Deployment of ARVN Maneuver Battalions by Corps Area**

February 1965 - June 1967

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
</tr>
<tr>
<td>I Corps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RVN</td>
<td>9.0</td>
<td>9.4</td>
<td>9.4</td>
<td>9.4</td>
<td>9.4</td>
</tr>
<tr>
<td>II Corps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RVN</td>
<td>8.6</td>
<td>8.6</td>
<td>8.6</td>
<td>8.6</td>
<td>9.4</td>
</tr>
<tr>
<td>III Corps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RVN</td>
<td>13.5</td>
<td>13.5</td>
<td>13.5</td>
<td>13.5</td>
<td>13.5</td>
</tr>
<tr>
<td>IV Corps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RVN</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
</tr>
<tr>
<td>CHQ</td>
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<td>0</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>43.5</td>
<td>43.9</td>
<td>43.9</td>
<td>43.9</td>
<td>43.9</td>
</tr>
</tbody>
</table>
SOUTH VIETNAM: TROOP DISPOSITION
BY CORPS OF ALLIED MANEUVER BATTALIONS
AND ESTIMATED VC/NVA MAIN FORCES (MF)
June 1966

I CORPS
NVA 23,500
VC/MF 12,500
--- 36,000
US/TN 22,000
GVN 10,500
--- 32,500

II CORPS
NVA 4,500
VC/MF 23,300
--- 27,800
US/TN 15,200
GVN 13,000
--- 30,200

III CORPS

IV CORPS
NVA Believed Negligible
VC/MF 18,400
GVN 14,200
probably help to make the ratio of friendly to enemy field forces less critical than it appears in Table IV-10. The ratio of friendly to enemy field forces has increased slightly in favor of the Communists during the July 1965-June 1966 period. A friendly to enemy field force ratio of 1:8 was observed in mid-1965 and a ratio of 1:9 observed in mid-1966. Projections of enemy and Allied field strengths indicate that the Communists may achieve a 1 to 1 ratio with opposing field forces in December 1966 and a 1.1 to 1 ratio by mid-1967.

b. Qualitative Aspects of Increases in Field Force Strength

The contribution of South Vietnam to both the Allied and local Communist field troop strength has stabilized in the past year. In July 1965, GVN troops accounted for 73 percent of Allied field strength. In June 1966 GVN troops made up 48 percent of Allied field strength. In July 1965, South Vietnamese Communists accounted for 98 percent of the enemy field forces. By June 1966, local Communists accounted for 62 percent of the enemy field forces. United States/Third Nation field forces have increased by some 38,000 during the July 1965-June 1966 period. Regular South Vietnamese Army field forces have increased by about 7,000 in the same period. Regular North Vietnamese Army force increased by some 37,000 troops in the July 1965-June 1966 period. The endogenous Communist contribution to VC main force increased strength by an estimated 11,000 during the same period.

c. Corps Area Field Strengths

The critical ratio of opposing field forces in South Vietnam by Corps area as of mid-1966 indicates that Allied strength varies considerably from one area to another (See Table IV-11). The Allied field forces enjoy an estimated 1:68 and 1:92 manpower superiority in I and III Corps areas respectively. In II and IV Corps areas the Communists enjoy an estimate 1:1.1 and 1:1.3 manpower superiority in the field. Consequently, it is observed that while Allied forces enjoy an aggregate manpower superiority of 1:96 in mid-1966, such an advantage is not held equally at each Corps level.
Table IV-10

South Vietnam: Ratio of Allied Maneuver Battalion Strength to Estimated NVA/VC Main Force Troop Strength
July 1965 - June 1967

<table>
<thead>
<tr>
<th></th>
<th>1965</th>
<th></th>
<th>1966</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
</tr>
<tr>
<td>NVA</td>
<td>1.2</td>
<td>1.2</td>
<td>5.2</td>
<td>7.7</td>
<td>10.7</td>
<td>11.1</td>
<td>11.1</td>
<td>13.1</td>
<td>18.3</td>
<td>24.5</td>
<td>30.9</td>
<td>38.0</td>
</tr>
<tr>
<td>VCMF</td>
<td>47.3</td>
<td>49.3</td>
<td>51.3</td>
<td>53.3</td>
<td>56.2</td>
<td>59.1</td>
<td>59.2</td>
<td>59.2</td>
<td>59.2</td>
<td>57.7</td>
<td>57.2</td>
<td>63.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48.5</strong></td>
<td><strong>50.5</strong></td>
<td><strong>56.5</strong></td>
<td><strong>61.0</strong></td>
<td><strong>66.9</strong></td>
<td><strong>70.2</strong></td>
<td><strong>70.3</strong></td>
<td><strong>72.3</strong></td>
<td><strong>77.5</strong></td>
<td><strong>82.2</strong></td>
<td><strong>88.1</strong></td>
<td><strong>101.0</strong></td>
</tr>
<tr>
<td>US/TN</td>
<td>16.2</td>
<td>21.2</td>
<td>27.2</td>
<td>35.1</td>
<td>35.3</td>
<td>44.1</td>
<td>45.1</td>
<td>46.1</td>
<td>51.6</td>
<td>53.4</td>
<td>54.2</td>
<td>71.4</td>
</tr>
<tr>
<td>GVN</td>
<td>43.9</td>
<td>45.5</td>
<td>45.5</td>
<td>45.9</td>
<td>45.9</td>
<td>45.9</td>
<td>48.0</td>
<td>48.0</td>
<td>48.0</td>
<td>48.7</td>
<td>50.9</td>
<td>50.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60.1</strong></td>
<td><strong>66.7</strong></td>
<td><strong>72.7</strong></td>
<td><strong>81.0</strong></td>
<td><strong>82.6</strong></td>
<td><strong>90.0</strong></td>
<td><strong>93.1</strong></td>
<td><strong>94.1</strong></td>
<td><strong>99.6</strong></td>
<td><strong>102.1</strong></td>
<td><strong>105.1</strong></td>
<td><strong>122.3</strong></td>
</tr>
<tr>
<td>Ratio Friendly to Enemy</td>
<td>1:1.81</td>
<td>1:1.76</td>
<td>1:1.76</td>
<td>1:1.75</td>
<td>1:1.81</td>
<td>1:1.83</td>
<td>1:1.78</td>
<td>1:1.78</td>
<td>1:1.62</td>
<td>1:1.82</td>
<td>1:1.66</td>
<td>1:1.96</td>
</tr>
<tr>
<td>Ratio US/TN to NVA</td>
<td>1:1.07</td>
<td>1:1.06</td>
<td>1:1.19</td>
<td>1:1.22</td>
<td>1:1.29</td>
<td>1:1.25</td>
<td>1:1.25</td>
<td>1:1.40</td>
<td>1:1.47</td>
<td>1:1.58</td>
<td>1:1.70</td>
<td>1:1.84</td>
</tr>
</tbody>
</table>
### Table IV-11

South Vietnam: Ratio of Allied Maneuver Battalion Strength to Estimated NVA/VC Main Force Troop Strength by Corps Area, Mid-1966

<table>
<thead>
<tr>
<th></th>
<th>I Corps</th>
<th>II Corps</th>
<th>III Corps</th>
<th>IV Corps</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCMF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US/TN</td>
<td>17,000</td>
<td>22,000</td>
<td>15,200</td>
<td>--</td>
</tr>
<tr>
<td>GVN</td>
<td>10,800</td>
<td>10,500</td>
<td>15,000</td>
<td>14,200</td>
</tr>
<tr>
<td>Total</td>
<td>27,800</td>
<td>32,500</td>
<td>30,200</td>
<td>14,200</td>
</tr>
</tbody>
</table>

Ratio Friendly to Enemy

\[
\frac{\text{NVA/VC}}{\text{(US/TN + GVN)}}
\]

### C. Projected Critical Troop Ratios

We estimate that by the end of 1966 Communist field strength in South Vietnam will be about 125,000 and 140,000 by mid-1967 (See Table IV-12). North Vietnamese Army units will account for 54 percent of the total. Projected Allied deployments for the end of 1966 and mid-1967 show that approximately 122,300 and 129,500 troops respectively, will be allocated to maneuver battalions. About 58 percent of the projected Allied field strength will be accounted for by US/Third Nation forces. The projected increases in both forces...
will come largely from US/Third Nation troops and the North Vietnamese Army.

