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The Marine Expeditionary Unit: Can it Support The Humanitarian Mission?

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Thesis: The Marine Expeditionary Unit (MEU), the Marine Corps forward deployed force, is not adequately staffed, trained or equipped to conduct humanitarian operations. With a relatively small investment, the MEU can become a viable force to successfully accomplish humanitarian missions. This paper discusses C3 issues relative to the conduct of humanitarian operations.

USMC; Command and Control; C2; C3; C4I; Joint Command and Control; Humanitarian Opns; MEU; Civil Affairs; JDISS; LAN; Trojan Spirit, FHAST; UAV 31

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THE MARINE EXPEDITIONARY UNIT: CAN IT SUPPORT THE HUMANITARIAN MISSION?

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Outline

Thesis: The Marine Expeditionary Unit (MEU), the Marine Corps forward deployed force, is not adequately staffed, trained or equipped to conduct humanitarian operations. With a relatively small investment, the MEU can become a viable force to successfully accomplish humanitarian missions.

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INTRODUCTION

In the future, the American military will be called on to perform more and more humanitarian missions. The Marine Expeditionary Unit (MEU) appears to be the ideal force to accomplish this mission. The MEU is the immediate response, sea-based Marine component of the fleet commander's amphibious and power projection forces. MEUs are deployed continuously in the Mediterranean Sea and Pacific Ocean, and periodically in the Atlantic Ocean, Indian Ocean, and Caribbean Sea. This combination of global reach and quick response makes the MEU a logical choice to take on the role as an advance force to prepare for a larger, more permanent force, such as a Marine Expeditionary Force (MEF).

The term humanitarian mission can refer to either *humanitarian intervention* or *humanitarian assistance.* The Marine Corps will be called upon to perform both missions in the future. Intervention and assistance are subsets of the same mission. The difference lies in the amount of violence

a Marine unit will encounter when attempting to provide relief to beleaguered people. Bangladesh was a "pure" humanitarian assistance mission, while the operation in Somalia is classified as humanitarian intervention because of the ongoing clan warfare.

Recent operations such as *Provide Comfort*, *Sea Angel*, and *Restore Hope* highlight the ability of the MEU to fulfill a variety of humanitarian missions in a flexible manner. However, these operations also bring to light problems which would likely limit the MEU's success in future operations. All of these problems are related to the idea that the MEU will be utilized more frequently as America's armed forces are restructured. As a result, the MEU's equipment and training must be commensurate with assigned missions.

When conducting humanitarian operations, the MEU suffers from a lack of communications equipment; insufficient maps to aid in mission planning and execution; scanty information on all aspects of indigenous populations (for example, living conditions, population density, attitudes toward American intervention); and a lack of information on infrastructure. Only by acknowledging the increasing role of the MEU as the nation's "force of choice"

and equipping it to perform in this capacity can we expect the MEU to be successful in future humanitarian missions.

IDENTIFYING THE PROBLEM

PAST HUMANITARIAN MISSIONS: SOME IMPORTANT LESSONS LEARNED

If the MEU is to successfully tackle humanitarian missions, the Marine Corps must first perform a critical analysis of past operations. Past events are the perfect teachers for the future. If the Marine Corps does not learn from past humanitarian missions, it is destined to repeat the same errors. During the past two years, the Marine Corps has undertaken a variety of missions to assist nations beleaguered by natural disaster, armed conflict, or both. Each mission was unique; each involved distinct political concerns and lacked critical support in the command, control, communications, computers, intelligence, and interoperability (C4I) arena. Three major operations will be reviewed and examined for C4I strengths and weaknesses.

Operation *Provide Comfort*: Can we talk?

On 9 April 1991, the 24th MEU was directed by the Joint Chiefs of Staff to support Operation *Provide Comfort*. This operation provided humanitarian support to Kurdish refugees in northern Iraq. *Provide Comfort* was unique in that the MEU was required to operate several hundred miles inland and therefore received limited naval support from the attached Mediterranean Amphibious Readiness Group (MARG). On 14 April, the 24th MEU was made part of a joint task force. The primary mission of the MEU was to provide security and establish temporary living quarters for the Kurdish refugees.

