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**Develops estimations of capture rates for enemy prisoners of war (EPW) for use in Headquarters, Department of the Army (HQDA) Total Army Analysis (TAA) process. Covers data developed from Small lScale Contingency Operstions inclusing land, air, and naval elements.**

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Final Report

# Capture Rate Study:
## EPWs in Small Scale Contingency Operations

## Phase IV (Part 2)

For Purchase Orders

DASW01-98-M-1597

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27 March 2001

Prepared for:

**Department of the Army**
**Center for Army Analysis**

6001 Goethals Road
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Chapter
# 1

# Introduction

The Enemy Prisoner of War Capture Rate Study is intended to develop estimations of capture rates for enemy prisoners of war (EPW). It is intended that these rates be incorporated into the Headquarters Department of the Army (HQDA) Total Army Analysis (TAA) process.

Historically, capture rates have been influenced by a variety of factors. These include posture (offensive or defensive), theater of combat, intensity of combat, outcome of the engagement, terrain, weather, force ratios, distance advanced or retreated, degree and extent of encirclements, logistics, duration of the campaign, existence of retreat routes, morale, and national characteristics. Usually, methods of calculating EPW capture rates have been based upon extracting and evaluating existing historical data.

This report addresses the second part of the fourth phase of the project, covering data developed from Small Scale Contingency (SSCOs) Operations. While these operations include land, air, and naval elements, including the US Marine Corps, according to Army Regulation (AR) 190-8, *Enemy Prisoners of War—Administration, Employment, and Compensation*, the Secretary of the Army is the Department of Defense (DOD) executive agent for the EPW and Detainee Program. The US Army is responsible for EPW operations, not the Navy, the Air Force, or the Marine Corps.

This study does not address all of the issues relating to capture rates and is far from a comprehensive study on Small Scale Contingency Operations (SSCOs). Additional research should be conducted on a number of points. The number of civilian internees (including the number who need medical care), the number of refugees, and non-interned civilians who might also impose a load upon military police and medical services also need to be determined.

This report is mostly the work of Christopher A. Lawrence and Richard C. Anderson. Mr. Lawrence was the project manager and he developed the study plan under guidance from Jeff Hall at the Center for Army Analysis (CAA). Mr. Lawrence and Mr. Anderson assembled the SSCO data. Jay Karamales programmed the databases. The final report was written by Mr. Lawrence and Mr. Anderson. We also received help and support from Nicholas Krawciw, Stanley Miller (CAA), Robert McConnell (CAA) and Susan Rich.

Chapter
# 2

# Study Plan

The EPW Capture Rate Study contract was originally split into three separately funded phases. In February 2000, after the completion of Phases I & II, it was decided to add an additional, fourth phase. Phase IV included the task of analyzing the medical experiences of EPW; it was also decided to move the analysis of EPW in Small Scale Contingency Operations (SSCO) to this phase. The major tasks in Phase IV were:

1) Assemble 50 SSCO engagements from post-World War II.

2) Assemble EPW medical experience data.

3) Prepare Final Reports addressing the SSCO and medical experience.

Chapter
# 3

# Research Problems

The work completed for Phases I & II of this project is the standard that The Dupuy Institute (TDI) strives for in its research and analysis. That work included exhaustive research in unit records from the relevant archives (US, UK, German, Soviet), a detailed and complete compilation of this primary source material, cross checking of the data, and assembly of a comprehensive description of the data from both sides in the conflict. This was the same approach taken in Phase III, except that the data sources tended to be secondary, and therefore they were not as detailed or reliable as was always desired.

For the SSCOs, these standards could not be maintained. This was partly due to problems inherent in the data and the operations, and partly due to a failure of the analytical community to perform significant research on SSCOs in the past.

This lack of significant research on SSCOs is fundamentally a community-wide failure of management and vision. In researching conventional combat in World War II, one often finds an embarrassment of riches. Most of the US Army and US Marine Corps units' records are declassified and readily available in the National Archives. The same is true for the records of the opposing German forces. Furthermore, an extensive collection of official histories was written in the 1950s and 1960s. Numerous books written by professional historians further supplement this body of work. Furthermore, DUSA(OR), JCS, CAA, the US Air Force and others have funded many projects over the years that have facilitated the detailed and extensive collection of data and descriptions of conventional combat. This includes the QJM Database (developed in the 1970s), the CHASE study (developed in the mid-1980s), HERO's LWDB (the computerized version in Reflex of CHASE), the Ardennes Database (1987-1990), the Kursk Database (1993-96), TDI's LWDB (the computerized version in Access of CHASE, 1997-98) and TDI's DuWar (incorporating CHASE and other material, in Access, 2000-01). As important as the databases are the extensive collections of source documents assembled during the course of these studies. TDI currently houses an estimated 30,000 pages of combat unit records in its files. Of equal importance is the knowledge and understanding of, and experience in, the subject developed by TDI employees over the years.

There is a dearth of systematically collected data on SSCOs. There are only two previous works that could be directly incorporated into our SSCO database. They were HERO's Casualty Estimates in Contingency Operations (CEC) Study, performed in 1985-86, and TDI's Modern Contingency Operations Data Base (MCODB), executed as part of the Bosnia Casualty estimate in 1995. This latter database was mostly based on the CEC study. No other comprehensive data compilations of value are known. Official histories of these SSCOs are rare. Furthermore, there are almost no extensive bodies of military history written that analyze the military aspects of the various SSCOs. The notable exception to this generalization is Michael Clodfelter's work. There was also a Congressional Research Service Study, and a few other papers that provided some statistical data. Finally, only part of the US post-WWII archival records have been declassified and made readily available at the National Archives, primarily only the records of the major conflicts (Korea and Vietnam). US Gulf War data are also usually available through a number of sources.

The two existing works that were tapped (CEC and MCODB) have major shortcomings. The CEC suffers from being a one-sided database with research generated from secondary sources (including newspapers and news magazines). Furthermore, it was not the most rigorous of HERO's many studies. It was conducted by inexperienced managers and researchers, and performed under a very tight budget. As such, the data suffers from inconsistent definitions (for example, "strength" and what is included in a "battle casualty") and many noticeable errors (for example, the dates for the *Mayaguez* Incident, the strength of the US, French, and Italian contingents in Lebanon (1982-84), and the strength of the British Forces in Malaysia). As such, TDI found that the CEC study was best used in conjunction with other data, and in those cases where the CEC data conflicted with more recent sources, the more recent sources were usually more accurate.

The MCODB is a Reflex database based upon the CEC Study, with some additional material and operations added, including peacekeeping operations. It was compiled during the course of a three-week study for the JCS. For the sake of that study it contained sufficient data to answer one (and pretty much only one) question, which was the number of people killed in the intervening forces in various operations. It had almost no two-sided data, and no consistent details on strength and casualties other than total strength and total dead. This is not much different in depth or content than the original CEC Study. No supplemental work has been performed on this database since that three-week study period in 1995.

In the end, the current SSCO database was built from a core of three sources, and supplemented with considerable material grabbed from a variety of other sources. First and foremost was Michael Clodfelter's *Warfare and Armed Conflicts, A Statistical Reference*. This book is essentially a statistical extension of Dupuy & Dupuy's *Encyclopedia of Military History*, and was the most consistent and comprehensive secondary source of two sided data that could be found. Other useful material included the *Casualty Estimates in Contingency (CEC) Study* and the Congressional Research Service's *U.S. Military Operations, 1965-1994 (Not including Vietnam): Data on Casualties, Decorations, and Personnel Involved*. For UN peacekeeping operations, a wide variety of UN published material was relied upon, including casualty lists faxed to us by the UN Casualty Office.

The other major point is that there are also major research problems for SSCOs due to the nature of the operations and their data. First and foremost, most of the data tends to be from secondary sources, although occasionally there are official pronouncements with reliable data. Perhaps most crippling is that almost all the data is one-sided. Due to the nature of the opponents (usually a first world intervening force is facing militia, rioters, guerrillas, or a Third World army), there is often little reliable material available on the strength and losses of the indigenous forces. Much of the information on indigenous forces comes in the form of estimates (often by journalists). Furthermore, each operation actually requires considerable effort to fully map out what happened. From a practical point of view, it takes a considerably greater effort to fully lay out even a small, short, SSCO than is does to create a WWII division-level engagement. If one tries to fully research a SSCO from both sides, one encounters unique research, interpretation, and even translation problems. These can all be solved by budget, but to date the budget provided for such research has been far from sufficient.

With the fall of the Berlin Wall in 1989, it was clear that the US Army's daily missions were changing from facing a conventional threat to addressing all these various SSCOs. It was time for the analytical community to focus more of its research effort on SSCOs. Since then, the US analytical community has not skimped on conferences and meetings held on the subject, and has rightly proclaimed that this was a major analytical problem that needed to be addressed. Still, the first step in virtually any valid analytical or scientific effort is data collection. **In the twelve years since the fall of the Berlin wall, the actual budget and personnel dedicated to research on SSCOs remained virtually non-existent.** In fact, the CEC study still is the most extensive data collection to date, and it was done before the wall fell. **One can only conclude that the US analytical community is merely paying lip service to research on SSCOs and has not backed up their concerns with budget**. Providing budget is the only way for real research to be conducted.