### Table IV-12

South Vietnam: Projected Critical Troop Ratios:  
Allied Maneuver Battalion Strength to Estimated NVA and VC Main Force Strengths

<table>
<thead>
<tr>
<th></th>
<th>June 1966</th>
<th>December 1966</th>
<th>June 1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCMF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US/TN</td>
<td>54.2</td>
<td>71.4</td>
<td>78.6</td>
</tr>
<tr>
<td>GVN (ARVN)</td>
<td>50.9</td>
<td>50.9</td>
<td>50.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>105.1</td>
<td>122.3</td>
<td>129.5</td>
</tr>
</tbody>
</table>

The ratio of NVA forces to US/Third Nation forces has grown from approximately 1 to .1 in July 1965, to 1: to .7 in mid-1966. Projections indicate that this ratio may increase to 1 to .8 in December 1966 and nearly 1 to 1 by mid-1967. The North Vietnamese apparently plan to match the buildup in US/Third Nation maneuver battalions. (See Figure IV-a). Thus, during the next 12 months Allied forces in South Vietnam will in a relative sense, face a larger enemy force than they have in the past.
COMPARATIVE, ACTUAL, AND PROJECTED ALLIED AND US/THIRD NATION MANEUVER BATTALION STRENGTH TO VC/NVA MAIN FORCE STRENGTH

July 1965 - June 1966 and Projected for December 1966 and June 1967

*Allied estimates from the Department of Defense.
III. Operations

A. Assumptions and Methodology

The statistics used to evaluate the intensity and course of the ground war in South Vietnam take on added meaning in a war without fronts. Several of the factors employed to assess the war in South Vietnam are subject to considerable margins of error, and as such require discussion. The number of Communist troops reported killed in action is both the most important and least reliable statistical measure used to assess the progress of the military aspects of the struggle. The figure is subject to error because of duplications, omissions, possibly inflated body counts, and the inability to identify non-military casualties. On the other hand, it is well known that Communist forces exert considerable effort to remove both their dead and wounded from the battlefields of South Vietnam. At present there appears to be no rational method for adjusting enemy body count figures. Consequently, the statistics on enemy dead are taken as received, subject to non-quantifiable reservations on their accuracy.

The allocation of the reported enemy dead to the respective inflicting forces also presents a problem. Combined US/Third Nation and GVN operations are conducted in such a manner that an accurate accounting of enemy casualties by an inflicting force is difficult to achieve. A similar problem exists in trying to determine whether artillery, air support or ground forces inflicted the casualties. Statistical problems also exist in allocating casualties to large and small scale operations.

To allocate the number of reported enemy killed in each engagement to the respective inflicting force, the number of Allied soldiers killed in each combined operation were weighted by their aggregate kill ratios. The number of Allied and enemy killed in action were also rounded in an effort to make the data consistent. It was observed that the majority of US/Third Nation inflicted and sustained casualties were results of maneuver battalion sized operations or greater. A similar assumption with far less certainty was made with respect to GVN forces. South Vietnamese casualties, both inflicted and sustained, were allocated to their
respective corps areas for the July 1965 - May 1966 period on the basis of relative April and May data. The July 1965 - May 1966 period was examined with considerable emphasis because of the relative wealth of data and the increased involvement of US/Third Nation forces in the war.

B. Operations

1. Total GVN and US/Third Nation Operations

During the July 1965 - May 1966 period some 43,700 enemy troops were reported killed in action. Both in relative and absolute sense US/Third Nation forces are now playing a dominant combat role in the South Vietnamese war (See Figure IV-9). The number of US/Third Nation forces (maneuver battalions) capable of actively engaging Communist forces in combat operations has grown from 16,200 in July 1965 to 54,200 in mid-1966. The number of GVN forces capable of initiating offensive operations has remained relatively stable--from about 44,000 in July 1965 to 51,000 in mid-1966.

2. US/Third Nation*

During the July 1965 - May 1966 period US/Third Nation participation in ground operations increased directly with increases in US/Third Nation maneuver battalion strength. (See Figure IV-10). From July-December 1965, US/Third Nation forces accounted for 23 percent of the 23,600 enemy troops reported killed in action; during January-May 1966, US/Third Nation forces killed 56 percent of 20,100 enemy troops reported killed in action. (See Figure IV-11).

US/Third Nation field forces achieved a kill ratio of approximately 6 to 1 during the July 1965 - May 1966 period. Of the 16,800 enemy reported killed in action

*For purposes of simplicity Third Nation forces are combined with US. Combined operations are allocated to US/Third Nation and GVN operations respectively.
APPROXIMATE COMMUNIST KIA, BY INFlicting FORCE
1965 - May 1966

Figure IV.9
RELATIONSHIP OF COMMUNIST AND US/THIRD NATION KIA TO BUILD-UP OF US/THIRD NATION MANEUVER BATTALION STRENGTH

July 1965 - May 1966

US and TN Maneuver Battalion Strength
(Number of men available for offensive combat)
COMPOSITION OF REPORTED VC/NVA KIA
BY INFLECTING FORCE
July 1965 - May 1966

July - December 1965

- 23% by US/TN
- 77% by GVN Forces

Total: 23,600

January - May 1966

- 44% by GVN Forces
- 56% by US/TN

Total: 20,100

APPROXIMATE DISTRIBUTION
OF REPORTED VC/NVA KIA, BY CORPS AREA
July 1965 - May 1966

US/TN
Total 16,800

III Corps 23% 3,800
I Corps 26% 4,400
II Corps 51% 8,600

GVN
Total 26,900

IV Corps 40% 10,800
I and II Corps 35% 9,400
III Corps 25% 6,700
by them during the 11 month period, 26 percent were ac-
counted for by US Marines in I Corps, 51 percent by US
Army/Third Nation forces in III Corps. (See Figure IV-12).
As a general rule US/Third Nation maneuver battalion kill
ratios have been highest in I and II Corps areas and lowest
in III Corps.

3. GVN

During the July 1965 - May 1966 period the
South Vietnamese Army participation in ground operations
decreased. From July-December 1965, GVN forces accounted
for 7 percent of the 23,600 enemy troops reported killed in
action, or approximately 3,000 enemy killed per month. 
(See Figure IV-13). High desertion rates, heavy casualties,
and political instability have adversely affected the bat-
tlefield contributions of South Vietnamese military units.

South Vietnamese forces achieved a 2.7 to 1
kill ratio over Communist forces during the July 1965 -
May 1966 period. Approximately 35 percent of these kills
were recorded in I and II Corps, 25 percent in III Corps
and 40 percent in IV Corps.

