PANAMAX 22
(OPERATION FUTURO NOBLE)

U.S. Army South transition to a multinational force headquarters

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Foreword

> The theater army's mission is the most diverse and complex of any Army echelon. The theater army headquarters is tailored to a specific combatant commander (CCDR) with the ability to conduct both operational and administrative command and control (C2) over Army forces theater wide. It provides enabling capabilities appropriate to theater conditions, such as theater intelligence, theater sustainment, theater signal, theater fires, theater information activities, civil affairs, engineer, and theater medical. In theaters without assigned field armies, corps, or divisions, the theater army assumes direct responsibility across warfighting functions for its tactical commands. The theater army is the Army Service Component Command to a geographic combatant command.
>
> —FM 3-0, Operations, page 2-18, 1 October 2022

I would like to thank and commend all the units and countries represented who came to Fort Sam Houston to participate in Exercise PANAMAX 22 (Operation FUTURO NOBLE) from 1 to 12 August 2022. The PANAMAX series is U.S. Army South's (USARSOUTH) largest multinational exercise. This year, personnel from 20 nations (including the Unites States) participated in this command post exercise (CPX). Troop-contributing nations from the Caribbean, Central America, and South America sent their very best from across their Army, Navy, and Air Force.

Transitioning from a theater army to a multinational force headquarters (HQs) is complex, deliberate, and challenging. During PANAMAX 22 (PMX22), multiple partner nations (PNs) led functional component commands in combined and joint operations. Coming together as a team required identifying, then leveraging the specific and unique capabilities of each partner and service component. The exercise's scenario provided the opportunity for Multinational Force South (MNFS) to integrate and employ components and PN forces to train together in a common defense to stabilize the strategically important Panama Canal region and defend its approaches.

The PANAMAX series of exercises are built to enhance relationships, promote mutual military readiness, improve interoperability, and to establish the foundation for lasting integrated deterrence with select PNs across the U.S. Southern Command (USSOUTHCOM) area of responsibility (AOR) to confront common threats and challenges. This year's exercise achieved exactly this – sharing and implementing a regional security strategy to consolidate gains now and to guide our azimuth for the future. I believe the information and lessons captured during this experience not only serve this command but has applicability to other units preparing for a similar mission set.

My thanks to those who contributed to this document. Your insights and comments, along with your candor, made this publication possible.

Major General William L. Thigpen
Commanding General, U.S. Army

TABLE OF CONTENTS

FIGURES

CHAPTER 1

Introduction

**MAJ Tifani G. Summers, Public Affairs Officer,
U.S. Army South**

BACKGROUND

PANAMAX 22 (PMX22) is a U.S. Southern Command (USSOUTHCOM)-sponsored, biannual, multinational exercise that began in 2003 with United States, Chile and Panama as the initial participants. Since its inception, it has evolved to become the region's largest coalition command post exercise (CPX).

Partner nations (PNs) who participated include Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Spain, and Uruguay.

Figure 1-1 shows the Multinational National Force South Headquarters at Joint Base San Antonio (JBSA)—Fort Sam Houston.

Figure 1-1. Multinational National Force South Headquarters at JBSA—Fort Sam Houston (PAO, U.S. Army South)[1]

PARTNERSHIP FOR REGIONAL STABILITY AND SECURITY

This exercise focused on the Panama Canal's security and stability operations under the auspices of a United Nations Security Council Resolution (UNSCR). The goal was to provide realistic training for all participants and build interoperability with PNs. Combined training like this increases cooperation and helps militaries from various nations achieve shared goals. The U.S. Army South (USARSOUTH) commander laid out five specific and overarching focus areas for the exercise, which guided the staff, components, PNs, and downtrace units.

The PANAMAX 22 commanding general's five focus areas included the following:

1. Building the components' and PN's team and staff.

2. Components' and PN's planning and execution in the competition continuum.

3. Components' and PN's integration to stabilize the Panama Canal region and defend the approaches to the Panama Canal.

4. Ends, ways, and means to counter drivers of instability while simultaneously enabling drivers of stability to reconnect the people to the government.

5. Transition strategy: Political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT) effects and assessment that must be achieved in the operational environment (OE) to conduct battle handover (BHO) to another security force to allow U.S. forces to redeploy.

INTEROPERABILITY

This year, the multinational force was led by USARSOUTH commander, Major General William Thigpen and Chilean Army Logistics division commander, Major General Ricardo Stangher as deputy commander.

"Interoperability is absolutely the cornerstone of what we do, and we had a chance to see it from the human, procedural, and technical dimensions, working together every day on a 24-hour cycle," Major General Thigpen said.

> Commanders know their multinational partners as well as they know their adversary. It is important that partners understand each other's concerns and needs. Each partner in an operation has a distinct cultural identity. Although nations with similar cultures face fewer obstacles to interoperability than nations with divergent cultural outlooks, differences still exist. Commanders and staffs learn the capabilities of partner nations or organizations. These capabilities differ based on national and organizational interests and objectives, political guidance, limitations on the national force, doctrine, organization, rules of engagement (ROE), law of war, equipment, culture, religions, customs, history, and other factors.
>
> —FM 3-16, *The Army in Multinational Operations*, page 1-3, 8 April 2014[2]

"Our relationships we build here and the interoperability we establish will secure our mutual interests and assist in our response to real world transnational threats and challenges," Major General Stangher said.