Our experience with Internet research has not been very satisfactory. We discovered that some details on US personnel losses were often available, sometimes from official government Web sites. However, personnel strengths for US operations were rare. Basic descriptions of each operation were available, but previous knowledge of the operation was helpful in balancing the narratives. In a number of cases we discovered very detailed sites covering all or part of certain operations. This was usually not for analytical purposes. For example, there were detailed narratives of the *Mayaguez* operations and US casualties on the web because of the MIA issue. We found a listing and details on a number of US evacuation operations in which the US 160th Special Operations Squadron participated. We found a listing and description of various British hostage rescue and counter-terrorism actions, including in-country operations against the IRA. Occasionally a good primary source document like Kissenger's letter to President Ford on the debrief of the *Mayaguez* crew were available. Sometimes entire books were on the Web, like Mark Bowden's *Blackhawk Down*.

As such, for certain aspects of specific operations, there was considerable detail. What was missing was the complete story, including data on the indigenous forces and, in many cases, reliable, unbiased and unimpeachable sources. **Only one of the 169 records in the database could be completed from the data drawn solely from the Internet**. The notable exception was the *Liberty* Incident (the Israeli attack on the US intelligence ship USS *Liberty*)! Furthermore, the detail and extent of the data available clearly declined for events that occurred before 1995. For example, virtually no data on the US intervention in the Dominican Republic in 1964-65 could be found, and this was true of most events before 1975. Furthermore, as the US is the largest user of the Internet, SSCOs that included forces from other nations, or which were executed by other nations, were also not well covered (except for the British). **As such, and as one would expect considering the age and demographics of Internet users, the Internet was best for researching recent events that concerned the US**. Its utility dropped considerably when used outside of those parameters. The exception was the UN peacekeeping operations, which had considerable descriptive and statistical material on these. Still, these were best supplemented by the various hard copy sources that TDI has collected. We also found the Internet useful for locating basic statistical abstracts of countries. This may have saved us a few man-days of research time.

Furthermore, we encountered another troubling problem that TDI feels has long term implications for research and education. Many of the sites that describe an SSCO or incident listed a half-dozen or more related links, sites, and articles on the subject that one could access. Yet TDI invariably found that half of these links, sites, and articles could no longer be accessed. Usually they had been shut down. This occurred regularly for events and sites as recent as two or three years ago. **TDI therefore concluded from its observations that these "near history" sites have a half-life of less than five years, meaning that one-half of the material on the subject will disappear from the Internet in five years**. As there is no Internet equivalent of a library, one can only conclude that the history and published knowledge of these events will disappear over time if this material is not published elsewhere on paper.

In the end, the primary advantage of the Internet over using libraries, archives, and other research methods was time (and therefore cost). As such, we attempted to maximize its use as a budget saving effort in this project. There were some materials, in particular official papers, that were sometimes located easily on the Internet that would have taken considerable effort to locate in hard copy. **Still, it is clear that the Internet is in no way a replacement for traditional research utilizing archival sources, books, newspapers, dissertations, and so on. Due to the problem of disappearing data on the Internet, it will not become such a tool in the foreseeable future**.

TDI strongly recommends that if the US analytical community is serious about studying SSCOs, it must develop a properly researched, two-sided database on the subject. While TDI's SSCO database can serve as the starting point for this work, what is needed is a major research effort.

Chapter
4

# SSCO Categories

Each SSCO database record consists of 149 fields. A number of these fields are filled from data from each "combatant menu", which have six menus (allowing up to six combatants and three sides), each of 46 fields. Due to the paucity of Enemy Prisoner of War data, and for that matter, two-sided data, TDI was forced to forgo any form of statistical analysis. Instead, the data collected on similar types of operations was arranged as a series of "benchmarks" giving ranges of results. From these, we have attempted to develop a set of rules that can be applied to the EPW experience in SSCOs. More could be done with more research.

Throughout this study, TDI avoided defining what was a SSCO and what was not. This was for four reasons. First, we did not want to limit the range and selection of data by definition. Second, most SSCOs are easily recognized as such. Third, even the questionable SSCOs (like Loughall) have SSCO-like characteristics and are therefore useful for analysis. Fourth, TDI wanted to focus on doing real work as opposed to conducting "angels dancing on the head of pins" type definitional debates. As we have observed that previous efforts at defining terminology for OOTWs consume considerable time and resources without producing any useful product, we choose not to follow that path. Therefore, no definition of SSCOs is provided for this paper.

The SSCOs were categorized as 10 types of operations (see Appendix A for a list of operations by category). They are:

| Abbreviation | Operation Type |
|---|---|
| AID | Aid |
| ASSIST | Military Assistance |
| CONV | Conventional Hostilities |
| EVAC/RESC | Evacuation/Rescue |
| INSG | Insurgency/Counterinsurgency |
| INTRV | Intervention |
| PKPG | Peacekeeping |
| POLACT | Police Action |
| RAID | Raid |
| STF | Show the Flag, Maintain presence, gather intelligence |

Chapter
# 5

# Human Factors

Armed forces do not all fight with the same degree of effectiveness. Their performances and capabilities in battle can and do vary widely. These differences go far beyond the numbers, mix, and capabilities of the weapons brought onto the field of battle. There are "force multipliers" that are related to the performance of human beings (and groups of human beings) on the battlefield. These force multipliers, which The Dupuy Institute refers to as "Combat Effectiveness," include such factors as leadership, generalship, training, experience, morale, motivation, cohesion, intelligence (including interpretation), momentum, initiative, doctrine, the effects of surprise, logistical systems, organizational habits, and even cultural differences. Human factors are hard to measure. As such, the analytical community often ignores them.

For the previous work by The Dupuy Institute and earlier phases of this study, combat effectiveness was measured by mission accomplishment, casualty effectiveness, and/or spatial effectiveness. For Small Scale Contingency Operations, these were not very useful measurements. To start with, mission accomplishment was very much related to whether the political agenda of the various parties was fulfilled, and is not a measurement of combat mission accomplishment (which often is murky). For most of these operations, spatial effectiveness was irrelevant. Casualty effectiveness remained a factor. Looking at the operations where we have two-sided data illustrates this (see table, next page).

| Operation | Intervening Force Strength | Indigenous Force Strength | Intervening Force Losses | Indigenous Force Losses | Intervening Bloody Losses | Indigenous Bloody Losses |
|---|---|---|---|---|---|---|
| Greek Civil War* | 152,500 | 22,666 | 56,527 | 73,028 | 54,526 | 30,492+ |
| Malaysian Insurrection* | 189,000 | 4,000 | 4,784 | 10,687 | 4,784 | 7,991 |
| Prison Camp Riot on Koje-do I | 800 | 5,600 | 40 | 214 | 40 | 214 |
| Prison Camp Riot on Koje-do II | 1,800 | 6,500 | 14 | 315 | 14 | 315 |
| Cypriot EOKA Insurgency | 28,000 | 273 | 1,060 | 166 | 1,060 | 166 |
| Algiers* | 550,000 | 39,000 | 37,360 | 144,600+ | 36,867 | 141,000+ |
| *Musketeer* | 22,000 | 3,000 | 162 | 2,056 | 161 | 1,871 |
| Bay of Pigs | 1,453 | 20,000 | 1,307 | 205 | 118 | 205 |
| Battle of Bizerte | 4,800 | 4,200 | 192 | 2,846 | 160 | 2,150 |
| Indian Occupation of Goa | 30,000 | 7,195 | 79 | 4,888 | 79 | 87 |
| Canal Zone Riots | 10,000 | 30,000 | 89 | 224 | 89 | 224 |
| *Mayaguez* Rescue Mission | 275 | 200 | 68 | 102 | 65 | 102 |
| Entebbe (Operation *Jonathan*) | 35 | 7 | 2 | 7 | 2 | 7 |
| Lufthansa 737 | 60 | 4 | 0 | 4 | 0 | 4 |
| Kolwezi | 1,355 | 4,000 | 31 | 80 | 31 | 80 |
| Operation *Nimrod* | 12 | 6 | 0 | 6 | 0 | 5 |
| Flight GA 206 | 35 | 5 | 1 | 5 | 1 | 5 |
| Peace for Galilee | 60,000 | 45,000 | 1,351 | 10,896 | 1,328 | 5,600 |
| Siege of Beirut | 60,000 | 6,000 | 1,223 | 1,000 | 1,223 | 1,000+ |
| Falklands | 28,000 | 15,265 | 1,101 | 15,265 | 995 | 2,020 |
| Operation *Winter Harvest* | 10 | 5 | 0 | 5 | 0 | 0 |
| Grenada | 8,800 | 5,064 | 138 | 5,064 | 138 | 487 |
| Operation *Flavius* | 3 | 16 | 3 | 0 | 3 | 0 |
| Panama | 27,351 | 17,800 | 271 | 4,635 | 271 | 189 |
| Desert Storm | 541,340 | 350,000 | 158 | 130,000 | 131 | ??? |
| Gulf War: The 100 Hour War | 541,340 | 220,000 | 1,045 | 64,000 | 1,040 | 1,000+ |
| Somalia III (UNISOM II) | 34,200 | 10,000 | 264 | 1,120 | 253 | 1,095 |
| Assault at Marseilles Airport | 24 | 4 | 10 | 4 | 10 | 4 |
| Japanese Ambassador's Residence | 140 | 14 | 2+ | 14 | 2 | 14 |
| Thai Hospital Rescue | 80 | 10 | 2 | 10 | 2 | 10 |
| Hijack of Vnukovo Airlines | 30 | 3 | 0 | 1 | 0 | 1 |
| **TOTAL** | **2,293,443** | **815,837** | **107,284** | **471,447** | **103,393** | **196,338** |
| Less Desert Storm | 1,752,103 | 465,837 | 107,126 | 341,447 | 103,262 | 196,338 |
| Less also the Gulf War | 1,210,763 | 245,837 | 106,081 | 277,447 | 102,222 | 195,338 |
| Less also Algiers | 660,763 | 206,837 | 68,721 | 132,847 | 65,355 | 54,338 |
| Less also Greek Civil War | 508,263 | 184,171 | 12,194 | 59,819 | 10,829 | 23,846 |