Although the MEU was able to handle its assigned mission effectively, problems arose in communications, mapping support, and interfacing with civilian relief organizations. Because an enormous amount of attention was focused on the plight of the Kurdish refugees, numerous civilian organizations responded with large teams of workers and equipment to transport supplies. The MEU was tasked to provide security, logistics, and aviation support to all the civilian relief organizations working inside the Marine

operating area. (15) Although the Marines maintained good working relationships with each of the civilian organizations, the already thinly stretched resources of the MEU were stretched even further as more relief agencies entered the area. (8) The after action report stated that the ability of the MEU to effectively deal with civilian agencies can be enhanced by providing a civil affairs team and increasing the amount of communications equipment. (15) The increase in communications equipment would directly enhance the working relationship between the MEU and the civilian relief organizations.

The shortage of communications equipment in the MEU is well documented. The 24th MEU, during Operation *Provide Comfort*, was required to maintain communications with the Joint Task Force and the commander of naval forces. (8) During the operation, the MEU found itself chronically short of all types of radio assets, especially satellite radios. A MEU currently deploys with six Army-Navy/Portable Satellite Communications (AN/PSC-3A) radios, but during the operation as many as 15 AN/PSC-3As were in use at any given time. (8) The deployment of all four MEU elements (ground, aviation, service support, and command), the extensive use

of reconnaissance teams, and the relatively low priority of satellite channel assignments for a MEU degraded the reliability of communications. To further complicate the MEU communications problem, the assignment of wideband satellite channels resulted in overcrowded nets and subjected users to "bleed-over" from other channels. (11)

The MEU's ability to establish a telephone or communications center is also very limited. In the case of Operation *Provide Comfort*, the MEU was dependent on outside agencies to provide the necessary communications support. (11) Although this support was provided, the process was not without problems. The MEU attempted to use the Air Force communications center for the transmission of maintenance data, but because of the incompatibility of the software, the MEU was forced to send all maintenance transactions to Camp Pendelton via courier. (12)

The need for maps was never-ending; maps of the operating area were in chronic short supply. The initial delivery of maps to the MEU occurred only 36 hours before the first units flew across the border. (17) The need for accurate maps is crucial, for without maps, it is nearly impossible for a commander to properly prepare and direct

his forces. However, the MEU has a limitation that cannot be overlooked -- storage space. The MEU has a finite amount of space allocated for storage of supplies. The MEU must balance the right amount of *beans, bullets, band aids, and map pallets*. Fleet Marine Force Atlantic (FMFLANT) commented on this lesson learned from the MEU:

> *To provide the MEU with coverage of every possible area of employment may be fiscally and physically infeasible. (17:2)*

Our solution to FMFLANTs concern is discussed in a later section.

Operation *Sea Angel:* Intelligence database needed, no experience necessary!

Although this operation was conducted by a Marine Expeditionary Brigade (MEB), there are many similarities to Operation *Provide Comfort*. Again, there was a constant lack of maps to support the scheme of operations. Lieutenant General Stackpole, Commanding General, III Marine Expeditionary Force, writes:

> *[Because of the lack]... of maps or geographical information on Bangladesh, we had to operate almost totally in the dark. This is something we must correct. (19:112)*

In a country where storms constantly change the coastline, the need for accurate maps is essential. The humanitarian assistance effort was also hampered by a Bangladesh government that was still in its infancy and was unable to provide up-to-date maps.

Unlike the operation in northern Iraq that received an abundance of intelligence from Operation *Desert Storm*, Bangladesh was not high on the JCS list of potential trouble spots. Therefore, Operation *Sea Angel* was accorded a low priority for intelligence gathering assets. (21) Lieutenant General Stackpole commented:

> *...[the] lack of real-time intelligence was such that they [the MEB] really didn't know what we were standing into. [sic] (19:112)*

In humanitarian assistance operations, such as the one in Bangladesh, it is essential that the proper type of intelligence data reach the supported command. Examples of humanitarian intelligence data required are the religious taboos of a nation, congregation points for survivors, known water sources, and potentially hostile groups.