Component combined forces were led by:

- Ground—Major General Rodrigo Ferraz of the Brazilian Army
- Maritime—Rear Admiral Marcelo Fernandez of the Argentine Navy
- Air—Brigadier General Carlos Silva of the Colombian Air Force
- Special Forces—Captain Augusto Manucci of the Peruvian Navy

"Carrying out the joint planning process allows us to get to know each other better. Indeed, it offers us many benefits, since there are very few occasions like this, which implies a large investment of resources in which the countries of the region have the opportunity to train and work together," Brigadier General Silva said.

READINESS ENHANCER

Regional challenges require cooperative solutions. PMX22 was designed to develop and test participating nations' capabilities to respond as a unified force to a variety of mission demands.

"Every nation brings a different piece to the pie. Maybe there is a tropical storm or an earthquake that we might need to support. It's a broad range, a broad spectrum, but we're able to come together, work together whenever called to achieve the mission we're asked to do," stated Colonel Lane Bomar, USARSOUTH G-3 (operations).

PUBLIC AFFAIRS AND THE INFORMATION ENVIRONMENT

At JBSA—Fort Sam Houston, PMX22 received local media interest and was covered by five affiliates: CBS San Antonio, Univision KWEX, Telemundo CH 60, Spectrum, and KENS 5. Reporters expressed their excitement in having the opportunity to conduct media coverage of U.S. Soldiers working side-by-side with PNs.

All participating components were amplified on Defense Visual Information Distribution Service, totaling more than 80 images and news articles. USARSOUTH published 24 posts to its social media platforms (Facebook, Instagram, and Twitter), which reached 100,000 plus people with more than 6,000 engagements (likes, retweets, and shares) across the three major platforms.

LESSONS AND BEST PRACTICES

The following is a list of lessons and best practices for public affairs:

- Ensure the Joint Manning Document (JMD) assigns a U.S. public affairs officer (PAO) or noncommissioned officer (NCO) at each component command.
- Enforce exercise message traffic to go over the directed primary means of communication—for PMX22, this was over the All-Partners Access Network (APAN) during the planning phase and then over the Combined Enterprise Regional Information Exchange System (CENTRIXS) during execution. Often, USSOUTHCOM (along with other echelons) used Secret Internet Protocol Router Network (SIPR), Global Video Services (GVS), which PN PAOs are not authorized to access.
- Provide PNs the opportunity to rotate between PAO and G-39 (information operations) to observe and develop a better understanding of the various roles each information-related capability has and how they synchronize.

CHAPTER 2

Preparing and Training for Multinational Operations

COL Charles J. Karels, Chief,
G7 Training and Exercises Directorate, U.S. Army South

LTC Matthew D. McCarty, Chief,
G-7 Operational Exercises Branch,
U.S. Army South

OVERVIEW

PANAMAX 22 (PMX22) was a U.S. Southern Command (USSOUTHCOM)-sponsored, Combatant Commander Exercise Engagement (CE2)-funded, operational and foreign military interaction (FMI) exercise focused on the security of regions surrounding the Panama Canal. PMX22 had the support from the Joint Staff J7 (Director, Joint Force Development), involved partner nations (PNs), USSOUTHCOM component commands, and other organizations within the United States Government (USG) and other supporting commands and agencies as appropriate. Participating nations demonstrated the capability to plan coalition operations under the auspices of a United Nations Security Council Resolution (UNSCR) to maintain free and open access to the Panama Canal region. PANAMAX is executed every even-numbered year and has been one of USSOUTHCOM's top operational exercises to train the USSOUTHCOM battle staff and to provide U.S. Army South (USARSOUTH) a joint task force (JTF)-capable headquarters (HQs) training opportunity as identified in USSOUTHCOM Regulation 35-3, Change 1, "USSOUTHCOM JTF HQs Training and Readiness Program."

TRAINING AUDIENCE

PMX22 had exercise participants from 20 countries. The primary training audience was the USSOUTHCOM Battle Staff, headquartered in Doral, Florida.

USARSOUTH was the secondary training audience at Joint Base San Antonio (JBSA)—Fort Sam Houston, Texas, and was the Combined Joint Task Force (CJTF) HQs named Multinational Forces South (MNFS).

USSOUTHCOM has used the PANAMAX MNFS training audience role as an opportunity for its service components to train with other PNs. The four functional components are the Combined Forces Land Component Command (CFLCC), Combined Forces Air Component Command (CFACC), Combined Forces Maritime Component Command (CFMCC), and Combined Forces Special Operations Component Command (CFSOCC). The four functional components are led by PN leadership from the USSOUTHCOM area of responsibility (AOR) and are manned by the PNs and U.S. Joint Forces. Functional component leadership rotates between the different countries as coordinated by USSOUTHCOM. Each service component provides support to the PANAMAX functional component leads to facilitate their success during exercise planning and execution. See Figure 2-1 for a visual depiction of the command relationship structure. PN leads for functional components are delineated by the respective country flag.