*Note that it is a characteristic of guerilla wars that the total indigenous force losses exceed the average or peak indigenous force strength. This was also true for Vietnam.

This data shows the following relationships:

| | Weighted Force Ratio | Weighted Loss Ratio | Weighted Bloody Loss Ratio |
|---|---|---|---|
| All 30 operations | 2.81 to 1 | 1 to 4.39 | 1 to 1.90 |
| Less Desert Storm | 3.76 to 1 | 1 to 3.19 | 1 to 1.90 |
| Less also Gulf War | 4.93 to 1 | 1 to 2.62 | 1 to 1.91 |
| Less also Algiers | 3.19 to 1 | 1 to 1.93 | 1 to .83 |
| Less also Greek Civil War | 2.76 to 1 | 1 to 4.91 | 1 to 2.20 |

From this it appears that the intervening force tends to significantly outnumber the indigenous force by 3 to 4 to one and inflicts casualties at a 4 or 5 to one ratio. A simple chart showing force ratio compared to loss ratio for these 39 engagements shows that there is no direct correlation between force ratios and loss ratios in SSCO.

The intervening forces suffer higher losses than the indigenous forces in only five of the 31 cases listed above. These were: the Cypriot EOKA Insurgency, one of the more successful insurgencies in history; the Bay of Pigs operations, which had a very unfavorable odds ratio; the Siege of Beirut, for which defending casualties were almost certainly under-reported; Operation *Flavius*, which effectively was a special forces trap for three IRA terrorists; and the Assault at Marseilles Airport.

When bloody casualties are considered (meaning only killed and wounded) then the Greek Civil War, Panama, and the Gulf War also are added to the list of operations in which the intervening forces suffered higher casualties than the indigenous forces. In the case of the Greek Civil War, we do not have reports on the number of insurgents wounded but not captured or surrendered, so their bloody losses are under-reported. In the case of Panama, there may have been some under-reporting of the Panamanian wounded, but the bloody losses appear to be fairly close to reality. In the case of the Gulf War, the casualty numbers were estimates and may be low for the Iraqis.

Furthermore, some of the conventional operations we have examined contain a considerable number of battalion-level, brigade-level, or division-level engagements. Some of these were measured during Phase III of the project, and these are included below for reference.

| | Number of Cases | Force Ratio | Casualty Ratio |
|---|---|---|---|
| Operation Musketeer | 1 | 10.75 to 1 | 1 to 11.19 |
| Falklands | 7 | 1.01 to 1 | 1 to 4.00 |
| Weighted | | 0.86 to 1 | 1 to 3.70 |
| Gulf War | | | |
| Coalition Attacking | 16 | 2.46 to 1 | 1 to 33.33 |
| Weighted | | 1.74 to 1 | 1 to 100 |
| Iraqi Attacking | 4 | 1.01 to 1 | 31.26 to 1 |
| Weighted | | 0.51 to 1 | 26.96 to 1 |

While human factors clearly played a part in the results of many of these operations, no operation (except for possibly the Gulf War) included enough identifiable and measurable engagements that allowed for statistically significant measuring of human factors. Keep in mind that in most operations, there is a clear performance differential in favor of the intervening forces. This does not mean that there cannot be considerable casualties inflicted on the intervening forces in these operations (e.g., US in Lebanon 1982- 84), it just means that in a conventional fight during an operation, the intervening forces tend to get the better in the exchange, even in operations in which they suffer considerable casualties (e.g., the fight on Tang island during the *Mayaguez* Rescue or the fight in Mogadishu during the US attack on the Somali command). While this superior combat capability was a factor in the operations, it often did not result in the operation being successful (e.g., Lebanon 1982-84, or Somalia 1992-95).

Chapter
6

# Number Captured

First, let's examine the number of people captured (EPWs, civilian internees, and unidentified captured) in these various operations:

## AID

No examples of these operations were included in our database. This was due to constraints on research time and the original decision to focus the study on Enemy Prisoners of War (EPWs). Therefore the focus was on operations that had an element of violence in them. The non-violent aid operations tend to be very poorly documented in open sources. Due to the nature of such operations, EPWs effectively will be zero. There may be some civilian internees, but these will certainly be the responsibility of the host country. The number of people evacuated and rescued can be significant and number in the thousands or tens of thousands. Further study of these operations is required to determine these figures, but it is well beyond the scope of this study.

## ASSIST (Military Assistance)

The Dupuy Institute looked at seven military assistance missions. Unfortunately, without further research, no data could be easily found on the number of EPWs or civilian internees in these missions. Due to the nature of these operations, it is expected to be very low. EPWs and civilian internees will certainly be the responsibility of the host country in these cases. Military assistance programs exist from very low-level efforts with a handful of advisors who remain attached to senior headquarters (which would result in virtually no EPWs or CIs) to more involved operations like the US in Vietnam in the early 1960s. A worst-case experience is the US Army in Vietnam from 1961 to 1964. During that time, the Saigon government reported 16,000 captured; almost all of them were captured and held by South Vietnamese forces. In that case, even when US advisors where in the field with the combat units, the EPWs were still handled by the host country. As the responsibility for EPWs and CIs would be with the host country, the requirements for capability to host EPWs would be very limited and brief. As such, no unique resources are expected to be required for EPWs and CIs for both small or large military assistance programs.

## CONV (Conventional Hostilities)

While conventional hostilities can be measured by the methods outlined in the Phase I & II Final Report, we did consider five conventional operations for this effort. Each had data on captures for at least one side. This is presented below:

| Event | Year Begun | Duration (in days) | Total Captured | Total Opposing Force Casualties | Average Opposing Force Strength |
|---|---|---|---|---|---|
| Indian Occupation of GOA | 1961 | 3 | 4,801 | 4,888 | 7,195 |
| Falklands War | 1982 | 75 | 13,245 | 15,265 | 15,265 |
| Sikh Golden Temple | 1984 | 2 | 1,517 | 2,095 | 2,095 |
| Desert Storm (the Air War) | 1991 | 38 | 1,218 | 130,000 | 285,000 |
| The 100 Hour War | 1991 | 5 | 63,000 | 64,000 | 190,000 |

Four of the five operations were primarily ground operations. Excepting Desert Storm, 95.73% of all casualties in these operations were prisoners of war. Furthermore, the number captured is 38.48% of the total average strength of the opposing force, and in three cases makes up over 70% of the opposing force became EPWs.

Unless there is reason to believe otherwise, in small conventional operations (less than 30,000 men in the opposing force), preparations should be made to accommodate 96% of the opposing strength as prisoners. Furthermore almost all of those captures are going to occur over a 2 to 3 day period, so this figure is effectively the peak demand figure for an operation. These figures are also in line with some of the operations categorized as "interventions" that had significant conventional aspects to them, like the Bay of Pigs and Grenada. See the section on Interventions for further data.

For conventional operations greater than 30,000 men, the methods derived from the Phase I & II Final Report should be used.