Communist Performance in Battle

The question of Communist troop morale is discussed
in detail in Annex VII. Communist troop performance indi-
cates that the enemy troops are not yet experiencing morale
problems that adversely affect their behavior on the battle-
field. However, the number of captured Communist weapons,
personnel, and desertions have increased considerably since
1964. (See Table IV-13). These losses can be explained by
the increasing scale of combat and do not necessarily re-
fect a decline in Communist battlefield performance.
RELATIONSHIP OF COMMUNIST AND GVN KIA TO BUILD-UP OF GVN MANEUVER BATTALIONS
July 1965 - May 1966

Figure IV-13

Communist

GVN

ARVN Maneuver Battalion Strength
Approximately 35,100

ARVN Maneuver Battalion Strength
Approximately
### Table IV-13

**South Vietnam: Absolute Indicators of Communist Performance in Battle**

<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1965</th>
<th>1966*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communist &quot;Chieu Hoi&quot; Military Desertions</strong></td>
<td>1,900</td>
<td>9,500</td>
<td>12,000</td>
</tr>
<tr>
<td><strong>Captured</strong></td>
<td>4,200</td>
<td>6,300</td>
<td>7,900</td>
</tr>
<tr>
<td><strong>Communist Weapons Captured</strong></td>
<td>5,900</td>
<td>11,800</td>
<td>N. A.</td>
</tr>
</tbody>
</table>

*Estimate for entire year.*

**GVN amnesty program for Communist deserters.**

By relating the selected indicators to the scale of combat (the number of enemy reported KIA and captured) it is possible to illustrate that in a relative sense Communist forces are essentially performing as well as in battle today as they were in 1964 and 1965.

### Table IV-14

Relative Indicators of Communist Motivations in Battle Expressed in Terms of the Scale of Combat, 1964-66

<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1965</th>
<th>1966*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Captured - as a Percent of KIA</strong></td>
<td>.24  (\frac{1}{1})</td>
<td>.19  (\frac{1}{1})</td>
<td>.14  (\frac{1}{1})</td>
</tr>
<tr>
<td><strong>Weapons Loss - as a Percent of KIA and Captured</strong></td>
<td>.29  (\frac{1}{1})</td>
<td>.30  (\frac{1}{1})</td>
<td>.32  (\frac{1}{1})</td>
</tr>
<tr>
<td><strong>&quot;Chieu Hoi&quot; Desertions - as a Percent of KIA</strong></td>
<td>.11  (\frac{1}{1})</td>
<td>.27  (\frac{1}{1})</td>
<td>.26  (\frac{1}{1})</td>
</tr>
</tbody>
</table>

*Ratios calculated on January-June data.*

**Also includes weapons captured on junks and other infiltration craft, consequently this ratio overstates the true battlefield weapons loss.*

**IV-18**
It is observed that Communist battlefield performance has not changed in spite of the growing scale of combat and increased US/Third Nation participation. At present, the magnitude of Communist morale problems in terms of influencing battlefield performance, seems to be a minor hindrance to enemy operations in South Vietnam.

D. An Approximate Allocation of NVA/VC Battle Fatalities January-May 1966

1. Methodology

One of the most difficult intelligence problems faced in South Vietnam is that of allocating enemy casualties to their respective fighting units. The characteristics of guerrilla warfare make it impossible to distinguish between civilians, irregulars, VC main force and PAVN troops killed in action. Lack of uniforms and unit insignias are some of the basic problems encountered. The time allotted to body identification of the battlefield is influenced by the pressures of combat and undoubtedly is far too short to allow for accurate body counts, let alone extensive investigations of enemy unit identification. The importance of allocating enemy casualties to their respective units is crucial in assessing the present and probable course of the war in South Vietnam. The extent to which the Communists must rely on internal recruitment and North Vietnamese regulars can best be determined by arriving at an approximate allocation of enemy casualties.

It was initially assumed that all enemy reported killed in action were members of the Communist military establishment. Such an assumption obviously overstates enemy losses since it includes civilians inadvertently killed in and around the battlefields and counted as enemy dead. The inclusion of considerable numbers of South Vietnamese Communist irregulars and combat support troops helps to relax this assumption to a certain degree. However, the lack of any definitive study on such civilian casualties makes it impossible to adjust enemy casualties with any degree of precision. Consequently the killed in action figures are taken as given.

In order to allocate enemy battlefield fatalities to NVA/VC units, it was assumed that enemy casualties...
were sustained in proportion to their respective troop strength in the various Corps areas as of mid-1966. In the case of irregular and combat support troops it was assumed that these forces were half as likely to engage in major combat operations as were the NVA and VC regular forces. Reported enemy battlefield fatalities were allocated on a corps basis during the January-May 1966 period. Enemy losses and respective strength by corps area were then compared. Since there were no known NVA troops stationed in IV Corps during January-May 1966 it was concluded that all of the reported battle fatalities were sustained by local Communists. NVA strength in III Corps during the relevant period accounted for a small portion of the enemy main force strength - 15 percent in III Corps by mid-1966. The preponderance of enemy casualties in III Corps during the relevant period were assumed, therefore, to be sustained by local Communists. The bulk of the NVA strength in South Vietnam is stationed in II and I Corps respectively. Communist losses during the January-May 1966 period in the two upper Corps were allocated to NVA/VC on the basis of regular enemy troop strength as of mid-1966. By employing this methodology it was deduced that at a maximum 25-30 percent of Communist battlefield fatalities were inflicted on NVA troops during January-May 1966. Projected enemy troop strengths indicate that about 40 percent of the enemy battlefield fatalities during the next year will be sustained by NVA forces.*

The use of Communist regular troop strength as of mid-1966 weights the casualties heavily toward NVA forces during the January-May 1966 period. NVA troop strength has rapidly increased in recent months, thus over-stating probable NVA losses during the early months of 1966. Such a bias should corroborate arguments that NVA forces are employed more intensively in combat than are local Communist forces. The use of total South Vietnamese Communist

*It is not possible at this time to refine the allocation of fatalities by considering the actual frequency with which VC NVA units engage in combat.

IV-20
troop strength may also overstate local enemy casualties since it implicitly assumes that local forces have and will be engaged as often as North Vietnamese troops.

2. Analysis

This distribution provides some insights into probable future trends in the growth and composition of enemy forces in South Vietnam. It is estimated that Communist battlefield fatalities averaged approximately 4,700 a month during January-May 1966. Average monthly North Vietnamese and VC battlefield fatalities were 1,600 and 2,400 respectively. Accepted average monthly Communist infiltration during the same period was 4,200. Combined accepted and reported NVA infiltration averaged 7,000 a month.

It is obvious that during January-May 1966 North Vietnamese troop strength grew at a more rapid rate than did direct sustained battlefield fatalities. Considerable increases in estimated North Vietnamese Army strength in South Vietnam during the same period confirm this trend. The relatively stable size of the VC main force during the period probably indicates that the local Communists have been able to offset battlefield deaths by recruitments from the irregular forces and the populace.

IV. Communist Losses

A. Total Communist Losses

During 1965, it is estimated that some 79,300 to 90,300 Communists (See Table IV-15) were effectively put out of action. Projections indicate that from 105,000-120,000 enemy forces will be effectively lost in 1966 and from 65,000-75,000 will be lost during the first half of 1967. Battle fatalities account for approximately 40 percent of the losses, seriously wounded, estimated on the basis of captured documents, account for 32 percent, and captured and deserters the remaining 28 percent.
Table IV-15

South Vietnam: Estimate of Communist Losses
1965 - June 1967

<table>
<thead>
<tr>
<th></th>
<th>1965</th>
<th>1966</th>
<th>Jan-June 1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIA</td>
<td>35,000</td>
<td>48,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Captured</td>
<td>6,300</td>
<td>7,000</td>
<td>4,300</td>
</tr>
<tr>
<td>(&quot;Chieu Hoi&quot; Returnees)</td>
<td>5,500</td>
<td>13,000</td>
<td>000</td>
</tr>
<tr>
<td>SUB TOTAL</td>
<td>50,800</td>
<td>68,000</td>
<td>42,300</td>
</tr>
<tr>
<td>Seriously Wounded</td>
<td>19,000-30,000</td>
<td>24,000-39,000</td>
<td>15,000-24,000</td>
</tr>
<tr>
<td>Deserters</td>
<td>9,500</td>
<td>13,000</td>
<td>8,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>79,300-90,300</td>
<td>105,000-120,000</td>
<td>65,300-74,300</td>
</tr>
</tbody>
</table>

1. Killed in Action

Average monthly reported Communist battle fatalities increased from less than 2,000 during the first 6 months of 1965 to approximately 3,900 each month in the second half of the year. During January-May 1966, Communist battle fatalities averaged 4,000 per month. Some 35,000 Communist troops were killed in action in 1965. Approximately 20,000 enemy troops were reported killed in action during January-May of this year, and current estimates indicate that approximately 48,000 Communists will probably be killed in action by the end of 1966.