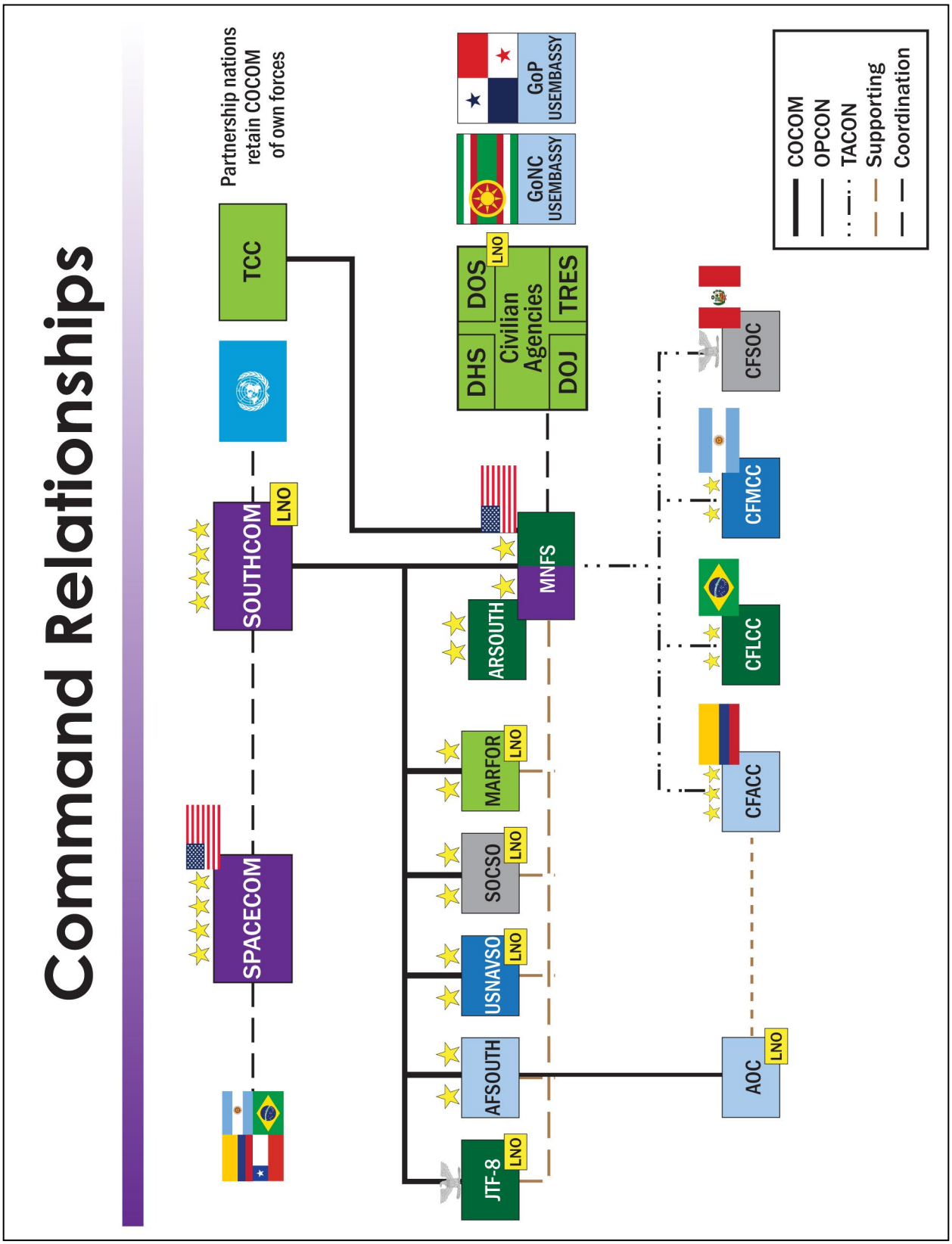

Figure 2-1. PMX22 Command Relationships (G7 TREX, U.S. Army South)[3]

JOINT EXERCISE PROGRAM

Exercise PANAMAX is part of the Joint Exercise Program (JEP). The JEP is the principle means for the USSOUTHCOM combatant commander (CCDR) to maintain trained and ready forces, exercise contingency plans (CONPLANs), support the theater campaign plan (TCP), and achieve joint and multinational training. The USSOUTHCOM-sponsored JEP operations, activities, and investments (OAIs) are used to train units to accomplish their mission requirements as directed in the USSOUTHCOM campaign plan.

Exercise PANAMAX provides USSOUTHCOM with an exercise that allows them to respond to a threat to the Panama Canal and surrounding area. The USSOUTHCOM staff, Joint Staff, and the components provide scenario inputs for the Joint Master Scenario Event List (JMSEL) that allow the training audience to meet the commanders' exercise and training objectives. During PMX22, the MNFS staff directorates had 57 training objectives that were exercised.

U.S. Army South's exercise objectives included:

- Conduct joint and multinational multidomain operations (MDO).
- Execute the PMX22 multinational command post exercise (CPX) with regional partners and establish command and control (C2) and doctrinal interoperability against a threat network under an UNSCR scenario.
- Conduct the military decisionmaking process (MDMP) with a multinational staff to build interoperability and determine planning gaps.
- Exercise the multinational standard operating procedures (SOPs) and the USARSOUTH staff planning SOPs.
- Synchronize PN activities while accepting specific national caveats to maximize their authorities and minimize exposures.
- Conduct sustainment in support of multinational operations.

MISSION

USARSOUTH served as the MNFS HQs in support of PMX22 from 1 to 12 August 2022 at JBSA—Fort Sam Houston and Suffolk, Virginia, to enhance regional cooperation and train participants on planning and conducting complex coalition operations focused on maintaining free and open access to the Panama Canal. The Panama Canal can be seen in Figure 2-2.