## EVAC/RESC (Evacuation/Rescue)

The Evacuation and Rescue data was broken into two very different types of operations. One was evacuation of civilians from a potentially threatening or violent area, and the other was anti-terrorist rescue missions. They show the following data:

| Event | Year Begun | Duration (in days) | Number of People Rescued | Number of Hostages Killed |
|---|---|---|---|---|
| Operation *Dragon Rouge* | 1964 | 3 | 2,000 + | 33 or 61 |
| Evacuation of Lebanon | 1974 | 2 | 250 | |
| Evacuation of Cambodia | 1975 | 10 | 282 | |
| Evacuation of Saigon | 1975 | 2 | 6,900 | |
| *Mayaguez* Rescue | 1975 | 1 | 40 | |
| Congo Rescue (Kolwezi) | 1978 | 7 | 3,000 | |
| Evacuation of Monrovia | 1990 | 1 | 2,670 | |
| Evacuation of Freetown | 1992 | 1 | 438 | |
| Evacuation of Monrovia | 1996 | 1 | 2,100 | |
| Evacuation of Sierra Leone | 1997 | 5 | 2,509 | |
| Evacuation of Tirana | 1997 | 14 | 817 | |
| Evacuation of Asmara | 1998 | 1 | 172 | |
| Siege of US Embassy in Liberia | 1998 | 20 | 1 + | |
| Operation *Barras* | 2000 | 17 | 6 | |

As can be seen, it is not unusual for these operations to evacuate hundreds of people, and in six of the 14 operations for which we have data, the number was in the thousands. It would appear that in absence of a direct count, the US should be prepared to handle at least 3,000 evacuees at any one time. In the case of some of these operations (like Saigon) the number evacuated was limited by the

time and resources available to evacuate them, rather than the number of people who required evacuation.

Also of note is the frequency of such evacuations. Since 1990 (inclusive) the US has conducted at least 10 of these operations, sometimes as many as two or three a year (1997 and 1998). As such, it appears the US needs to have the capability permanently in place to evacuate at least 3,000 people. As these missions are almost invariably mixed service missions, this is a US Armed Forces requirement, not necessarily a US Army requirement.

## Small Hostage Rescue/Anti-terrorist Missions

These operations are invariably small counter-terrorist operations, and as such, while very dramatic and well documented, but have little impact on US Army resources. They include:

| Event | Year Begun | Duration (in days) | Number of Hostages Rescued | Number of Hostages Killed | Number of Terrorists Captured | Number of Terrorists Killed |
|---|---|---|---|---|---|---|
| Munich Olympic Massacre | 1972 | 1 | 0 | 11 | 3 | 5 |
| Entebbe (Operation *Jonathan*) | 1976 | 2 | 106 | 0 | 0 | 7 |
| Somali School Bus Hijacking | 1976 | 1 | 30 | 1 | 0 | 5 |
| De Punt Train Hijacking | 1977 | 1 | 76 | 2 | 6 | 7 |
| Lufthansa 737 | 1977 | 1 | 90 | 0 | 1 | 3 |
| Operation *Nimrod* | 1980 | 1 | 21 | 1 | 1 | 5 |
| Flight GA 206 | 1981 | 1 | 100?? | 1 | 0 | 5 |
| Operation *Winter Harvest* | 1982 | 1 | 1 | 0 | 5 | 0 |
| Assault at Marseilles Airport | 1994 | 1 | 162 | 0 | 0 | 4 |
| Japanese Ambassador's Residence | 1996 | 1 | 71 | 1 | 0 | 14 |
| Thai Hospital Rescue | 2000 | 1 | 700 | 0 | 0 | 10 |
| Hijack of Vnukovo Airlines | 2001 | 1 | 123 | 2 | 2 | 1 |
| **TOTALS** | | | **1,480** | **19** | **18** | **66** |

Aggregate statistics for these operations show that the average number of hostages is 123.33, or 70.91 if the Thai hospital rescue is not included. Furthermore, 98.73% of the hostages survived the rescue. Therefore, for small hostage rescue efforts, planning should provide support for 100% of the hostages.

In the case of the terrorists, 21.14% survive the rescue attempt. In some cases, this low survival rate appears to be affected by deliberate targeting. As the number of terrorists is low (average of 7.00 per operation), the number of surviving terrorists is usually insignificant.

## INSG (Insurgency/Counterinsurgency)

While we examined nine insurgencies, for only three (besides Vietnam) did we have good capture data. They are:

| Event | Year Begun | Duration (in days) | Number Captured | Average Opposing Force Strength |
|---|---|---|---|---|
| Greek Civil War | 1946 | 1,343 | 42,536 | 22,666 |
| Malaysian Insurrection | 1948 | 4,429 | 2,696 | 4,000 |
| Algerian War | 1954 | 2,691 | 3,600 | 39,000 |

The Malaysian Insurrection and Algerian War show a similar pattern, with the number captured per day being very low (0.61 to 1.34 per day). The Greek Civil War shows a different pattern, with the number captured being 31.67 per day, and much higher casualties were incurred.

This is somewhat different than the US experience in Vietnam. The figures, by year, for US (and ARVN?) captures in Vietnam are:

| Year | Military Defections | Political Defections | Non-Military/ Political Defections | Captured per Day |
|---|---|---|---|---|
| 1966 | 12,897 | 6,303 | 1,042 | 55.46 |
| 1967 | 17,672 | 7,877 | 1,629 | 74.46 |
| 1968 | 12,569 | 3,825 | 1,777 | 49.65 |
| 1969 | 28,405 | 12,648 | 5,970 | 128.83 |
| 1970 | 17,092 | 11,361 | 4,112 | 89.22 |
| 1971 | 8,052 | 5,894 | 2,497 | 45.05 |
| **TOTALS** | **96,687** | **47,908** | **17,027** | **Avg: 73.77** |

To convert these terms into something that is meaningful, "Military Defections" and "Political Defections" are considered to be EPW (the first were NVA/VC military personnel, the second were VC political cadre), while "Non-Military/Political Defections" are treated as civilian internees. TDI has not been able to determine whether "Military Defections" and "Political Defections" account for all Vietnam-era EPW.

In the case of Vietnam, the number captured per day ranges from 45.05 to 128.83 (or 22.06 to 77.82 if one only counts the military defections). While the scale of the US commitment and size of the opposing forces was larger, this difference alone does not account for the difference in capture rates. Just to compare:

| Event | Peak Strength, Intervening Forces | Peak Strength, Indigenous Friendly Forces | Peak Strength, Indigenous Opposition Forces |
|---|---|---|---|
| Greek Civil War | ------ | 205,000 | 35,000 |
| Malaysian Insurrection | 55,000 | 90,000 | 4,000 |
| Algerian War | 550,000 | ------- | 39,000 |
| Vietnam War | 601,860 | 1,110,000 | 376,000* |

*estimate as of early 1973

| Event | Total Losses, Intervening Forces | Total Losses, Indigenous Friendly Forces | Total Losses, Indigenous Opposition Forces |
|---|---|---|---|
| Greek Civil War | ---- | 56,527 | 73,028 |
| Malaysian Insurrection | 1,430 | 3,354 | 10,687 |
| Algerian War | 37,360 | ----- | 144,600 |
| Vietnam War (1965-72) | 349,974 | 665,433* | 1,001,014** |

*1965-1973

** NVA (?) KIA from 1965-73 is 856,419. Military and Political defections from 1966-71 is 144,595. Wounded in action is unknown. Total casualty figure (NVA and VC) is probably in the range of 1.5 to 2.5 million

Lets look at some intervening force losses in various insurgencies just for comparison:

| Event | Peak Strength | Killed per Year | Killed per 1,000 |
|---|---|---|---|
| British, Northern Ireland, 1969-81 | 21,266 | 29 | 0.7 |
| British, Malaysia, 1948-60 | 55,000 | 42 | 0.8 |
| British, Cyprus, 1954-59 | 28,000 | 32 | 1.1 |
| Portuguese, Angola, 1961-74 | 55,000 | 82 | 1.5 |
| British, Aden, 1963-67 | 14,000 | 32 | 2.3 |
| British, Borneo, 1963-66 | 17,000 | 42 | 2.5 |
| British, Kenya, 1952-56 | 51,000 | 148 | 2.9 |
| Algeria, 1954-62 | 550,000 | 1,845 | 3.4 |
| Greece, 1946 - 49 | 205,000 | 1,962 | 9.6 |
| USSR, Afghanistan, 1979 - 89 | 104,000 | 1,057 | 10.2 |
| US, MAAG, Vietnam, 1956-60 | 672* | 0.4 | 0.6 |
| US, MAAG, Vietnam, 1961-64 | 11,001* | 66.8 | 6.1 |
| US, Vietnam, 1965-72 | 260,814* | 5,673.0 | 21.8 |
| Australia, Vietnam, 1962-72 | 5,833** | 39.0 | 6.7 |
| New Zealand, Vietnam, 1964-72 | 386** | 4.1 | 10.6 |

* These figures are average strength.