2. Wounded in Action

a. Methodology

Few if any official figures are released that give an indication of the total number of Communist soldiers wounded in action. The primary reason for the lack of such information is that the enemy remove a considerable number of their dead and wounded from the battlefield in an effort to conceal their losses and prevent the capture of additional personnel.
Three basic components went into derivation of an estimate of NVA/VC wounded in action. Consideration was given to historical factors such as: (1) US, ANZAC, and Japanese experience in Burma, Malaya, and the Pacific Islands in World War II; (2) the experience of South Vietnamese, and US/TN forces in Vietnam; and (3) Communist prisoner interrogation reports mentioning casualties and captured enemy documents such as medical reports and unit combat records. The observed ratios of wounded to killed during World War II and in Vietnam are summarized in Table IV-16 below.

Table IV-16
Selected Wounded to Killed Ratios

<table>
<thead>
<tr>
<th>World War II</th>
<th>Wounded to Killed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papuan Campaign (Australian)</td>
<td>2.04</td>
</tr>
<tr>
<td>Papuan Campaign (US)</td>
<td>2.79</td>
</tr>
<tr>
<td>Philippines (US)</td>
<td>3.52</td>
</tr>
<tr>
<td>Okinawa (US)</td>
<td>4.31</td>
</tr>
<tr>
<td>Burma 1949 (Japan)</td>
<td>2.47</td>
</tr>
<tr>
<td>Burma 1943 (Japan)</td>
<td>3.23</td>
</tr>
<tr>
<td>Vietnam</td>
<td></td>
</tr>
<tr>
<td>South Vietnam, 1963-65, (GVN)</td>
<td>2.17</td>
</tr>
<tr>
<td>US/Third Nation, 1965</td>
<td>4.1</td>
</tr>
</tbody>
</table>
Prisoner interrogation reports and captured enemy documents provided 15 quantifiable observations on the relationship between Communist troops killed and wounded in action. Enemy casualties ranged from some 700 in large unit actions to 20 casualties or less in small group actions. All of these losses were sustained while fighting against South Vietnamese forces during 1964 and 1965. The observed ratios of wounded to killed in action ranged from 1.07:1 to 2.4:1, with a weighted average ratio of 1.62:1. Since these figures are not biased by enemy removal of dead troops from the battlefield they may better reflect the distribution of enemy killed to wounded than those ratios which employ Allied body counts as a base figure.

An enemy document captured by the 1st Cavalry Division on 17 March 1966, in central Binh Dinh Province, revealed regimental data on Communist troops wounded in action during 9 April 1965 - 1 March 1966. The 2nd VC, 18th NVA, and Quyet Ram regiments which were estimated to be the major enemy elements stationed in Binh Dinh were listed in the document. The security of Binh Dinh is predominantly maintained by US and ROK forces. Consequently, a comparison between Communist troops killed in action (US/ROK body count) and enemy accounts of those wounded in action in Binh Dinh during the relevant period provides some indication of an enemy (WIA) relationship between US/Third Nation forces and the enemy.

US/ROK forces killed 628 Communists in Binh Dinh during the relevant period according to body counts. Enemy documents indicate that 1,135 troops were wounded. Some 85 Communists wounded in action were captured by US/ROK forces. It is assumed that: (1) US/ROK forces did most of the fighting in Binh Dinh Province; and (2) that the above mentioned Communist regiments comprise most of the enemy strength in Binh Dinh. The resulting ratio is  
\[ \text{WIA} = \frac{1,135 + 85}{628} = 1.94 \]
for Communist forces engaging US/Third Nation forces in South Vietnam. The US/ROK body count probably understates the number of enemy killed and consequently results in higher wounded to killed ratio than was probably experienced.

A general relationship between the number of troops killed in action and those wounded in action was
observed in the samples examined. Troops with high kill ratios (Enemy killed) also experienced high wounded to killed ratios (Friendly wounded). Conversely, troops with relatively low kill ratios tended to have low wounded to killed ratios. Troops (such as NVA/VC) with low kill ratios probably sustain a large number killed and a relatively smaller number wounded, while troops (such as US/Third Nation forces) with high kill ratios sustain a smaller number killed and a relatively larger number wounded. This relationship can be rationalized by the fact that better trained and organized troops with superior support fire from artillery and aircraft sustain fewer fatalities in obtaining or defending an objective than do forces that lack such support fire.

Captured enemy documents further indicate that approximately 50 percent of the wounded received serious injuries—broken bones and damage to internal organs that required immediate surgery. About 30 percent of the wounds were classified as light, and most of these cases were immediately returned to the battlefield. The remaining 20 percent suffered slight wounds that required little medical attention and were also immediately returned to the field.

It is difficult to estimate the number of seriously wounded Communist troops who die or cease to be effective fighting men. However, most of the seriously wounded are moved considerable distances by primitive means of transportation to surgical centers, where, undoubtedly, the facilities and the quality of the medical personnel are far below Western standards. These factors coupled with the consideration that many Communist troops are already affected by debilitating tropical diseases suggest that the majority of the seriously wounded troops are out of action for considerable lengths of time or indefinitely.

b. Estimate

Some 19,000 to 30,000 Communist troops were seriously wounded in 1965. End of year estimates indicate that from 24,000-39,000 enemy troops will be seriously wounded in 1966.
3. Captured

Some 6,300 Communist military personnel were captured in action during 1965. Given the current scale of operations it is estimated that approximately 7,000 enemy troops will be captured in 1966.

4. "Chieu Hoi" Returnees and Deserters

Some 9,500 Communist soldiers defected under the GVN "Chieu Hoi" program during 1965. Current estimates indicate that about 13,000 enemy military personnel are expected to defect under the "Chieu Hoi" program this year. No information exists on the number of enemy personnel who simply desert and return to their villages. We estimate that unrecorded enemy desertions are at least equal to the number of defectors under the "Chieu Hoi" program. This is admittedly a conservative approach and the actual numbers of deserters could be significantly higher than the estimates used in this annex.

B. Allocations of Present and Future Communist Military Losses in South Vietnam

It is estimated that a maximum of some 25,000 to 30,000 North Vietnamese troops will be effectively put out of action in South Vietnam during 1966. An additional 25,000 to 30,000 will be lost in the first half of 1967 if current rates of combat are maintained and projected troop strengths are realized. The bulk of the North Vietnamese losses will result from troops killed and seriously wounded in action. Relatively few North Vietnamese losses will be accounted for by captures, desertions, or defections.

Local Communists (including main forces, irregulars and combat support troops) will at a maximum sustain some 80,000 to 90,000 effective losses in action during 1966. An additional 40,000 to 45,000 will be lost in the first half of 1967. Approximately two-thirds of the local Communist losses will result from battle deaths and serious wounds. The remainder will be accounted for by captures and desertions. The relative shift in casualties from local to North Vietnamese Communist forces in 1967 reflects the expected increase in the role of PAVN troops in the South Vietnamese war. In terms of comparative battlefield losses the Allied
forces have a distinct advantage over the Communists. It is estimated that some 16,000 Free World soldiers will be killed in action during 1966, (6,000 US/TN, 10,000 GVN), compared to 48,000 Communists. An additional 9,000 Allied soldiers will probably be killed by mid-1967, reflecting the same loss composition, compared to some 30,000 Communists.