Figure 2-2. Aerial photo of the Panama Canal (PAO, U.S. Army South)[4]

COMMANDER'S INTENT

Purpose. USARSOUTH, PNs, and USSOUTHCOM service components train in the execution of multinational operations under the umbrella of an UNSCR, provide interoperability training for the participating multinational staffs, and improve interoperability amongst the United States and PNs to plan and execute complex multinational operations focusing on the security of the Panama Canal.

USARSOUTH should perform the following key tasks:

- Provide effective mission command and clear planning guidance to subordinate units throughout all phases of the exercise.
- Coordinate and provide resources to the CFLCC portion of the exercise and assist the Brazilian Army representatives in exercise planning and execution.
- Conduct the Joint Planning Process (JPP) with a multinational staff.
- Conduct targeting.

- Improve interoperability, cooperation, and learning with all participants.
- Conduct sustainment planning and operations in support of MDO.
- Use the multinational SOP and USARSOUTH planning SOP (PSOP) to increase the speed of response, interoperability, mission effectiveness, and unity of effort in MNFS operations.
- Conduct simultaneous Army Service Component Command (ASCC) steady state and MNFS operations.
- Conduct operations in the information environment (IE).

END STATE

Performing the above key tasks will increase USARSOUTH's ability to serve as a JTF-capable HQ able to effectively command and control (C2) joint and coalition forces engaged in sustained military operations. Completing these key tasks will also improve USARSOUTH's capacity in planning, interoperability, targeting, and creating an effective training environment for all participants.

JOINT EXERCISE LIFE CYCLE

USSOUTHCOM used the Joint Exercise Life Cycle (JELC) for PANAMAX's planning and execution. Figure 2-3 shows the JELC. See USSOUTHCOM Regulation 35-2, Joint/Combined Exercises and Component Training Deployments for more detail.

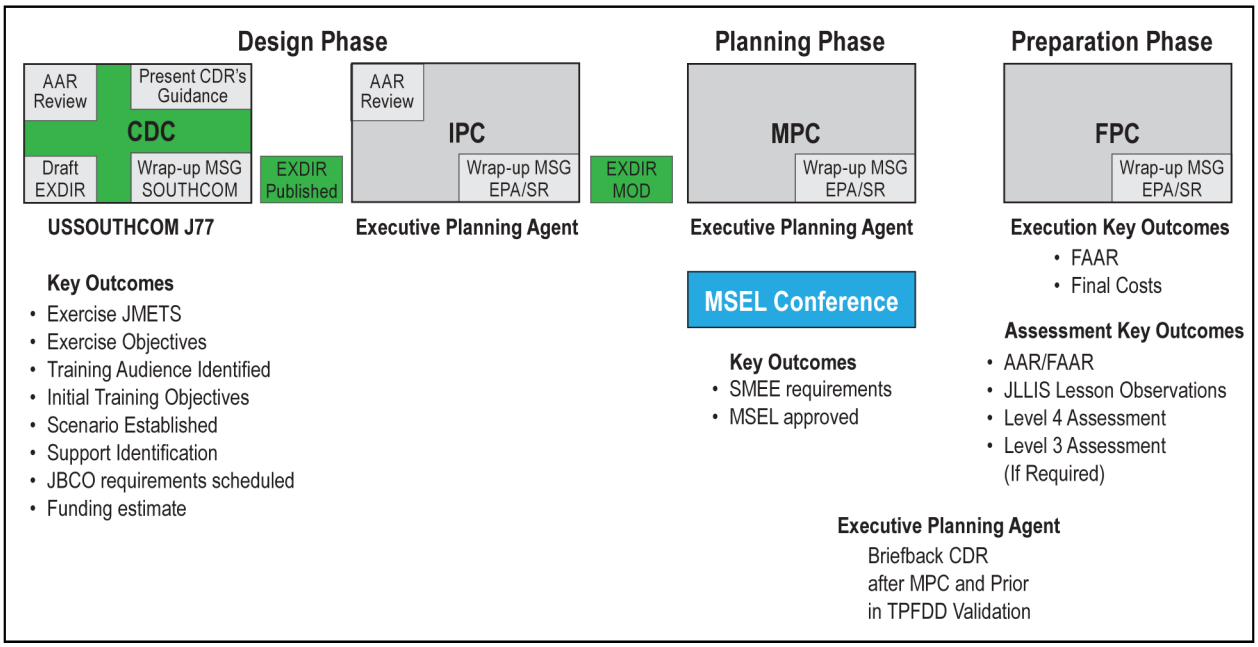

Figure 2-3. PMX22 Joint Exercise Life Cycle (G7 TREX, U.S. Army South)[5]

COMBINED EXERCISE CONTROL GROUP

The Combined Exercise Control Group (CECG) regulated the flow of information to the training audience through the Joint Master Scenario Event List (JMSEL) and other tools located in Suffolk, Virginia. The CECG controlled the observers, simulation, and intelligence systems and advised senior mentors to ensure the training audience was able to accomplish their respective training objectives. The Joint Staff provided the deployable training team (DTT) to observe USSOUTHCOM and USARSOUTH commanders and staffs and conducted a facilitated after-action review (FAAR) at the end of the exercise.