Operation *Restore Hope*: My kingdom for a computer!

If the current mission in Somalia has taught us anything, it is that we have yet to learn from previous humanitarian assistance operations. Mr. Robert Steele, C4I Analyst Headquarters Marine Corps (HQMC), argues that very little has been learned from past humanitarian missions:

> *If anything, Somalia has confirmed everything we learned in Bangladesh. The Marine Corps is not trained, equipped, or organized to conduct sustained humanitarian assistance missions in low intensity conflict environments: national and defense intelligence organizations are not trained, equipped, or organized to provide a full range of intelligence and information services necessary to conduct humanitarian assistance missions in low intensity conflict environments.... It's a whole new ball game, and the Marine Corps force structure group did not understand when it crafted the Corps of the future using precepts of the past. (21)*

Mr. Steele portrays a rather gloomy scenario when the Marine Corps is assigned to humanitarian assistance missions. After returning from Somalia, the Marine Air Ground Task Force (MAGTF) Instructional Team (MIT) was able to partially substantiate Mr. Steele's views and provide some insight into the problems the MEU experienced. Information from naval vessels supporting the MEU had to be transmitted via courier. (9) There was no electronic means of transmitting

Additionally, the space required to store all this equipment

intelligence data to the land-based MEU intelligence and operations staff. (9) In addition, the MEU was inundated with imagery support from national level intelligence agencies, but there was no means of transmitting this data to the tactical level. (9) The MEU lacked the data transmission system vital for the rapid dissemination of data during periods of increased operations tempo. Reliable printers capable of producing "photo quality" maps or imagery were also not available. (9)

As can be seen, all three operations exhibit a disturbing trend: lack of adequate maps, lack of sufficient communications and data transmission equipment, and a lack of usable intelligence. Even operations that are not categorized as *humanitarian* have experienced the same problems. Operation *Sharp Edge*, involving the rescue of noncombatants from Liberia, experienced the same difficulties in timely receipt of intelligence data and a lack of tactical maps. (10:1) The following sections will address these deficiencies and provide solutions that fit within the current Marine Corps budget.

SOLVING THE PROBLEM

UPGRADING MEU COMPUTER AND INTELLIGENCE ASSETS

Providing the MEU with more communications equipment, additional computers, and an intelligence analysis capability will help to accomplish the mission and improve the transition period if a larger force relieves the MEU. The systems we propose adding include: Trojan Spirit, Joint Deployable Intelligence Support System (JDISS), Local Area Network (LAN), and Compact Disc/Read Only Memory (CD/ROM) map support from the Defense Mapping Agency (DMA).

Trojan Spirit: Land-based intelligence dissemination system

Trojan Spirit would provide the MEU with a communication path into the Intelligence Analysis System (IAS) in situations where it is necessary for the command element to go ashore. The Marine Corps intends to buy six Special Purpose Integrated Remote Internal Terminal (SPIRIT) II systems and up to 55 ultra high frequency (UHF) satellite

communications (satcom) suitcase versions, which are currently being developed. (2) When the MEU arrives ashore and puts the system on line, the MEU will have a dedicated intelligence link into DSNET 1, DSNET 3 (e.g., DoDIIS access), and DSSCS networks, as well as the Central Intelligence Agency, National Security Agency, and Defense Intelligence Agency databases. Unfortunately, the problem of disseminating intelligence is often larger than the problem of collecting intelligence. In the past, courier (helicopter or surface ship) and facsimiles have been the main means of dissemination. This slow method of transfer is unacceptable. If the MEU had four of the SPIRIT II suitcase versions, it could initially distribute this equipment to the ground, air, command, and service support elements. These four elements will form the nucleus of a system for follow-on forces.