In a country with an abundant population, where some 270,000 natural deaths and 20,000 accidents occur each year, the loss of some 40,000-60,000 youths annually for the sake of "National Liberation" does not, in an oriental sense, seem too high. The increased North Vietnamese commitment in South Vietnam is not, however, entirely based on patriotism. VC units have borne the brunt of enemy casualties to date and appear pressed to maintain their current strength in face of growing Allied strength. The squeeze on VC manpower is becoming more apparent, and the necessity of outside help more acute if the war is to be waged at the present level. North Vietnam appears both willing and able to take on this task in the hope that a protracted struggle will give them ultimate victory. It may, however, find this commitment to be increasingly burdensome particularly as it required increasing numbers of the country's limited resources of skilled manpower and leadership cadres.
ANNEX V

THE RESOURCES AND LOGISTIC CAPABILITIES
OF THE COMMUNISTS IN SOUTH VIETNAM
ANNEX V

THE RESOURCES AND LOGISTIC
CAPABILITIES OF THE
COMMUNISTS IN SOUTH VIETNAM

I. The Viet Cong Economy and Its Manpower

A. The Viet Cong Economy

The Viet Cong have successfully organized and expanded an economic organization to meet the basic task of funding VC revolutionary activity. The basic economic organization, operating through the Finance and Economic Section of the People's Revolutionary (Communist) Party is assisted by the National Liberation Front and Communist military components in acquiring, transporting, and storing within South Vietnam almost all the non-military supplies required by the Viet Cong. During the past five years, the VC economic organization has expanded with the development of VC forces. Starting with a local self-production unit, the economic structure progressed, first, into a voluntary fund drive, then, into an organized taxation and finance mechanism and, finally into an organization activity supporting enlarged base and battlefield requirements.

Taxation appears to be the principal means used by the Viet Cong to acquire financial and material resources within South Vietnam. Agricultural taxation remains the most important source of VC tax receipts and is clearly dependent on continuing Viet Cong access to or some measure of control over the rural population. The Viet Cong currently exercise predominant political influence over 25 to 30 percent of the rice-cultivated area of South Vietnam which produces between 750,000 and 900,000 metric tons of rice per year. Annual consumption of rice by Communist regular forces could be obtained by an average tax of about 3 percent of total production in VC areas alone. The Viet Cong usually tax at a substantially higher level (12 to 15 percent). There is no indication that resentment by the rural population against taxes of this magnitude has reached levels adequate to stop rice collections. Plantation taxes--either in money or in kind--continue to be
collected and are an important source of supply for Viet Cong forces in the northern III Corps. Internal transportation, business establishments, and commercial activities are also widely taxed.

VC-initiated economic activities, seizures, and clandestine operations supplement VC tax receipts. Bond drives, food production, and simple manufacturing units have been initiated by the VC to support military personnel. Significant supplies of war booty continue to be accumulated by the Viet Cong. Clandestine front business operations and discreet purchases by civilians acting for the Viet Cong, provide access to resources from GVN-controlled areas, including imported manufactured goods.

For specific goods in certain areas of South Vietnam, the Viet Cong have utilized traditional smuggling along the South Vietnam - Cambodia border. During recent months, however, Viet Cong use of Cambodia as a source of non-military supplies has increased and been organized in a systematic fashion. Although this logistic support is more costly than domestic acquisition and evidently requires external financial arrangements with banks in Hong Kong, the immunity and proximity of such logistic support to large VC/NVA forces along the Cambodian border apparently has made this source of supplies increasingly valuable. On an annual basis, it is estimated that at least 5,000 and probably as much as 10,000 metric tons of rice are being acquired from Cambodia and a frequently reported figure of 20,000 metric tons appears to be possible. Some of this rice is also acquired to support Communist forces in Laos. In addition, the VC are acquiring in Cambodia substantial quantities of cloth, pharmaceuticals, salt, fish and fish sauce, gasoline, communications equipment, explosive chemicals, and other supplies.

B. The Economic Impact of Increased Military Pressure

The build-up in VC/NVA forces in South Vietnam during the last year has placed a heavy strain on VC logistic operations. Confirmed VC/NVA main force strength has approximately doubled during the last year. Whereas guerrilla personnel, like the civilian population, are expected to be self-sufficient in basic supplies, main force units require extensive logistic
support. Food supplies, especially rice, remain the principal bulk commodities required by these forces. The entire increase in main force strength has been recorded in rice-deficit areas— I and II Corps and northern III Corps. There has been no increase in VC main force strength in the rice-surplus IV Corps where logistic requirements for food supplies are relatively small.

With the concentration of VC/NVA main force strength in I and II Corps and in northern III Corps annual rice requirements clearly exceed the total rice production under VC control in the provinces of Pleiku, Kontum, Phu Bon, the western districts of the coastal provinces of central Vietnam, and the rice-deficit areas of VC military region 7. In all of these areas, there is evidence that the VC are experiencing food supply problems. For example, a recently captured document cited the logistical difficulties experienced by the VC during an early 1966 campaign in rice-deficit Quang Duc Province that did not have sufficient rice for its own provincial force; region forces assigned to the campaign were required to arrange their own rice supply "through the border," presumably the Cambodian border. During the course of the campaign, one-third of VC combat strength was diverted to the transportation of rice.

The increase in allied military action has continued to hamper the logistic system of the Viet Cong. Allied military actions have had an adverse effect on agricultural production in VC controlled areas and on the percentage of the harvest that the VC can acquire and transport to their base areas. The area covered and percentage of crop harvested in these rice-harvesting operations is not reported, and no aggregative estimate of their impact is possible. Even with continued VC access to rice-producing areas, the Viet Cong face a second major difficulty in transporting this commodity. The major portion of this movement has been carried out by civilian laborers, but the danger of involvement in military action has caused serious disaffection among the VC-controlled population as the tempo of military activity has increased. A third major difficulty caused by allied military activity has been the disruption caused by allied destruction of VC supply caches.
C. The Manpower Situation

The South Vietnamese population in VC controlled areas is at least 3.5 million people and could be as much as five million people depending on the extent to which the VC have access to contested areas. Most of the VC controlled population live in the delta region. This controlled population probably contains some 500,000 physically fit young males. An additional 30,000-35,000 youths annually become old enough to fight. In addition to this controlled population the VC also draw on the population of military age in contested areas, GVN deserters and on recruits from urban areas.

An increasing requirement for manpower during 1965 forced the VC to resort to monetary inducements and to forced conscription and returnee programs to obtain local personnel. With these new methods VC have been able to attain a significantly higher level of local recruitment--over 80,000 in 1965 compared to 30,000-40,000 annually during 1961-64. We estimate that the VC have a capability in 1966 to recruit and train some 7,000 to 10,000 personnel a month.

Recruitment at this scale must be regarded as close to the maximum capabilities of the VC, particularly if these recruits are to receive adequate training. There have been increasing signs of a growing squeeze on VC manpower during 1966. This is reflected in the growing dominance of North Vietnamese troops as the NVA/VC force expands. There are also frequent prisoner reports of manpower shortages and the poor quality and training of new recruits.

In addition to making up for their own losses of an estimated 80,000-90,000 in 1966, we estimate that VC forces will increase by about 5,000 troops in 1966. The VC are also required, however, to provide replacements for a growing number of NVA losses. During 1966 we estimate that the NVA will infiltrate from 55,000-75,000 troops at the same time that they are expanding the NVA troop level by an estimated 49,000 troops. NVA losses during the year, however, will range from 25,000-30,000. Thus the VC could have to make up for 5,000-20,000 NVA
losses, depending on the rate of infiltration and expansion of NVA forces. This indicates a total VC military manpower requirement in 1966 of from 90,000-115,000. This requirement is within the higher end of the range of current estimates of VC recruitment capabilities.