EXERCISE LOCATIONS

PMX22 was executed at several geographical locations, with a total of 2,000 participants across 20 countries from all branches of service. USSOUTHCOM, as the exercise's higher headquarters (HHQs), was located in Doral, Florida (primary training audience). The MNFS (secondary training audience) and CFLCC (Brazilian-led) were located at JBSA—Fort Sam Houston. The CFACC (Colombian-led) was located at Davis Monthan Air Force Base in Tucson, Arizona. The CFMCC (Argentinian-led) was located in Mayport, Florida. The CFSOCC (Peruvian-led) was located at Homestead Air Force Base, Florida.

CHAPTER 3

Transition to a Multinational Force Headquarters

LTC Matthew P. Wilkinson, G-35, U.S. Army South

OVERVIEW

U.S. Army South (USARSOUTH) rapidly built a team with joint, interagency, and multinational partners as directed by United States Southern Command (USSOUTHCOM) operating under a United Nations Security Council Resolution (UNSCR) to assist New Centralia in security and to ensure unimpeded maritime operations in and around the Panama Canal Zone. The Planning in Crisis (PIC) for the situation in New Centralia facilitated the storming, forming, and norming of the staff, which benefited from multiple perspectives and shared goals. The result of the combined efforts was an effective Multinational Force South (MNFS) team that could observe, orient, decide, and act quicker than the enemy, leading to mission accomplishment and a successful exercise.

MNSF CAMPAIGN SYNCHRONIZATION

The campaign synchronization for Operation FUTURO NOBLE began at the MNFS headquarters (HQs) PIC event hosted at the Drury Inn Hotel in San Antonio, Texas, from 6 to 10 June 2022. The MNFS PIC served as a venue to build the team and develop actionable and detailed courses of action (COAs) with partner nation (PN) input. The MNFS PIC presented several initial challenges that had to be overcome, including operating in a COVID-19 environment, establishing standard operating procedures (SOPs), and communication in a multilingual environment.

Strong leadership and directly delegating assigned positions and responsibilities remedied initial friction. Highly capable bilingual PN leaders in key positions, specifically the J-3 (Joint Staff Director, Operations) and Chief of Staff (CoS), were critical to bringing together PN participants in the MNFS staff with functional expertise in support of developing a plan and identifying MNFS commander decision points.

Using the Joint Planning Process (JPP) as the guiding framework for planning facilitated understanding of steps and requirements of mission analysis (MA) and COA development. The JPP facilitated wide participation and contributions among the joint and multinational partners.

With the assistance of USARSOUTH staff and joint staff, the CoS and J-3 were responsible for receiving and driving the JPP steps one though six (initiation; MA; COA development; COA analysis and wargaming; COA comparison; and COA approval).

Directed by the CoS and J-3, each warfighting function had a planning cell and designated planning area where analysis was conducted, and options were developed for execution or in support of the operation.

Two COAs were developed during the planning process. Using a standardized and pre-approved presentation format assisted in overcoming challenges and allowed the staff to refine the plan, rather than devoting planning time to product development. The first COA employed a reduced MNFS footprint in New Centralia, which consequently reduced risk to the coalition force. However, it risked mission failure based on the constrained operational time horizon and ceded the initiative to enemy forces. The second COA consisted of an increased coalition posture and profile in New Centralia that enabled the MNFS to control the terrain and tempo of operations. This COA risked MNFS legitimacy and unity should the task force exceed its authorities provided by the United Nations (UN). Despite the risk, the second COA gave the MNFS the best probability to achieve its military end state within its operational time horizon.

The MNFS PIC concluded with the MNFS commander, MG Thigpen, selecting the second COA. This decision was based on the MNFS being able to secure key terrain and retain a position of relative advantage over enemy forces, allowing New Centralia forces to take the lead. Finally, the directed COA allowed the MNFS to control the phasing and transition criteria throughout the operation.

Campaign synchronization continued at the component level in the component PIC hosted in Panama City, Panama, from 20 to 30 June 2022. The component PIC primarily offered the PN components the opportunity to develop and publish their supporting plans. It also served as a second medium for the MNFS HQs to refine its plan and come together as a staff. At the conclusion of this PIC, each component briefed the MNFS commander on their plan, which is shown in Figure 3-1.

Figure 3-1. MNSF PIC main conference room (PAO, U.S. Army South)[6]

SYNCHRONIZING THE HEADQUARTERS AND THE OPERATION

MNSF Operational Approach

An operational approach was developed during the MNFS PIC and used throughout the planning process and the actual command post exercise (CPX) to synchronize the staff. Joint augmentation to the MNFS HQs from the Joint Enabling Capabilities Command (JECC), based out of Norfolk, Virginia, and highly effective PN key leaders played a vital role in the production of the operational approach.

A well-defined operational approach is important when working in a joint and multinational environment because it summarizes information and decision points for the commander and staff. The MNFS operational approach created a shared understanding of transition criteria and enabled detailed planning throughout the exercise.

The operational approach combined one line of operation (LOO) and isolated the Brigada des Martires Del Libération (BML) forces from outside the Joint Operations Area (OJOA) enablers with the following four distinct lines of effort (LOEs):

1. Ensure continued access to the Panama Canal.

2. Maintain coalition legitimacy.

3. Degrade BML military capabilities.

4. Build and enable PN security forces (PSF).

These four LOEs are shown in Figures 3-2a and 3-2b.