** These figures are average strength from 1965-70. Peak strength for Australians was in 1969, which 7,672. For New Zealand, there peak was 552 in 1969.

| | | | |
|---|---|---|---|
| US, MAAG, Vietnam, 1961 | 3,164 | 11 | 3.5 |
| US, MAAG, Vietnam, 1962 | 11,326 | 31 | 2.7 |
| US, MAAG, Vietnam, 1963 | 16,263 | 78 | 4.8 |
| US, MAAG, Vietnam, 1964 | 23,310 | 147 | 6.3 |
| US Vietnam, 1965 | 154,000* | 1,369 | 8.9 |
| US Vietnam, 1966 | 389,000* | 4,771 | 12.3 |
| US Vietnam, 1967 | 480,000* | 9,699 | 20.2 |
| US Vietnam, 1968 | 536,040* | 14,437 | 26.9 |
| US Vietnam, 1969 | 484,326* | 6,727 | 13.9 |
| US Vietnam, 1970 | 335,794* | 7,171 | 21.4 |
| US Vietnam, 1971 | 158,119* | 942 | 6.0 |
| US Vietnam, 1972 | 24,200* | 531 | 21.9 |

* Figure used here is end of year strength, which distorts the killed per 1,000 figure for 1972.

The comparisons above are based upon killed. The allied South Vietnamese Army suffered about 4.3 times as many killed as the US Army did.

What is clear, and is a point that cannot be stressed enough, is that the Vietnam War was the most intense of the major insurgencies of the last century, and it's casualty rates and capture rates are an order of magnitude higher than any other insurgency. This is partly due to significant elements of the war being effectively conventional warfare, therefore producing casualty and capture rates more in line with conventional combat.

Therefore, with most insurgencies, unless it grows to Vietnam levels of intensity (of which Vietnam itself is the only example), then preparations are required to handle about two EPWs a day. If the insurgency grows in intensity to a major insurgency (meaning like the Greek Civil War or the Afghani-

stan War), then preparations to handle 30 or more captures a day are needed. The worst-case scenario is, as always, Vietnam. The number of prisoners that the US (and ARVN?) captured averaged 73.75 per day, ranging from 55.46 per day in 1965, then increasing to a peak of 128.83 per day in 1969 and then decreasing to a low of 45.05 in 1971.

## INTRV (Intervention)

The Institute was able to collect data on seven examples of captures in various interventions. Most of these interventions involved significant conventional combat, but are not generally considered to be a conventional war. They are somewhat unique in that there are two cases in which the intervening forces also suffered a number of captured in action.

**Indigenous Forces Captured**

| Event | Year Begun | Duration (in days) | Total Captured | Total Opposing Force Casualties | Starting Opposing Force Strength |
|---|---|---|---|---|---|
| *Musketeer* | 1956 | 8 | 185 | 2,056 | 3,000 |
| Battle of Bizerte | 1961 | 4 | 696 | 2,846 | 4,200 |
| Indonesian Confrontation | 1963 | 1,147 | 771 | 1,583 | ---- |
| Peace for Galilee | 1982 | 10 | 5,296 | 10,896 | 45,000 |
| Grenada | 1983 | 10 | 4,515 | 5,064 | 5,064 |
| Panama | 1989 | 56 | 4,446 | 4,635 | 17,800 |

**Intervening Forces Captured**

| Event | Year Begun | Duration (in days) | Total Captured | Total Opposing Force Casualties | Starting Opposing Force Strength |
|---|---|---|---|---|---|
| Battle of Bizerte | 1961 | 4 | 32 | 192 | 4,800 |
| Bay of Pigs | 1961 | 6 | 1,189 | 1,307 | 1,453 |

As can be seen, with one exception, these interventions tend to be brief, and in the case of *Musketeer*, Grenada, and Panama, most of the casualties and captures occurred in a two- or three-day period. As such, the total captured are effectively the same as peak capture rates. For these interventions, the number captured made up 59.94% of the casualties of the defending forces (8 examples) and consisted of 20.12% of the entire force faced (7 examples). If one leaves out "Peace for Galilee" and the "Indonesian Confrontation," the figure increases to 68.71% of the casualties being captured and 30.46% of the entire force being captured. In two of the cases (Grenada and Bay of Pigs), effectively almost all the forces engaged were captured. This is similar to the conventional combat examples above.

This data again points to the same conclusion as for conventional warfare, which is: "Unless there is reason to believe otherwise, for small conventional operations (less than 30,000 men in the opposing force), preparations should be made to accommodate 96% of the opposing strength as prisoners. Furthermore almost all of these captures are going to occur over a 2 or 3 day period, so this figure is also effectively the peak demand figure for an operation.....For conventional operations greater than 30,000 men, the methods derived from the Phase I & II Final Report should be used."

## PKPG (Peacekeeping)

There is no lack of examples of peacekeeping operations in the world. There have been 45 UN Peacekeeping missions and a number of non-UN peacekeeping missions. Unfortunately, the Institute was only able to gather limited data on the number of captures in these missions. This data almost certainly exists for many of these operations, but there was insufficient time to conduct detailed re-

search into each. As such, we only have capture data for three of these operations, and in two cases it is for the intervening force.

| Indigenous Force | | | | | |
|---|---|---|---|---|---|
| Event | Year Begun | Duration (in days) | Total Captured | Total Opposing Force Casualties | Opposing Force Strength |
| Somalia III (UNISOM II) | 1993 | 329 | 25 | 1,120 | 10,000 |

| Intervening Force | | | | | |
|---|---|---|---|---|---|
| Event | Year Begun | Duration (in days) | Total Captured | Total Opposing Force Casualties | Opposing Force Strength |
| Lebanon MNF (US 2) | 1982 | 516 | 1 | 497 | 1,900 |
| Somalia III (UNISOM II) | 1993 | 329 | 1 | 264 | 20,000 |

The real issue with peacekeeping operations is the level of intensity. They can have zero casualties for extended periods of time, they can have significant casualties from a few brief incidents (i.e., the US in Lebanon in 1983), or in the worst case, they can become a small insurgency.

A quick survey of casualties in 23 UN peacekeeping missions show that there were fewer than five casualties (killed and wounded) in 13 of these missions, while four missions had over 100 casualties each. (See Annex B in *Peacekeeping in Bosnia: Fatality Estimates*, The Dupuy Institute, 28 November 1995.) In 1995, TDI calculated the average number killed in 42 peacekeeping operations as 42 peacekeepers, with the average per year being 17 from all causes (including accidents).

Therefore, for the purposes of estimating enemy prisoner of war capture rates, the issue is whether the operation is typical or develops into the worst-case scenario, which is a small guerilla war. In the typical case, the number of EPW is close to zero. In the worst case, the numbers should be those of a small guerilla war.

The data is available to perform a more sophisticated analysis, but the time was not available for assembling the data for over 50 peacekeeping operations.

## POLACT (Police Action)

Within the category of "police actions" there are in fact five separate and unrelated types of operations.

First are operations like the later stages of the US/UN intervention in Haiti in the 1990s, in which the primary forces in place were police, trainers, and other support personnel and the function of the mission was to develop effective police and government control over the country. As such, even though these operations are sometimes termed peacekeeping missions, they are in reality not keeping the peace between potentially warring factions, but rather are serving to keep general law and order. They are sometimes the final evolution of a peacekeeping mission, as in the case of Haiti. In such an operation there are no EPWs *per se*, and the handling of criminals and civilian internees are the responsibility of the host country. Therefore, these operations are not expected to make any unusual demands on the intervening forces resources.

The second type of "police action" considered is that like the US anti-drug operations. In these cases, as in the US anti-drug operations in Bolivia starting 1986 and the Andean Initiative in the War on

Drugs, there are again few EPWs *per se*, and the handling of criminals and civilian internees is the responsibility of the host country. These operations are also not expected to place any unusual demands on the intervening forces resources.

The third type of "police action" examined is the anti-terrorist operation, like the UK actions at Loughall Station in 1986 and Operation *Flavius* in Gibraltar in 1988. These were operations specifically intended to halt terrorist operations that were underway, and in both cases resulted in the extermination of all of the terrorists. Since the number of people in these operations is very small, they are not expected to place any unusual demands on resources.

The fourth type of "police action" is riot control. While in the US these are primarily the responsibility of the civilian authorities, primarily the police, if the disturbance is large it will require calling in the National Guard and in some cases, the US Army. For example, in the case of urban rioting in the US in 1968, after the Martin Luther King assassination, some 55,000 federal and National Guard troops were called out over the course of 30 days of rioting across 125 cities. In the case of the May Day protests in 1971 (anti-war protests), some 13,000 Federal troops were called out. These events can place a considerable demand on US Army resources dealing with even temporarily interning civilians and rioters. A sample of four riots should indicate the order of magnitude of this problem:

| Event | Year | Duration (in days) | Estimated Protesters | Est Number Protesters Interned | Police/ Troops Called Up | Federal Troops Called Up |
|---|---|---|---|---|---|---|
| Detroit Riot | 1967 | 8 | | 5,000 | 10,000 | 1 brigade |
| Urban Rioting | 1968 | 30 | | 21,270 | 55,000 | 13,000 |
| May Day Protest | 1971 | 8 | 750,000 | 11,000 | | 13,000 |
| Miami Riots | 1980 | 4 | 135,000 ?? | 1,000 | 13,500 | 0 |

As can be seen, the number interned can be quite large, and in the four cases for which we have reports of numbers interred, two of the riots make up the 4th and 6th largest cases of EPWs/CIs in our 169 examples (after Vietnam, the Gulf War, and Falklands). While officially the responsibility for detaining and processing rioters belongs to the local government and police, for all practical purposes, for a period of one or more days, the US Army has often had to detain and control them. The short term peak demand must therefore be addressed. Furthermore, riots do occur outside of the US that involved US forces (i.e. the Panama Canal Zone riots of 1959 and 1964). In the case of the riots in Panama in 1964, there were 30,000 rioters and the disturbances lasted for 5 days. The 10,000 US troops there suffered 4 killed and 85 wounded while the rioters lost 24 killed and at least 200 wounded. This riot also included sniping and other gunfire.