If the casualty rate increases as expected during 1967 to an annual rate of 130,000-150,000 Communist losses will be beyond the estimated recruitment and training capabilities of the VC. More of the manpower burden will then be placed on North Vietnam creating additional pressures on its manpower resources.

II. Communist Logistic Operations in South Vietnam (See Appendix A)

The Communist forces in South Vietnam have created a highly centralized system of Supply Councils to meet the logistics requirements of the VC/NVA forces. This organization operates at each administrative level in South Vietnam working closely with counterpart economic and service organizations of the Central Office for South Vietnam (COSVN) and the Rear Services Staffs of the military command. This elaborate system controls from 40,000-50,000 personnel engaged full-time in logistic support activities. Additional thousands of personnel are conscripted on a part-time basis to assist in transporting supplies, the construction of logistics bases, and the maintenance of supply routes. The VC use an elaborate system of land routes, trails, and inland waterways connecting the infiltration routes from Laos and Cambodia with the major COSVN base areas.

The VC storage system is greatly decentralized working from a large number of small depots, storing generally only 5-10 tons of supplies each. This dispersed system provides maximum protection against large scale destruction or capture of supplies but also serves as a major constraint to the initiation of large sustained enemy actions.

The logistics system used by the Communist forces in South Vietnam has been able to satisfy adequately the minimum requirement for movement and storage of supplies.
This capability has been weakened and made more difficult as the scale of combat has increased and Allied ground operations have disrupted normal logistic movements and overrun storage areas. Difficulty in effectively maintaining the internal distribution of supplies has also been compounded by the manner in which VC/NVA forces are dispersed throughout South Vietnam.

In mid-1966 one-third of the enemy combat and combat support troops was located in the II Corps Area, one-third in the III Corps, and the remainder about equally between the I and IV Corps. The IV Corps area with only 15 percent of total VC/NVA regular forces, is the area in which the VC have the greatest self-sufficiency in logistic supplies, particularly foodstuffs. The predominant share of VC/NVA forces is concentrated in food-deficit areas. Thus the II and III Corps areas which are the predominant rice-deficit areas account for almost two-thirds of the total daily logistic requirement.

The inability to transport food from rice surplus to deficit areas has become more severe as Allied ground actions intensify. The Communists have been compelled to turn to Cambodian sources in order to provide rice to the forces in the central highlands. Use of this source of supply has increased in the last half year and may now be as much as 15 tons a day. The need to turn to sources outside the country for rice indicates that internal distribution is one of the most pressing problems faced by the Communists and is probably the most vulnerable aspect of their entire logistics operation.

If the disposition of Communist forces in South Vietnam remains unchanged during the build-up projected through mid-1967 and internal distribution of food is impossible, their dependence on external sources for supplies could double. Our present estimates indicate a maximum external requirement of about 55 tons a day. But if internal distribution of food to the food-deficit areas cannot be effectively accomplished, this requirement could be increased to at least 100 tons a day.

This added logistic requirement would not be critical, particularly if it were met from Cambodian sources. It would not even tax the Laotian infiltration route very severely but would aid substantially in reducing the excess of road capacity over logistic requirements.
The present disposition of Communist forces is much more favorable for the internal distribution of supplies infiltrated into South Vietnam. Over 85 percent of the NVA forces and 35 percent of the VC forces are in the I and II Corps areas in close proximity to the Laotian infiltration corridor and the northern infiltration routes from Cambodia. These forces account for almost three-fourths of the supplies which must be infiltrated from external sources.

The data available on the destruction and capture of supplies by Allied forces during the past year are quite incomplete. Food supplies amounting to at least 12,000 tons and over 21,000 weapons and 180,000 rounds of ammunition are the major amounts known to have been captured or destroyed. We lack almost completely any meaningful data on Communist stock-piles and are therefore unable to assess the impact of these losses. But as minimum losses, the food stocks may be relatively significant, particularly as Allied operations uncover more storage areas and interfere more with the internal distribution of supplies.

The substantial increase in incidents of Communist terrorism and harassment of local population may indicate that the enemy is finding it increasingly difficult to obtain local support in terms of food and/or labor for its war effort.
APPENDIX A

THE COMMUNIST LOGISTICS SYSTEM
IN SOUTH VIETNAM

I. Organization

VC/NVA* logistic operations are under the control and supervision of Supply Councils found at every echelon of command from the Central Office for South Vietnam (COSVN) to the village level. (See Figure III-1)** Village Forward Supply Councils are responsible for procurement and for the distribution of supplies to troops in the field. The province level controls the planning and regulatory agencies which furnish logistic data to the military Rear Service Staffs at the various levels of command. Communications and liaison sections, under the Supply Councils, exercise an important role in safeguarding all types of logistic operations. Party cadre associated with the communication and liaison sections serve as guides, security personnel, station attendants, and supervisory personnel.

Supply Councils also supervise the work of two basic transportation organizations—the People’s Revolutionary Party (PRP) Finance and Economic Section transport elements and the military Rear Service Section transport elements.

Transport and supporting elements under the jurisdiction of military Rear Services Sections are organized

*The organization structure outlined in this section is estimated to apply generally to both VC and NVA forces. Some of the material appearing in this section is based on an analysis of a captured document discussing the VC Sao Vang Division, a division containing both VC and NVA elements.

**Figure III-1 follows page III-5 in Annex III.
into (1) transport elements of the Rear Services Sections which are organic to the various echelons of the VC/NVA regular military forces, (2) separate military transport units (not found below military region level) responsible for the receipt and redistribution of supplies, and (3) ordnance sections and armament sections. The Rear Service Staff organic to the VC/NVA Division is organized into four functional sections: a quartermaster section for procurement, storage, and distribution of food and clothing; an ordnance section for procurement, storage, maintenance and distribution of weapons and ammunition; a medical section for medical support and evacuation; and a finance section for financial support.

A. Personnel

Enemy forces in South Vietnam in mid-1966 amounted to 260,000-280,000 including from 40,000-50,000 personnel engaged in logistic support. The composition of important VC supply elements is shown in the following tabulation:

<table>
<thead>
<tr>
<th>Combat Support</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate Military Transport Units</td>
<td>5,800</td>
</tr>
<tr>
<td>Region/Province/District Ordnance and Ammunition</td>
<td>3,000</td>
</tr>
<tr>
<td>and Ammunition Sections</td>
<td>8,800</td>
</tr>
<tr>
<td>Other Combat Support Troops</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17,600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Forces</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance and Economic Transport Units</td>
<td>2,000</td>
</tr>
<tr>
<td>Infiltration Corridor Personnel</td>
<td>3,000</td>
</tr>
<tr>
<td>Communications and Liaison Units</td>
<td>2,000</td>
</tr>
<tr>
<td>Organic Military Transport Elements</td>
<td>7,400</td>
</tr>
<tr>
<td>VC/NVA Crewmen on Water Craft</td>
<td>12,000</td>
</tr>
<tr>
<td>Total</td>
<td>26,400</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44,000</td>
</tr>
</tbody>
</table>
In addition to these regular employees the VC have conscripted thousands of temporary, civilian workers to assist in logistic activities. Recruiting is carried out among men between the ages of 18 and 50 and women between the ages of 20 and 41, with the annual period of service usually being from 1 to 3 months. This conscripted labor is given both political and security training. It is then organized into platoons and companies, and assigned by village and district forward supply councils to the combat units or to a rear services staff. Front line or Class A laborers are used by combat units to transport ammunition and food supplies; to evacuate battle casualties; to remove captured supplies to collection points, and to construct supply depots and defensive positions, as well as in other miscellaneous tasks. Local inhabitants have been conscripted to carry weapons and ammunition inland from coastal areas and to transport food to the mountainous regions. Special groups are assigned to carry supplies and ammunition from the Cambodian border area to enemy base areas.