In Operation *Sea Angel*, a small MEB detachment worked out of the American Embassy in Bangladesh, initially coordinating the relief effort. (5) This detachment relied upon voice and limited message traffic for information. Fortunately the need did not arise for maps and imagery; if it had, the detachment was incapable of

receiving this information until supported by an Air Force Communications Group. (5) Trojan Spirit was originally developed as a training system for Army signal intelligence operators. It has, however, evolved into a system capable of supporting real world contingencies. This satellite communication system is able to translate between non-interoperable communications protocols and pathways. Configured in two High Mobility Multi-Wheeled Vehicles (HMMWV), Figure 1 lists the important characteristics of this system.

- ✓ 14 channels digital voice, data, or FAX.
- ✓ 10 SI/TK channels.
- ✓ 1 DSNET 3 router.
- ✓ 4 Secret collateral channels.
- ✓ ETHERNET LAN capability
- ✓ Satellite auto-tracking capability.
- ✓ Secondary imagery capability.
- ✓ Intelligence dissemination capability.

Figure 1: Characteristics of Trojan Spirit (2)

In the emerging new world order, the difference between

Joint Deployable Intelligence Support System (JDISS): Sea-based intelligence analysis platform

The JDISS provides the MEU with entry into the IAS while shipboard. (1) Currently, the MEUs are relying on the Navy to install JDISS terminals and provide the communication path. The JDISS is flexible enough to go over most transmission paths, but it must have a Super High Frequency (SHF) satellite communications link to maximize its capabilities. The Navy is currently installing Quicksat systems on all command and control vessels allowing the use of JDISS while afloat. (1) The JDISS is composed of a file server and three workstations. Figure 2 lists the important characteristics of a JDISS.

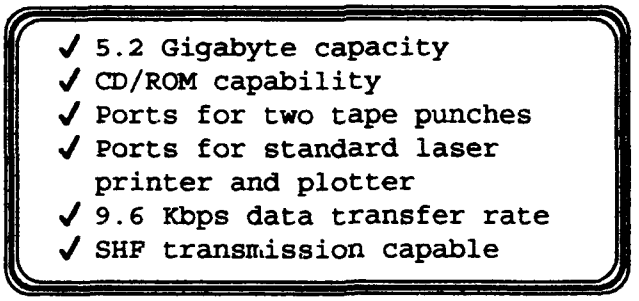

Figure 2: Characteristics of JDISS (1)

The JDISS can exchange information with deployed Trojan Spirit II teams through access into national and theater level intelligence fusion centers.

Local Area Network (LAN): Data help for expanding operations

To improve information flow within the MEU, a LAN capability is required. In the near future, amphibious ships are going to have internal LANs with varying degrees of access into Wide Area Networks (WAN). While the Marines are embarked, they will have access to these LANs and WANs. However, as soon as the MEU has landed, the connection to these vital systems will be cut off because the MEU does not possess the equipment required to transfer data. In cases where it is likely that a larger force will replace the MEU, a LAN established ashore would provide a smoother transition. The standard end user computer equipment (EUCE) and communications equipment necessary for data transfer and networking must be deployed with the MEU for LAN and WAN access.

Maps: Get with the program (CD/ROM)!

Currently each MEU deploys with approximately 60 pallets of maps for contingency operations. (4) Even with

all these pallets, the MEU still does not have all the maps it needs. The Defense Mapping Agency (DMA) can put its most up-to-date maps of the world on CD/ROM. (6) Having accurate maps of the operations area is an important prerequisite to successful completion of the mission. The current method of deploying with all of these map pallets is an enormous waste of storage space onboard ship. By having maps on CD/ROM, the commander and staff will have access to map data that will allow the initial planning of the operation. The consensus in all the cases studied was that the DMA was able to produce maps in sufficient quantities and deliver them in a timely manner so that all mission requirements were satisfied.

PERSONNEL AND TRAINING: UPGRADING TO THE FHAST CONCEPT

The MEUs organic intelligence collection assets are designed for information collection close to the objective area and are not designed to collect information for humanitarian missions. To properly prepare for a humanitarian operations, the MEU requires extensive

information. National and theater level assets will compliment detailed information gathered by the MEU.