The frequency of major domestic riots tends to vary over time, with the US having had only two major riots since 1980 (Miami in 1982 and Los Angeles in 1992). During the 1950s, 1960s, and through the early 1970s, the number and their degree of violence was quite significant. The rioting from 1965 to 1972 was particularly frequent and massive. However, urban rioting has occurred in virtually every decade of US history over the last 150 years, and there have been other periods of rioting in multiple cities (in 1877, for example). As such, while urban unrest appears to be quiet for now, one cannot rule out that rioting in the US will not place a significant demand on the US armed forces at some point in the future.

The fifth type of police action is prison riots. While this is not a usual demand on US Army resources domestically (although it could be: in recent times the National Guard has been used), it is a problem with prison camps, refugee camps, etc. Two cases for which we were able to find good data are the prison camp riots on Koje-do that occurred during the Korean War. While these were unique in the degree of organization of the prisoners, it is not unheard of for refugee camps (for example, the

camp the US had in Guantanamo during the 1980s) to also see rioting. The data for these two cases is presented below:

| Event | Year | Duration (in days) | Participating Guards | Participating Prisoners | Guard Losses | Prisoner Casualties |
|---|---|---|---|---|---|---|
| Prison Camp Riots on Koje-do I | 1953 | 1 | 800 | 5,600 | 40 | 214 |
| Prison Camp Riots on Koje-do II | 1953 | 1 | 1,800* | 6,500 | 14 | 315 |

* This included the use of 22 medium tanks.

In the case of the first riot, there were 5,525 "re-internees" (as they were still in a prison camp), of which 139 were wounded (2.52%). In the case of the second riot, there were 6,459 "re-internees", of which 274 were wounded (4.24%).

As a final note, the phrase "police action" has also been used at times to describe the US participation in the Korean War in 1950-53 and the US participation in the Vietnam War in 1965-1972. One was clearly a conventional war while the other was a massive guerilla war with significant conventional aspects.

## RAID (Raid/Incident)

The raid and incident category includes military operations such as the Israeli Interventions in Lebanon in 1978, whose purpose seems to have been to disrupt the forces assembled on the border, and one-time events such as brief military actions, car bombings, and engagements. These latter cases are individual incidents and are not further analyzed. No analysis was carried out for any of the operations in this category.

## STF (Show the Flag, Maintain Presence, Gather Intelligence)

There are a number of operations in which the primary function of one side was to remain in an area as a show of force. This certainly describes the US in Korea, in Europe, and in a number of other places in the world. Unless these demonstrations turn violent, they tend to produce very low EPW rates. Usually the host countries are responsible for EPWs and civilian detainees; therefore these operations create no unusual demands on the US. In the case of Korea, a low level of violence has existed since the Korean War that has resulted in casualties, combat, and some deaths and captures. Again, the EPWs are the responsibility of the host nation (Korea) and therefore the US has not recorded any. The US did in fact serve as a source of EPWs for the North Koreans, and this data is shown below.

| Event | Year Begun | Duration (in days) | Total EPWs |
|---|---|---|---|
| Korean DMZ post-war | 1953 | 4,541 | 1 (US) |
| Korean DMZ Incidents | 1974 | 3,657 | 2 (US) |

Of the three captured, two were deserters. This data was not analyzed further.

Chapter
# 7

# Frequency and Duration of Operations

The material selected for this study is not in any way a complete or even representative sample of the nature of operations and their frequency. No conclusions should be developed from the material selected. An exhaustive study on SSCOs and OOTWs may produce such a list, but this study does not. Still, for reference below is a list of operations by type, frequency, and duration. Again, the reader is warned that no conclusions should be drawn from this list.

| Operation Type | No. of Operations Identified | Years Covered | Average Duration (in days) | No. of Operations from 1989-2000 | Average Duration |
|---|---|---|---|---|---|
| **AID** | 0 | | | | |
| **ASSIST** | 7 | 56 - 83 | 1,733 | 0 | |
| **CONV** | 5 | 61 - 91 | 25 | 2 | 22 |
| **EVAC/RESC** | | | | | |
| Evacuation/Rescue | 19 | 64 - 00 | 7 | 11 | 7 |
| Hostage Rescue | 13 | 72 - 01 | 1 | 4 | 1 |
| **INSG** | 9 | 48 - 65 | 2,399 | 0 | |
| **INTRV** | 15 | 56 - 94 | 172* | 4 | 209 |
| **PKPG** | 39 | 48 - 00 | 2,794 | 24 | 1,217 |
| **POLACT** | | | | | |
| Police Action | 6 | 92 - 98 | 454 | 6 | 454 |
| Drug Raids | 2 | 86 - 89 | 123 | 1 | -- |
| Anti-terrorist | 2 | 86 - 88 | 1 | 0 | |
| Urban Riots | 6 | 59 - 80 | 9** | 0 | |
| Prison Camp Riots | 2 | 53 | 1 | | |
| **RAID** | | | | | |
| Raid | 1 | 78 | 8 | 0 | |
| Incident | 3 | 72 - 84 | 1 | 0 | |
| **STF** | 6 | 53 - 90 | 1,694 | 1 | 162 |
| Not Yet Classified | 17 | 60 - 99 | 1,105 | 12 | 635 |
| Air | 9 | 48 - 98 | 560*** | 3 | 1,797*** |
| Naval | 8 | 62 - 89 | 60**** | 1 | 1 |

* With one outlying data point removed this average is 97

** With one outlying data point removed this average is 5

*** With one outlying data point removed, these averages are 55 and 1 respectively

**** With one outlying data point removed, this average is 1

Chapter
8

# Percent Wounded

We have the following percent wounded figures for the EPWs:

| Operation | Total Captured | Total Casualties | Total Wounded | % Captured Who Were Wounded |
|---|---|---|---|---|
| **Falklands** | 13,245 | | 1,274 | 9.62% |
| **Grenada** | | | | |
| Grenadians | 4,235 | 4,280 | 358 | 8.45% |
| Cubans | 638 | 663 | 59 | 9.25% |

These figures are consistent with those found in the Phase IV, Part 1 Study.

Chapter
# 9

# Analysis

Based upon the above data, one can conclude that suggested EPW and civilian internee rates for the following types of operations are:

| Operation Type | EPW | Civilian Internees | Civilian Rescuees |
|---|---|---|---|
| **AID** | 0 | ??? | Could be significant |
| **ASSIST** | 0 | 0 | 0 |
| **CONV** | 96% of opposing force if less than 30,000; for greater than 30,000 use Phase I & II Report | Included in EPWs | ??? |
| **EVAC/RESC** | | | |
| Evacuation/Rescue | 0 | 0 | 3,000+ |
| Small Hostage Rescue | 1+ | 0 | 100% of hostages |
| **INSG** | | | |
| Small Insurgencies | <2 per day | Included in EPWs | ??? |
| Major Insurgencies | >30 per day | Included in EPWs | ??? |
| **INTRV** | 96% of opposing force if less than 30,000; for greater than 30,000 use Phase I & II Report | Included in EPWs | ??? |
| **PKPG** | | | |
| Typical | 0 | 0 | 0 |
| » Small Insurgency | < 2 per day | Included in EPWs | ??? |
| **POLACT** | | | |
| Police Action | 0 | 0 | 0 |
| Drug Raid | 0 | 0 | 0 |
| Anti-terrorist | 0 | 0 | 0 |
| Urban Riots | 0 | up to 20,000+ | 0 |
| Prison Camp Riots | 0 | All rioters | 0 |
| **RAID** | | | |
| Raid | ??? | ??? | ??? |
| Incident | ??? | ??? | ??? |
| **STF** | 0 | 0 | 0 |

Chapter
# 10

# Conclusions

First and foremost, to state the obvious, not all SSCOs are the same. They differ widely in time, environment, resources required, and enemy prisoners of wars (EPW) and civilian internees (CIs). For the sake of this study, SSCOs were classified according to their overriding characteristics, but not in accordance with a rigid set of definitions. This classification and their characteristics are described below:

**Aid**: Not studied.

**Military Assistance**: Low levels of casualties (the highest was MAAG Vietnam 1961-64, in which the total killed was 267. Long duration (often 5 years or more). Relatively Infrequent, but because of long duration, there are sometimes one or two missions underway that have the potential for casualties. Indigenous forces handle EPWs and CIs.