II. Storage and Distribution

The VC supply system is designed to satisfy both normal, continuous troop requirements and those requirements imposed by rapidly changing battlefield conditions. The VC have established an area supply system which incorporates a large number of small depots—each generally having a capacity of five to ten tons—dispersed throughout areas in which VC units operate. Although classes of supplies in depots are usually mixed, some depots store food exclusively and others contain only weapons and ammunition. Even in the larger war zones, supplies are dispersed throughout the area. Villages that are located close to combat units may also act as supply points. In certain areas, only one-third of the prescribed stock is allocated to depots, with the remaining two-thirds dispersed among civilians for custody. This system limits the damage that can be caused by the destruction of one large depot or supply cache, but it also acts as a major constraint to the initiation of large, sustained enemy actions when large amounts of supplies need to be concentrated in relatively small areas.
A. Distribution of Food

Regiments are given an initial issue of rice corresponding to a 30 day supply, which is to be replenished when half of the supply is consumed. Rear service staffs are charged with maintaining a stock equivalent to one month's supply for all forces operating in their area of jurisdiction. When a regiment leaves the area the remaining rice must be returned to these staffs. Troops usually have a seven-day supply of rice in their individual packs as a reserve for emergencies; the unit draws rice from supply points located along the line of movement. This method reduces the supply train and the requirement for porters. Each regiment is assigned an area from which food is purchased. A rear supply element of the regiment normally sends out purchasing teams to the area to contact local VC authorities and to arrange for purchase in the prescribed quantities.

III. Transportation Routes

The enemy in South Vietnam makes use of a very large number and variety of lines of communication. These include major South Vietnamese highways, secondary roads, waterways, trails and innumerable footpaths. (See Figure V-1). Many of the land routes, especially in the north, are narrow, unimproved trails, negotiable only by foot, animal, or small two or three-wheeled vehicles, but trucks are sometimes used on segments of the major routes when they are under Communist control, and sometimes on routes nominally under GVN control. Extensive use is made of water craft in the Delta area.

A. Land Routes

The most frequently used land routes for the movement of personnel are probably the two in a north-south orientation connecting the Laotian and Cambodian infiltration corridor with the large established enemy base areas in Tay Ninh Province northwest of Saigon. The first route, which runs just inside South Vietnam along the Cambodian border, consists for the most part of a connecting group of trails although it follows or parallels existing roads in its southern segments. The second
route runs between the first route and the coast and follows route 14 for many miles. Many lateral routes connect the two major north-south routes and with coastal points. Some of the north-south routes in the eastern section of the country running roughly between route 19 and the Saigon area are used mainly as supply routes.

Enemy forces attempt to use major South Vietnamese highways to the maximum extent possible. When such roads are only partly under their control, personnel and supplies move parallel to the uncontrolled sections. A large portion of the network is located near South Vietnamese provincial and military boundaries where surveillance may be least effective. The enemy selects routes in many cases which are just outside the fire envelope of static GVN artillery units.

Besides Route 14, the VC probably make extensive use of Route 20 north from Saigon, Route 21 west from Khanh Hoa to Darlac, Route 22 through Tay Ninh, Provincial Routes 12 and 8 in the Delta region, Provincial Route 7 west from the coastal province of Phu Yen, and Provincial Routes 13, 4, 1, and 8 north of Saigon. Most of the use of trucks occurs on these roads.

B. Waterways

The VC depend on water craft as the basic means of transportation in the Delta region of South Vietnam. The VC main and local force units in IV Corps alone probably possess about 4,000 craft of varying sizes; the approximately 40,000 militia in IV Corps probably use additional thousands of vessels.

Troops usually are transported in small three-man sampans, and supply movements vary from organized convoys of medium-sized craft capable of carrying loads of one ton or more to small individual craft. The average load per water craft is estimated at 1 3/4 tons but the enemy also has much larger types at his disposal.

Several factors permit Communist forces to make extensive use of waterways in the Delta. There is no
registration of civilian boats, so that Communist boats are difficult to identify. Curfew restrictions cannot be imposed or enforced except on some major waterways because of the lack of adequate communications and patrol craft. Moreover, security is maintained by moving primarily at night, by taking advantage of foliage near river banks, by maintaining advance and rear units to warn of nearby flight activity and by sinking boats for later recovery when detection seems imminent.

IV. War Zones

War Zones usually consist of a group of dispersed and relatively primitive supply caches, command posts, arms workshops, training facilities, and troop bivouacs linked by a network of unpaved roads, trails, and paths. They generally are located on major transport routes used by the enemy in areas which are sparsely populated and/or populated by ethnic or religious minorities hostile to the South Vietnamese government. The war zones located near planned Communist areas of combat probably serve as staging areas, while those located well away from friendly forces most likely contain facilities for weapons repair and manufacture, training, and rest. Areas, such as War Zone C, adjacent to the Cambodian border also serve as access to sanctuary and as transit points for movement of supplies and troops. Until late 1962, the enemy operated in these zones with relative impunity, but the areas have been coming under increasingly heavy ground and air attack in recent months.

V. Logistic Resupply Requirement for Communist Forces in South Vietnam

The VC/NVA forces in South Vietnam have a daily total logistic requirement of 150 tons. This logistic requirement is divided into 5 classes: Class I (food), Class II (weapons), Class III (petroleum), Class IV (quartermaster, engineer and medical) and Class V (amunition). Figure V-2 shows the daily volume of each class of supply and the amounts supplied from internal and external sources.

A. Class I (Food Supplies)

The Communist forces in South Vietnam obtain most of their food supplies within the country. Although
SOUTH VIETNAM

DAILY VC/NVA LOGISTIC REQUIREMENTS AS OF MID-YEAR 1966

BY CLASS AND SOURCE OF SUPPLY*

(Short Tons)

- Internal Supplies
- External Supplies

Figure V-2

Class I
118.0

Class II and IV
9.7

Class III
4.6

Class IV
3.0

Class V
11.5

Class VI
2.6

*Note: The diagram represents the logistic requirements by class and source of supply.
these forces control sufficient rice production to satisfy all VC/NVA food requirements, large quantities of rice apparently are being transported from Cambodia to enemy controlled rice-deficit areas in South Vietnam. This is because of the difficulty in sustaining internal distribution of large amounts of bulk commodities.

The principal rice-deficit areas with large troop concentrations include the provinces of Kontum, Pleiku, Darlac, Phu Bon, and Quang Duc, all in the II Corps area, and Phuoc Long, Binh Long and the northern part of Tay Ninh in the III Corps. If the main and local force VC and NVA troops in these areas were made completely dependent on Cambodian sources for food, Cambodia would be providing about 25 percent of the total daily food requirement for all Communist forces in South Vietnam.

Enemy incidents of terrorism and harassment have risen from a monthly average of 1,629 in 1964 to 2,233 during the first four months of 1966. Although these increases are attributable to various factors they may indicate that the enemy is finding it increasingly difficult to obtain local support in terms of food, and/or labor, for the war effort.

B. Class II and Class IV Supplies

1. Weapons

The enemy stock of weapons has been accumulated from several sources. These include weapons which have been captured, locally-produced, buried or left behind in South Vietnam from the Indochina War, and infiltrated from North Vietnam. Local manufacture of military supplies, however, presently emphasizes ammunition, hand grenades, and mines rather than the fabrication of individual weapons.