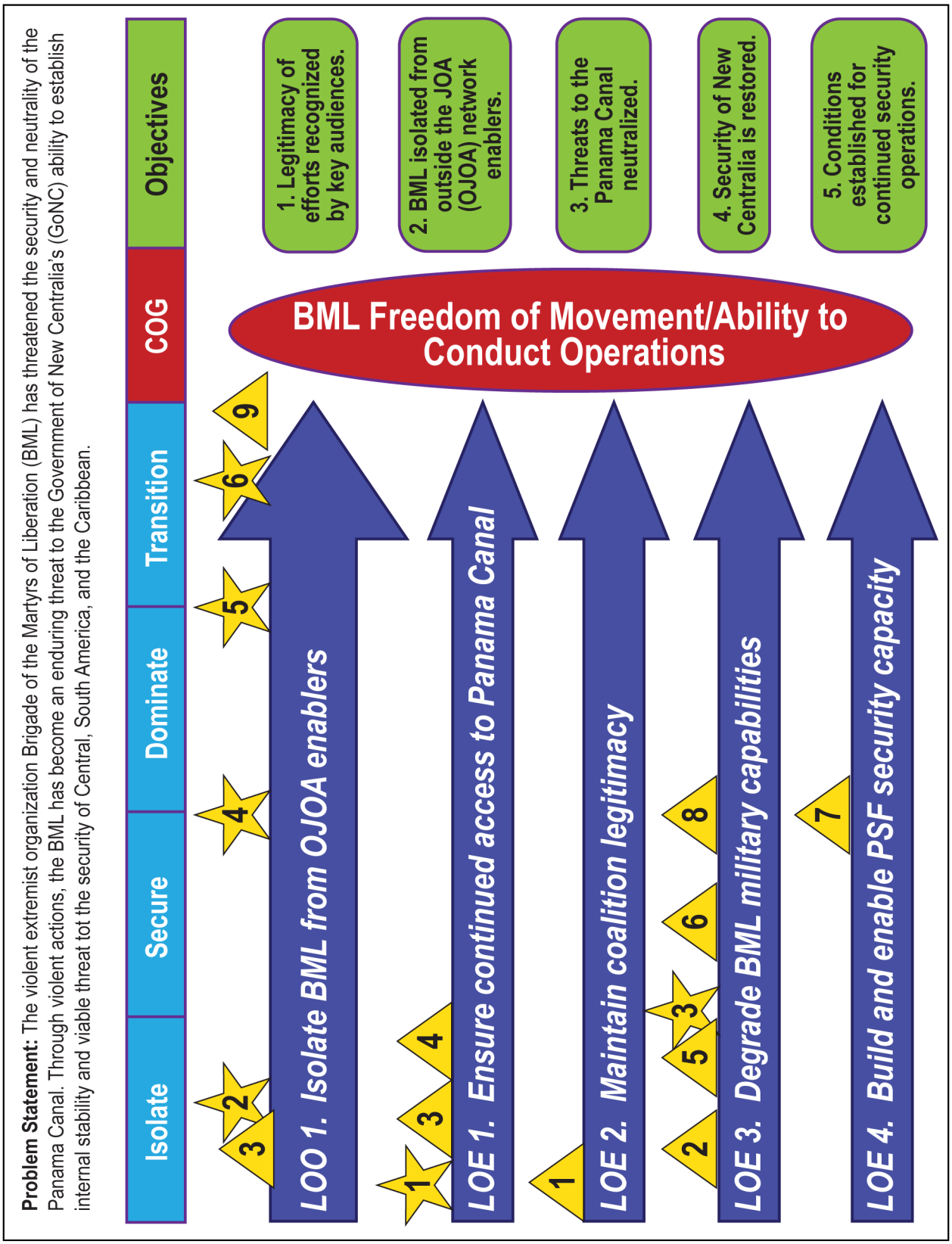

Figure 3-2a. MNSF PIC operational approach (G-35, U.S. Army South)[7]

Figure 3-2b. MNSF PIC operational approach (G-35, U.S. Army South)[8]

Developing the operational approach occurred concurrently with JPP during the MNFS PIC. The operational approach was modified multiple times during the planning process with decision points being updated in the COA development and during the operational design. This process is shown in Figure 3-3. To successfully develop an operational approach, the MNFS staff should include senior-level planners with Joint Staff experience. Many PNs did not bring this expertise of Joint Staff's experience and were more familiar with the detailed methodology of planning.