From a personnel and training standpoint, information concerning such areas as potable water, bridge capacities, road conditions, and health matters can be obtained by the MEU. Tasked organized units from within the MEU are required to gather such information. An example of such a detachment is an infantry squad providing security for an engineer platoon surveying a road or bridge. Force Reconnaissance Marines, Sea Air Land (SEAL) teams, and the MEU Service Support Group (MSSG) are available to the MEU commander for these missions. The MEU must train for humanitarian missions just as it would for any other mission. Lieutenant General Stackpole, Operation *Sea Angel* commander, wrote:

> *Planning and executing deployments in relief efforts are, in many respects, similar to planning and executing the movement phase of wartime contingencies. (20:18)*

For an actual operation, current infantry training in urban terrain, noncombatant evacuations, and offensive operations is sufficient for humanitarian missions. However, Force Reconnaissance, SEALs, and MSSG must train and be evaluated on humanitarian mission information gathering as part of the

MEU (Special Operations Capable (SOC)) program. Even with MEU assets and input from theater and national level assets, the MEU will not receive all the necessary information to adequately perform a humanitarian mission.

In most humanitarian operations, the MEU will be the lead element of a larger follow-on force. The follow-on force can be expected to arrive as soon as 48 hours after the initial landing by the MEU, depending on the operation. The first echelon of this force must be a task organized element, designed specifically to enhance the commander's ability to evaluate the situation and to provide the commander with recommendations for subsequent operations. Not every humanitarian operation will require combat troops, as in Somalia, since some operations will be in permissive environments. Figure 3 illustrates a notional Fleet Humanitarian Assistance and Support Team (FHAST).