**Conventional Warfare**: Usually moderate levels of casualties, but can be quite high depending and size and duration of war (i.e Korean War). Can last less than a month, but again can be considerably longer (build-up and ensuing Gulf War was 205 days). Relatively infrequent, less than one a decade for the US. Can generate considerable EPWs and CIs. This is a major demand that needs to be planned for.

**Evacuation and Rescue**: Low level of casualties, often none. Brief (usually only several days; none of the 19 examples analyzed lasted longer than a month). Relatively frequent. In the last decade, there has usually been at least one per year, almost all in Africa. By nature, few or no EPWs but often thousands of evacuees. This is a major demand that needs to be planned for.

**Small Anti-terrorist Hostage Rescue**: Low level of casualties. Brief, usually only a few days. Frequency varies depending on period. Currently not that frequent for the US. By nature, few EPWs but can generate over a hundred rescuees.

**Insurgency**: Usually moderate levels of casualties, but can be high in a few cases (the Vietnam War was exceptionally high). Long duration (often 7+ years). Relatively infrequent. Indigenous forces should handle the EPWs and CIs, although US forces may have to address these needs temporarily.

**Intervention**: Usually low to moderate levels of casualties. Usually less than three months, but some have been known to drag on for longer than a year. Relatively infrequent. Can result in considerable EPWs and CIs, and as such is a major demand that needs to be planned for.

**Peacekeeping**: Usually low to moderate levels of casualties. Long duration (not unusual for them to last for more than 5 years). Very frequent, with the US involved to some extent with several at a time. There are usually more than 10 such missions going on in the world at any given time. More re-

search needs to be carried out to properly address EPWs and CIs for these missions. Worst case is that the EPW demand rises to the level of a small insurgency.

**Police Action**: Usually low levels of casualties. Long duration. Not infrequent (often is the tail end of a peacekeeping mission). Indigenous forces handle the EPWs and CIs.

**Drug Raids**: Usually low levels of casualties. Long duration, as these are basically military assistance type programs. Not infrequent—usually there is at least one US initiative occurring in Latin America at any given time). Indigenous forces handle the EPWs and CIs.

**Anti-terrorist Actions**: Usually low levels of casualties. Brief (a few days). Infrequent. Few EPWS or CIs generated.

**Urban Riots**: Usually low levels of casualties. Short duration, often less than a week. Frequency varies depending on period. Currently not that frequent in the US. Can result in considerable number of civilian internees that the US Armed forces may have to deal with temporarily. As such, this is a major temporary demand that needs to be planned for.

**Prison Camp Riots**: Low levels of casualties. Short duration (a day or so). Infrequent. Reinternment of rioters creates no new demands, although separation and relocation of some of the prisoners may be desirable.

**Raid**: Usually low to moderate levels of casualties. Short duration (often less than a week). Infrequent. Can result in some EPWs and CIs.

**Incident**: This is a "miscellaneous" category on which no analysis was done.

**STF**: Usually low levels of casualties. Long duration (often five or more years). Not infrequent, and there are usually several of these missions going on at a given time. Can result in some EPWs and CIs, but these are usually the responsibility of the host country.

**Not yet classified**: These were mostly peacekeeping and police action operations that we have not fully researched and classified. As such no analysis has been done for them.

**Air Operations**: Usually low levels of casualties. Often brief (a few days), although the Berlin airlift and patrolling the Iranian no-fly zone are notable exceptions. Not infrequent. By nature, do not result in EPWS and CIs.

**Naval Operation**: Usually low levels of casualties. Often brief (a few days), although there are exceptions. Not infrequent. By nature, do no result in large numbers of EPWs or CIs.

For the sake of the above discussion, low levels of casualties are less than 100, and usually less than 10 killed. Moderate levels of casualties are more than 20 and sometimes in the hundreds. High level of casualties means hundreds to thousands of casualties.

**Therefore, for planning purposes, the US Army needs to focus on requirements for conventional warfare, evacuations and rescues, interventions, peacekeeping operations, and riots.**

While the nature of the study was to focus on EPWs and CIs, in all reality, in these operations one has to also deal with detainment, care, and treatment of evacuees/rescuees and even refugees.

The natures of EPWs and CIs for these types of operations are different. For conventional warfare, mostly one will gather EPWs. They will need both temporary detainment and care, and possibly long term detainment and care. A significant percent of them may be wounded and need medical care.

For evacuations, most of the people will be civilian evacuees. Still, in most evacuations, the vast majority of people rescued are indigenous people. As such, they will need to be at least temporarily sheltered and fed, and may need medical help. This may also include dealing with and treating infectious diseases. While this is a temporary demand, it can place considerable burden on the medical corps. In the case of some evacuations, the civilian internees need to be disarmed or policed.

For interventions, one will gather EPWs and perhaps a significant number of civilian internees. They will need both temporary detainment and care, and possibly long term detainment and care. A significant percent of them may be wounded and need medical care. The civilian internees may need to be disarmed or policed and may also need to be shelters, taken care of and may need medical attention.

For peacekeeping operations, one will expect to deal with a wide range of EPWs, CIs, evacuees, and refugees. This creates a whole host of temporary and long-term detainment, care, and treatment problems for all four groups.

For riots, one has primarily a short-term detainment issue that is resolved when they can be transferred over to the local authorities. Therefore, the detainment, care and treatment issues are only short-term (several days at the most).

Chapter
# 11

# Final Comments

The biggest problem encountered with developing analysis of SSCOs is the lack of any real systematic research extant on the subject. What is missing is a solid foundation based upon data. Until this is rectified, there is a limit to what analysis can be performed. Since the fall of the Berlin Wall, the operations research and studies and analysis communities have attempted to better address OOTWs. These attempts appear to be mostly lip service, for they have not been supported with sufficient budget to actually accomplish any significant analysis. As such, it is remains difficult to measure and analyze OOTWs as no one has done the research that will allow one to do so. Until budget is assigned for this type of work, gains in understanding will be limited.

Currently, the SSCO database as used for this study is incomplete. It contains partial records for 169 operations from 1944 to 2001. Time and budgetary constraints meant that not all entries in the database could be filled prior to the end of this study. However, TDI has identified a total of 220 operations for potential study and entry into the database. Since this subject is so important to future Army operations, plans should be made as soon as possible to provide adequate funding for the completion of this database.

Appendix

I

# List of Operations by Type

**AID (Aid)**

(Not Analyzed)

| ASSIST (Military Assistance) | Year | Duration (days) |
|---|---|---|
| US MAAG Vietnam I | 1956 | 1,709 |
| UK Mission to Oman | 1957 | 539 |
| UK Mission to Jordan | 1958 | 105 |
| UK Mission to Kuwait | 1961 | 830 |
| US MAAG Vietnam II | 1961 | 1,461 |
| El Salvador Advisory Mission | 1979 | 5,114 |
| US Support for Honduras | 1983 | 2,376 |

| CONV (Conventional Hostilities) | Year | Duration (days) |
|---|---|---|
| Indian Occupation of GOA | 1961 | 3 |
| Falklands War | 1982 | 75 |
| Sikh Golden Temple | 1984 | 2 |
| Desert Storm | 1991 | 38 |
| Gulf War: The 100 Hour War | 1991 | 5 |

| INSG (Insurgency/Counterinsurgency) | Year | Duration (days) |
|---|---|---|
| ELAS Insurgency | 1944 | 44 |
| Greek Civil War | 1946 | 1,343 |
| Malayan Insurrection | 1948 | 4,429 |
| Algerian War | 1954 | 2,691 |
| Cypriot EOKA Insurgency | 1954 | 1,635 |
| Australian Army in Vietnam | 1962 | 3,829 |
| British Operations in Aden | 1963 | 1,451 |
| New Zealand Army in Vietnam | 1964 | 3,128 |
| Vietnam: The US War | 1965 | 2,949 |

| EVAC/RESC (Evacuation/Rescue) | Year | Duration (days) |
|---|---|---|
| Operation *Dragon Rouge* | 1964 | 3 |
| Evacuation of Lebanon | 1974 | 2 |
| Evacuation of Cambodia | 1975 | 10 |
| Evacuation of Saigon | 1975 | 2 |
| Evacuation of Vietnam | 1975 | 28 |
| *Mayaguez* Rescue Mission | 1975 | 1 |
| Congo Rescue (Kolwezi) | 1978 | 7 |
| Iranian Hostage Rescue | 1980 | 2 |
| Evacuation of Monrovia | 1990 | 1 |
| Evacuation of Mogadishu | 1991 | -- |
| Evacuation of Kinshasa | 1991 | -- |
| Evacuation of Freetown | 1992 | 1 |
| Evacuation of Monrovia | 1996 | 1 |
| Evacuation of Sierra Leone | 1997 | 5 |
| Evacuation of Tirana | 1997 | 14 |
| Evacuation of Asmara | 1998 | 1 |
| Evacuation of Guinea-Bissau | 1998 | 4 |
| Siege of US Embassy in Liberia | 1998 | 20 |
| Operation *Barras* | 2000 | 17 |
| **Small Hostage Rescue/Anti-terrorist Missions** | | |
| Munich Olympic Massacre | 1972 | 1 |
| Entebbe (Operation Jonathan) | 1976 | 2 |
| Somali School Bus Hijacking | 1976 | 1 |
| De Punt Train Hijacking | 1977 | 1 |
| Lufthansa 737 | 1977 | 1 |
| Cyprus Hijacking | 1978 | 5 |
| Operation Nimrod | 1980 | 1 |
| Flight GA 206 | 1981 | 1 |
| Operation Winter Harvest | 1982 | 1 |
| Assault at Marseilles Airport | 1994 | 1 |
| Japanese Ambassador's Residence | 1996 | 1 |
| Thai Hospital Rescue | 2000 | 1 |
| Hijack of Vnokovo Airlines Tu-154 | 2001 | 1 |