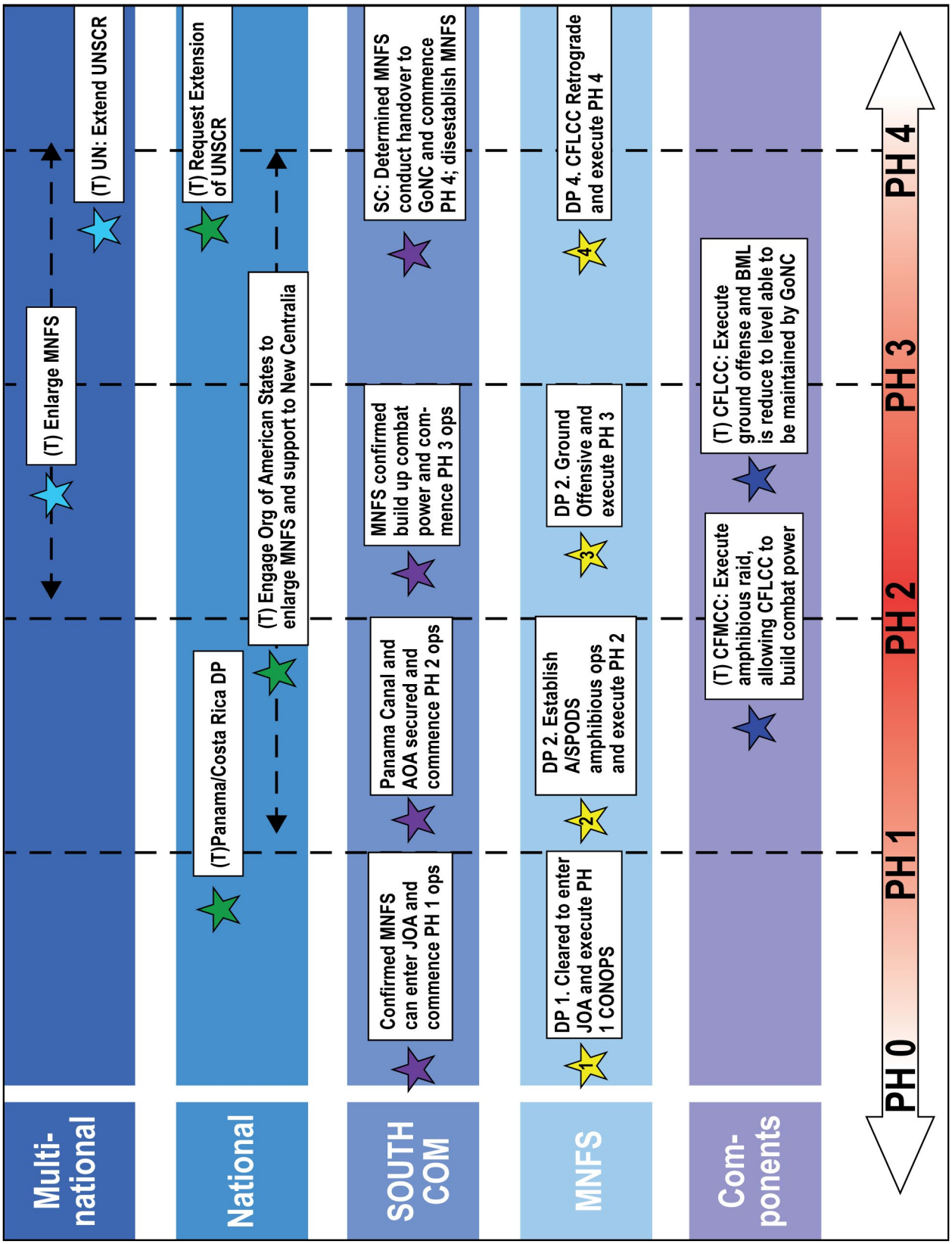

Figure 3-3. Decision space in a strategic concept (G-35, U.S. Army South)[9]

Battle Rythm

A battle rhythm is the framework that HQs use to manage internal staff working groups (WGs), gather information, and create plans that support the commander's decision making. This drives subordinates and supports higher HQs (HHQs) decision making processes. Therefore, it must consider the battle rhythms of subordinate, adjacent, and HHQs.

The MNFS developed a battle rhythm for the PIC and the CPX. A successful battle rhythm ensures proper nesting with the HHQs' decision cycle while permitting time for the staff to collaborate and gather information. Critical in developing a battle rhythm is defining the time and space for directors and staff to participate in higher staff meetings and internal staff meetings, and to work issues, collaborate with each other on the various challenges, and provide solid information for the commander to make a timely decision. Empowering staff participating in the various boards, bureaus, centers, cells, and working groups (B2C2WGs) to speak, plan, and make decisions on behalf of their function further proved key in effective synchronization and operation of the MNFS HQ. Effective communication between senior leaders to the staff at every level (including establishing realistic expectations for participation) allowed USSOUTHCOM and USARSOUTH to develop a battle rhythm that provided the commander with solid information and products to make decisions in a timely manner.

Integrating Joint, Interagency, and Multinational Capabilities to Promote Unity of Effort

USARSOUTH, as the MNFS, integrated joint, interorganizational, Department of Defense (DoD), Department of State (DoS), and multinational capabilities under a partnership across 15 countries to ensure unity of effort and accomplishment across every domain of operations as part of the PANAMAX PIC events. The MNFS should continue as a tactic, technique, and procedure (TTP) to leverage PN leadership specialty skill sets identified during the PIC and other events leading up to the exercise. Additionally, the MNFS staff identified a need to understand national caveats and aligned rules of engagement (ROE) for the different PNs. This allowed staff leadership to make the best decision in assigning PNs to the right position within the Joint Task Force (JTF) HQs.

During the component PIC, understanding all capabilities each military component brought to the JTF enabled the MNFS HQ to be positioned to produce the best COAs to integrate multi-domain offensive and defensive plans. For example, the coordination for the Combined Forces Maritime Component Command (CFMCC) to conduct an amphibious operation where each component had a key supportive effort that needed to be met for the operation to occur required a high level of planning and understanding. PN understanding of USSOUTHCOM's role in support of the MNFS also ensured mission success when conducting joint, interagency, and multinational (JIM) planning, training, and operations with DoD, DoS, and the New Centralia government. One challenge identified during the PIC was the level of PN willingness, or ability, to participate in the JTF mission and success. Understanding each country's national caveats, limitations, and strengths can contribute to the overall success of a training event. The U.S. should continue to empower the PNs to assume greater leadership roles and decision-making authorities to enhance making Operation FUTURO NOBLE one of the premier training events for USARSOUTH.