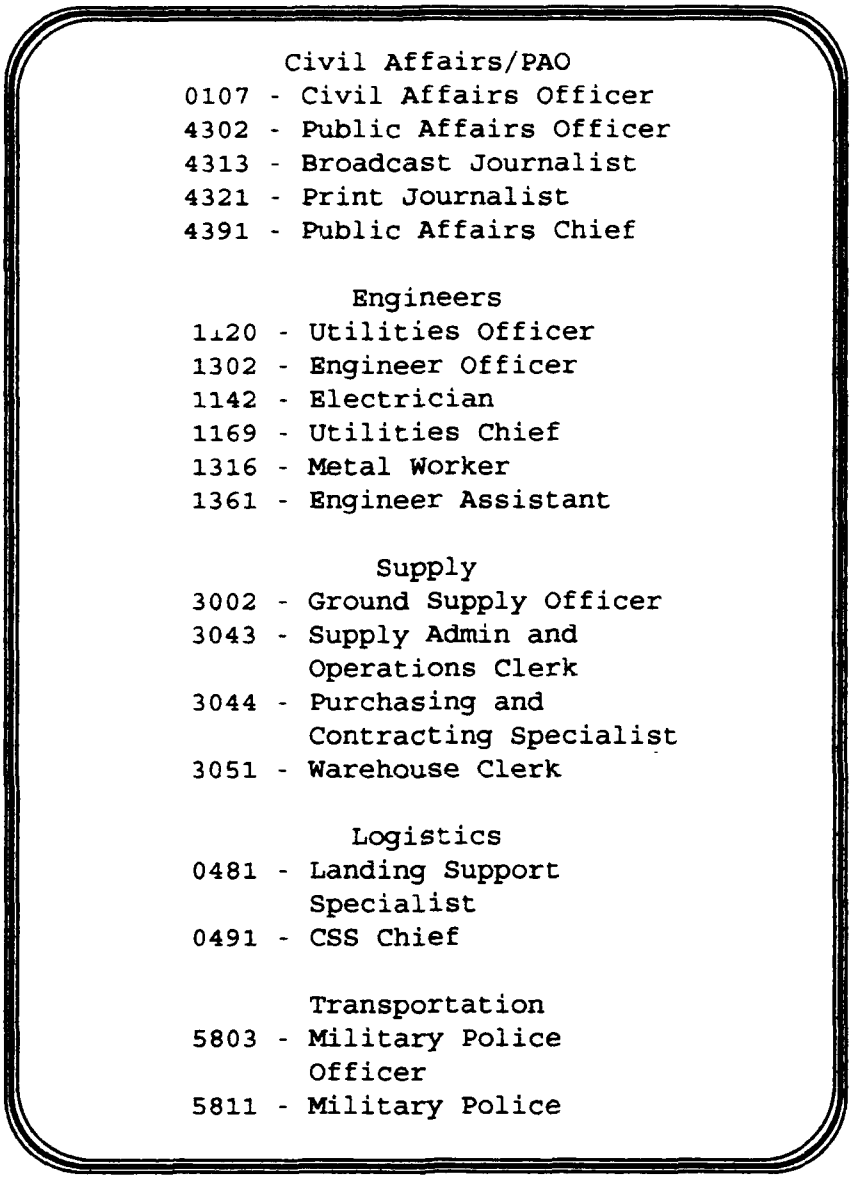

Figure 3: Notional FHAST

This force would be designed specifically for gathering information and reporting directly to the MEU commander and

his staff with observations and recommendations. The FHAST would require specialized training, and once trained, this force could deploy to any location as directed. HQMC or Quantico Marines could provide the necessary staff. This force is similar in concept to the MIT currently at Quantico. However, unlike the MIT, who became additional staff members of I MEF during Operation *Restore Hope*, (9) these personnel are initially for observation and recommendation only, not augmentation. Once relief operations begin, the FHAST can be incorporated into the MEU staff.

The key to a successful humanitarian mission is gathering logistics requirements and fulfilling them. Captain Daniel J. Choike and First Lieutenant William J. Bowers, who participated in disaster relief operations for Hurricane Iniki, wrote:

> *...essential elements of information (EEIs) must still be answered before responding to an assignment [disaster relief]. EEIs developed by the operations section for recon and survey teams later helped the reaction process. (3:29)*

Commander-in-Chief (CINC) Atlantic has published a Generic Intelligence Requirements Handbook (GIRH) which covers the basic intelligence requirements for certain types of

operations, but it does not include humanitarian missions. By creating specific EEIs for humanitarian missions, a ser-friendly GIRH would be established for the MEU. This task should be assigned to the Marine Corps All Source Fusion Center to provide all MEUs the same initial requirements.

IMAGERY AND PHOTO SUPPORT: DEVELOPING THE MARINE UAV

Major Werner, Intelligence Officer (S-2) 24th MEU, brings to light another information gathering problem. "The MEU," he stated, "is lacking in any type of photo and imagery capability." (22) This problem has led the Marine Corps to rely strictly on Navy assets for imagery and photos. Although the Fleet Imagery Support Terminal System (FIST) and JDISS are reliable systems, they rely on national and theater level assets for imagery and photos. The MEU requires its own organic imagery and photo capability, which can operate either afloat or ashore. The answer to this problem is the vertical takeoff and landing (VTOL) unmanned aerial vehicle (UAV). In developing a UAV, the Marine Corps

has identified a number of functions which its UAV must be capable of performing. Figure 4 lists these functions.

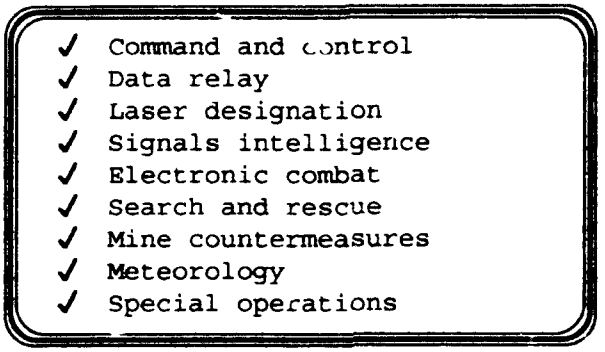

Figure 4: Required UAV functions (7:855)

These functions will enhance the MEU's ability to operate independently. The Joint Project Office of the Department of Defense and a number of civilian contractors are working towards such a vehicle.

Although there are a great many benefits to such a vehicle, there are drawbacks as well. In addition to the UAV itself, sensors and other payloads, a mission planning system, ground control stations, data terminals, remote video terminals, ground support equipment, and a launch and recovery system are required for operation. (7:854) All these systems are expensive; in fact, the vehicle is one of the least expensive components. Associated costs include training, maintenance, and personnel increases.