| INTRV (Intervention) | Year | Duration (days) |
|---|---|---|
| *Musketeer* | 1956 | 8 |
| Battle of Bizerte | 1961 | 4 |
| Bay of Pigs | 1961 | 6 |
| Indonesian Confrontation | 1963 | 1,147 |
| East African Mutiny | 1964 | 8 |
| French Intervention in Gabon | 1964 | 2 |
| Dominican Republic | 1965 | 513 |
| French Intervention in CAR | 1979 | 2 |
| Peace for Galilee | 1982 | 10 |
| Siege of Beirut | 1982 | 67 |
| Grenada | 1983 | 10 |
| Panama | 1989 | 56 |
| French in CAR | 1991 | -- |
| Haiti (UNMIH I) | 1993 | 376 |
| Haiti (MNF) | 1994 | 194 |

| PKPG (Peacekeeping) | Year | Duration (days) |
|---|---|---|
| Middle East (UNTSO) | 1948 | 19 |
| India/Pakistan (UNMOGIP) | 1949 | 18,993 |
| Middle East (UNEF I) | 1956 | 3,894 |
| Lebanon I | 1958 | -- |
| Cyprus (UNFICYP) | 1964 | 13,425 |
| India/Pakistan (UNIPOM) | 1965 | 212 |
| Middle East (UNEF II) | 1973 | 2,130 |
| Golan Heights (UNDOF) | 1974 | 9,711 |
| Lebanon MNF (US 1) | 1982 | 17 |
| Lebanon MNF (US 2) | 1982 | 516 |
| Lebanon MNF (France 1) | 1982 | 21 |
| Lebanon MNF (France 2) | 1982 | 555 |
| Lebanon MNF (Italy) | 1982 | 513 |
| MNF and Observer in the Sinai | 1982 | 6,826 |
| Iran/Iraq (UNIIMOG) | 1988 | 942 |
| Angola (UNIVEM I) | 1989 | 911 |
| Central America (ONUCA) | 1989 | 822 |
| Angola (UNIVEM II) | 1991 | 1,369 |
| Cambodia (UNAMIC) | 1991 | 183 |
| El Salvador (ONUSAL) | 1991 | 1,400 |
| Iraq/Kuwait (UNIKOM) | 1991 | 3,563 |
| Western Sahara (MINURSO) | 1991 | 3,563 |
| Somalia I (UNISOM I) | 1992 | 162 |
| Somalia II (UNITAF) | 1992 | 147 |
| Yugoslavia (UNPROFOR) | 1992 | 1,401 |
| Liberia (UNOMIL) | 1993 | 1,491 |
| Georgia (UNOMIG) | 1993 | 2,680 |
| Macedonia | 1993 | 2,733 |
| Somalia III (UNISOM II) | 1993 | 329 |
| Rwanda (UNAMIR) | 1993 | 487 |
| Rwanda/Uganda (UNIMUR) | 1993 | 913 |
| Chad/Libya (UNASOG) | 1994 | 61 |
| Somalia IV (UNISOM II continued) | 1994 | 340 |
| Tajikistan (UNMOT) | 1994 | 1,993 |
| Angola (UNIVEM III) | 1995 | 881 |
| Croatia (UNCRO) | 1995 | 337 |
| Macedonia (UNPREDEP) | 1995 | 1,461 |
| Croatia (UNMOP) | 1996 | 1,827 |
| Ethiopia & Eritriea (UNMEE) | 2000 | 154 |

| POLACT (Police Action) | Year | Duration (days) |
|---|---|---|
| Cambodia (UNTAC) | 1992 | 609 |
| Haiti (UNMIH II) | 1995 | 458 |
| Haiti (UNSMIH) | 1996 | 396 |
| Haiti (UNTMIH) | 1997 | 122 |
| Haiti (MIPONUH) | 1997 | 836 |
| Croatia (UNPSG) | 1998 | 304 |
| **Drug Raids** | | |
| Anti-Drug Operations in Bolivia | 1986 | 123 |
| Andean Initiative in War on Drugs | 1989 | --- |
| **Anti-terrorist** | | |
| Loughall Station | 1986 | 1 |
| Operation *Flavius* | 1988 | 1 |
| **Urban Riots** | | |
| Canal Zone Riots | 1959 | 1 |
| Canal Zone Riots | 1964 | 5 |
| Detroit Riot of 1967 | 1967 | 8 |
| Urban Rioting in US | 1968 | 30 |
| May Day Protest | 1971 | 8 |
| Miami Riots of 1980 | 1980 | 4 |
| **Prison Camp Riots** | | |
| Prison Camp Riots on Koje-do I | 1953 | 1 |
| Prison Camp Riots on Koje-do II | 1953 | 1 |

| RAID (Raid/Incident) | Year | Duration (days) |
|---|---|---|
| **Raids** | | |
| Israeli Litani Operations | 1978 | 8 |
| **Incidents** | | |
| Action at Mirbat | 1972 | 1 |
| Bombing in Tyre | 1982 | 1 |
| Car Bombing of US Embassy | 1984 | 1 |

| STF (Show the Flag, etc.) | Year | Duration (days) |
|---|---|---|
| Korean DMZ post-war | 1953 | 4,541 |
| Korean DMZ Skirmishes | 1966 | 1,157 |
| Korean DMZ Incidents | 1974 | 3,657 |
| Instability in Panama | 1988 | 645 |
| Operation *Golden Pheasant* | 1988 | 1 |
| Desert Shield | 1990 | 162 |

| Not Yet Classified | Year | Duration (days) |
|---|---|---|
| (Are incomplete in the data base, but are mostly peacekeeping operations, although some are police actions or aid missions) | | |
| Congo (ONUC) | 1960 | 1,447 |
| West New Guinea (UNSF) | 1962 | 212 |
| Yemen (UNYOM) | 1963 | 458 |
| Lebanon (UNIFIL) | 1978 | 8,324 |
| Afghanistan/Pakistan (UNGOMAP) | 1988 | 730 |
| Namibia (UNTAG) | 1989 | 365 |
| Mozambique (ONUMOZ) | 1992 | 761 |
| Bosnia (UNMIBH) | 1995 | 1,858 |
| Croatia (UNTAES) | 1996 | 762 |
| Angola (MONUA) | 1997 | 608 |
| Guatemala (MINUGUA) | 1997 | 151 |
| CAR (MINURCA) | 1998 | 699 |
| Sierra Leone (UNOMSIL) | 1998 | 488 |
| Congo (MONUC) | 1999 | 427 |
| East Timor (UNTAET) | 1999 | 458 |
| Kosovo (UNMIK) | 1999 | 580 |
| Sierra Leone (UNAMSIL) | 1999 | 458 |

| AIR | Year | Op Type | Duration (days) |
|---|---|---|---|
| Berlin Airlift | 1948 | EVAC/RESC | 325 |
| Downing of Airplane | 1969 | RAID (Incident) | 1 |
| Chad | 1983 | INTRV | -- |
| Persian Gulf Interception | 1984 | POLACT | 1 |
| Interception of Egyptian Airliner | 1985 | POLACT | 1 |
| US Air Strike on Libya | 1986 | RAID | 2 |
| Philippine Coup | 1989 | INTRV | 1 |
| Patrol of No-Fly Zone | 1991 | POLACT | 3,592 |
| Kosovo | 1998 | INTRV | -- |

| NAVAL | Year | Op Type | Duration (days) |
|---|---|---|---|
| Cuban Missile Crisis | 1962 | INTRV | -- |
| Attack on USS *Liberty* | 1967 | RAID | 1 |
| Seizure of USS *Pueblo* | 1968 | RAID | 1 |
| First Gulf of Sidre Clash | 1981 | STF | 1 |
| Second Gulf of Sidre Clash | 1986 | STF | 2 |
| Strike of USS *Stark* | 1987 | STF | 1 |
| Persian Gulf Tanker Escort | 1987 | PKPG | 412 |
| Third Gulf of Sidre Clash | 1989 | STF | 1 |