Significant quantities of Soviet and East European weapons and Chinese Communist copies of these weapons have been infiltrated into South Vietnam from North Vietnam. About 30 percent of the VC main force is estimated to have been at least partially equipped with the new family of Chinese 7.62 mm weapons by January 1966.
With respect to heavy weapons, the crew-served 60/61 mm and 81/82 mm mortars are now found in most main force battalions. The recent introduction of 120 mm mortars also has added to the firepower of Communist forces in the south. Other heavy weapons known to have been used by Communist forces include the 75 mm recoilless rifle, the 70 mm pack howitzer, and possibly the 105 mm howitzer, the latter having been captured from friendly forces or dating from the war with the French.

The flow of weapons from outside South Vietnam has enabled the VC to achieve some progress in weapons standardization within main force units. However, non-standard weapons are used by a large number of VC local forces and guerrilla forces. Data on weapons captured in 1963, 1964, and 1965 show that the use of Chinese-manufactured arms is increasing as seen in the following tabulation:

<table>
<thead>
<tr>
<th></th>
<th>Chinese</th>
<th>U. S.</th>
<th>French</th>
<th>Home made and other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>8.4</td>
<td>27.7</td>
<td>49.8</td>
<td>14.1</td>
</tr>
<tr>
<td>1964</td>
<td>22.7</td>
<td>29.1</td>
<td>32.6</td>
<td>15.6</td>
</tr>
<tr>
<td>1965</td>
<td>27.0</td>
<td>50.0</td>
<td>8.0</td>
<td>15.0</td>
</tr>
<tr>
<td>1966 (estimate)</td>
<td>35.0</td>
<td>30.0</td>
<td>15.0</td>
<td>20.0*</td>
</tr>
</tbody>
</table>

*Includes 5 percent from USSR.

Of the nearly 1,000 weapons captured by Allied troops in clashes with the NVA near Plei Me last November, 86 percent were of Chinese Communist manufacture, 11 percent of North Korean manufacture, and 3 percent of Soviet manufacture. These arms represent the most modern weapons used by Chinese and North Korean forces, suggesting that NVA units are well equipped.
2. Clothing

Enemy requirements for clothing and other textile products are not extensive, and most of it is obtained locally by a special VC clothing unit. However, a number of clothing items such as khaki uniforms, underwear, and winter clothing for the mountainous regions have been produced in North Vietnam and are issued to infiltrators. Some clothing is also required in Cambodia.

3. Medical Supplies

Medical supplies are obtained both locally and from various Communist and Free World countries through Cambodia and North Vietnam. Antibiotics, plasma, and quinine are the principal items acquired from external sources. Medical supplies are in fairly tight supply so that their external procurement has a high priority.

4. Transportation Equipment

Trucks, water craft, and other transportation equipment used by enemy forces in South Vietnam usually are acquired in the country, sometimes by confiscation, but also by purchase or borrowing.

5. Signal Supplies

Most VC communications equipment has been supplied by East European Communist countries or Communist China or is of US, Japanese, or French manufacture and has been captured on the battlefield. NVA equipment is infiltrated with military personnel.

6. Engineer and Chemical Supplies

Most VC/NVA chemical and engineer supplies are estimated to be obtained from within the country, although some chemicals are also smuggled in from Cambodia. A large share of the chemicals is used for the production of filler for locally-produced ammunition.
C. Class III (Petroleum)

The total requirement for petroleum products for VC/NVA forces in South Vietnam is small, being needed primarily for confiscated vehicles, motorized junks in the Delta region, generator equipment at command posts, and in some crude arms factories. The VC obtain supplies from taxation of the content of petroleum tank trucks in VC/NVA-controlled areas of South Vietnam, seizure of petroleum supplies, and purchase from local gasoline stations or in Cambodia.

D. Class V (Ammunition)

In the present situation of relative independence from external sources for most supplies, ammunition is the principal determinant of the volume of supplies which must be infiltrated from North Vietnam. The supply of ammunition is particularly important to the major combat elements equipped with the new family of weapons who are completely dependent on outside sources for their ammunition. Due to the extensive use of a variety of weapons, however, the enemy utilizes both internal and external sources for the supply of ammunition. Standard ammunition is generally manufactured in the Communist countries. The remainder of the supply is from captured stock or is manufactured locally in VC engineer workshops. Viet Cong munition factories are not estimated to have a present capability to manufacture 7.62 mm ammunition. There is no evidence that expended shells are reloaded, and captured U.S. 7.62 mm ammunition is not compatible with Communist weapons.

The heavier ammunition employed by the enemy includes 40 mm antitank grenades, 57 mm and 75 mm recoilless rifle rounds, 60 mm, 82 mm, and 120 mm mortar rounds, and 70 mm, 75 mm and 105 mm howitzer ammunition. All heavier ammunition is either captured or obtained from external sources.

VI. Geographic Distribution of Logistic Requirements for VC/NVA Forces in South Vietnam

As of mid-year 1966 the strength of VC/NVA regular forces in South Vietnam stood at 110,000 personnel. The
disposition of these forces by Corps area is shown in Figure V-3 which also shows the major areas of rice cultivation. The predominant share of these forces is located in rice-deficit areas.

In Figure V-4 we show by Corps area the current allocation of total logistic requirements--150 tons a day--and that portion--some 20 tons a day--which must be supplied from external sources. The distribution of Communist forces reflects an unevenness in daily logistic requirements by Corps area and leads to internal distribution problems.

Thus the forces in the I and IV Corps areas require only 19 and 15 percent respectively of total daily requirements. The IV Corps, with the smallest concentration of forces, is also the area in which the Communists have the greatest self-sufficiency in food. The II and III Corps areas, in which most of the Communist forces are concentrated, account for almost two-thirds of the total daily requirement. These areas are also the predominant rice-deficit areas.

The inability to transport food from rice surplus to deficit areas is apparently becoming more severe. The Communists consequently have had to turn to Cambodian sources as a logistic expedient to provide rice to some of the forces in the central highlands. This movement has increased in the last half year and has reached an estimated 15 tons a day. The need to turn to Cambodian sources for rice indicates that internal distribution is one of the most pressing problems faced by the Communists and is probably the most vulnerable aspect of their entire logistics operation. As US/GVN and allied forces have increasing success in capturing or destroying Communist stockpiles and in disrupting Communist control of transport routes this problem would be even more aggravated. It would not, however, be critical, particularly as long as food supplies could be obtained and infiltrated from Cambodia. Even if they had to be provided by North Vietnam through Laos the volumes which we estimate would be required could be accommodated on the Laotian infiltration network.
THAILAND

A

CUVEN

I CORPS

10,000 NVA

11,400 VC

II CORPS

23,500 NVA

16,700 VC

III CORPS

4,500 NVA

32,600 VC

IV CORPS

19,300 VC

SOUTH VIETNAM

DISPOSITION OF VC/NVA
REGULAR FORCES
BY CORPS AREA, MID-1966

Area of Rice Cultivation

Province boundary, 1966
### South Vietnam

**Daily VC/NVA Logistic Requirements as of Mid-Year 1966, by Corps Area**

#### Total Requirements

<table>
<thead>
<tr>
<th>Corps</th>
<th>VC</th>
<th>NVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>II Corps</td>
<td>33.87</td>
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<tr>
<td>III Corps</td>
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<tr>
<td>IV Corps</td>
<td>14.41</td>
<td>13.47</td>
</tr>
<tr>
<td>I Corps</td>
<td>13.47</td>
<td>6.48</td>
</tr>
</tbody>
</table>

#### External Requirements

<table>
<thead>
<tr>
<th>Corps</th>
<th>VC</th>
<th>NVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>II Corps</td>
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<td>3.06</td>
</tr>
<tr>
<td>III Corps</td>
<td>1</td>
<td>1.87</td>
</tr>
<tr>
<td>IV Corps</td>
<td>4.16</td>
<td>3.52</td>
</tr>
<tr>
<td>I Corps</td>
<td>1.94</td>
<td>0.87</td>
</tr>
</tbody>
</table>