Additionally, the space required to store all this equipment may not be available to the MEU, depending on the ship configuration provided by the Navy. While afloat, other concerns are raised with the use of the UAV. Takeoff and landing areas, communications requirements, and electrical problems are some of the problems that must be dealt with prior to effective employment of the UAV.

Deploying the VTOL UAV with a MEU will offer the MEU the imagery and photo capability it needs as well as forward basing this asset for follow-on units. The VTOL UAV will offer the commander of follow-on forces a greater ability to gather critical information for mission planning. The Marine Corps must consider purchasing the VTOL UAV for the MEU, as the benefits greatly outweigh the drawbacks.

THE SOLUTION IN ACTION: OPERATION TRUE SUPPORT

Operation True Support is an imaginary operation to show how our concepts would be used in an actual humanitarian operation.

The MEU commander (CO), reading the daily message traffic, notices that a major earthquake has occurred in the country of Virginia. He tasks his intelligence officer (S-2) to gather information concerning Virginia and brief him in 24 hours. The MEU, afloat on the USS Support, is currently located 500 miles from the coast of Virginia. The S-2 gathers information and prepares the brief. Using JDISS, the S-2 provides information on the population, infrastructure, and political situation of Virginia. Using FIST, high resolution imagery of the affected area is also provided. Shortly after the S-2 delivers the brief, the CO is informed that the MEU has been tasked to provide humanitarian assistance to the capital city of Virginia, located 100 miles inland. The CO asks the S-2, "What other information do I need to accomplish this mission?"

The S-2, realizing the need for greater detail, coordinates with the operations officer (S-3). Together, they use the GIRH produced by the Marine Corps to find specific information needed for the operation. Realizing that information will be available from numerous sources, they begin tasking subordinate units. The S-2 again accesses FIST and JDISS to receive information from national

and theater assets. The MEU S-3 requests that the FHAST be deployed to Virginia and begins operational planning based on the CD/ROM computer maps. The MEU S-3 undertakes task organizing MEU assets based on the mission requirements. Unit commanders start refresher training for humanitarian missions.

After reaching Virginia, the MEU staff goes ashore to the American Embassy to coordinate the relief effort. Upon arrival, the staff finds the embassy in worse than condition than expected. Additionally, numerous civilian relief agencies are already in place and have requested military assistance. The MEU determines additional requirements by using Force Reconnaissance, SEALS, and the MSSG platoon. The FHAST begins gathering information for the commander. National and theater level data is available through the Trojan Spirit system. The VTOL UAV is used to gather photographs of areas not accessible to land vehicles and other vital areas which cannot be readily covered by organic air assets.

The MEU, having received enough information to begin full scale operations, starts the deliberate planning process. Information flowing into the theater from outside

sources travels via AN/PSC-3A or Trojan Spirit. The LAN is used extensively for communications within the operations area. Once a follow-on force arrives, it will establish a larger communications footprint, using the MEU Trojan Spirit system and LAN as its base.

CONCLUSION

Only with the listed improvements in MEU support will there be a unit properly prepared for tackling the humanitarian mission. Lieutenant General H.C. Stackpole and Colonel Eric Chase provide an outstanding summary to the dilemma faced by units when initially given the warning order to deploy.

> *True readiness can only exist when a force has anticipated a mission and then planned, trained, and prepared for its execution. In the case of humanitarian missions, lives depend on rapid response; timing is critical; preparation is key. These essential preparations must be thorough, and they must be accomplished without detracting from the organizations overall readiness to carry out its primary military functions. (20:20)*

In the emerging new world order, the difference between humanitarian assistance and humanitarian intervention will be blurred. The Marine Corps must have troops trained and prepared to respond to a ***humanitarian mission,*** regardless of the presence of hostilities: Marines must be ready to help those who cannot help themselves. The Marine Corps has men and women willing to help; let's be sure they receive proper equipment, training, and support.

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