LESSONS AND BEST PRACTICES

The following are lessons and best practices for transition to a multinational force headquarters:

- Obtain and distribute translated copies of the planning process and ensure paper copies are on hand at the onset of the event.
- Ensure hard copy maps are set up in each planning room before the start of the exercise.
- Develop an operational approach early and ensure it is translated and understood by all planning cells.
- Continue planning through subordinate PICs to refine the commander's decision support matrix (DSM).

CHAPTER 4

Intelligence Synchronization and Common Intelligence Picture

MAJ(P) Mark R. Medlock, Chief Operations Division G-2, U.S. Army South

> Multinational operations present challenges and demands. These include culture and language issues, unresolved policy issues, technical and procedural interoperability challenges, national caveats on the use of respective forces, the authorities required for sharing of information and intelligence, and rules of engagement. Commanders analyze the particular requirements of a mission in the context of friendly force capabilities to exploit the multinational force's advantages and compensate for its limitations. Establishing effective liaison with multinational partners through embedded teams, collaborative systems, and leader contact is critical to establishing a common operational picture (COP) and maintaining situational understanding.
>
> —FM 3-0, *Operations*, page 2-14, 1 October 2022[10]

INTELLIGENCE SYNCHRONIZATION AND COMMON INTELLIGENCE PICTURE

There are always constraints presented by systems architecture and infrastructure within any intelligence enterprise. In many cases, these two conditions are directly linked. During PANAMAX 22 (PMX22), this was the case. The J-2 (Joint Staff Director, Intelligence) staff and Joint Intelligence Support Element (JISE) personnel and leadership determined ways to adapt and overcome these challenges.

INFRASTRUCTURE

During the early stages of planning, both G-2 (U.S. Army South Director, Intelligence) and military intelligence brigade planners identified much of the infrastructure needed to replicate a deployed JISE was either outdated or unavailable. For example, the tentage available for operations consisted of Base-X, general-purpose medium (GP medium) tents, which limited options to array personnel and teams to support improved collaboration. Additionally, the large screen monitors could not be adequately mounted for collective visibility of the common intelligence picture (CIP). Screens were essentially propped up using spare parts, boxes, and other miscellaneous items. Collectively, the tent size and lack of supportive equipment was not an effective use of space. Simply walking through the JISE was a challenge. As such, the JISE was not a venue for integrating personnel beyond the J-2 for collaboration, production, and development.

SYSTEMS ARCHITECTURE AND PROCESS

The JISE primarily works on classified systems. Thus, ability to leverage use of the Combined Enterprise Regional Information Exchange System (CENTRIXS) and pass information to and from partner nation (PN) intelligence sections was significantly limited. United States Southern Command (USSOUTHCOM) worked primarily on classified systems, further exacerbating this problem. As a result, the production manager had to produce two sets of products rather than one set of integrated outputs. While successful, timeliness and delivery of intelligence remained challenged.

Additionally, manpower was split between partner integration and meeting USSOUTHCOM requirements. Although Soldiers overcame this challenge, there remained a sense of desynchronization between the Joint Operations Center (JOC), higher headquarters (HHQs), and subordinate intelligence elements. Personnel working in the Brazilian Army-led Combined Forces Land Component Command (CFLCC) often complained about the lack of direct coordination with Multinational Force South (MNFS). Despite having a liaison officer (LNO) embedded in their section, J-2 operations tasked an additional intelligence officer to integrate with the CFLCC J-2 to support collection planning and intelligence integration.

Regardless of the types of classified systems employed, CENTRIXS proved effective overall and promoted information sharing. This was accomplished through structured dialogue at battle rhythm events and through direct engagement with partners via available knowledge management (KM) tools. In future iterations of PANAMAX, exercise designers should develop injects and intelligence reports that are written for release to PN formations. These injects should be disseminated over CENTRIXS as well, not just on classified systems.

Personnel working in the JISE often had classified communication challenges. Maintaining connectivity became a daily area of concern. This included issues with power generation and limited coordination with national agencies that oversee system access. System maintainers worked tirelessly to ensure connectivity. These efforts demanded multiple phone calls to the Defense Intelligence Agency (DIA). It also necessitated a rather creative use of improvised parts from other military intelligence systems to establish video teleconference (VTC) suite functionality and Top-Secret Voice Over Internet Protocol (TSVOIP) communications.

Overall, internal design options were limited and not supported by available infrastructure, resulting in a lack of effective collaboration. In the future, there must be training opportunities to pursue more modernized solutions to enable a JISE to assemble, move, execute, and recover while serving under one single command. Personnel, systems, and equipment are currently derived from multiple sources and integrated into one operation without a clear mode of support or sustainment.

COMMON INTELLIGENCE PICTURE

Agile Client proved to be a point of concern because of a lack of training and delayed functional capacity. While the Distributed Common Ground System-Army (DCGS-A) remains poised to support the use of Global Command and Control System-Army (GCCS-A), it is imperative that implementation and employment of GCCS-A applications (e.g., Agile Client) be employed proficiently to achieve full capability.

Alternative methods were used with tools supported by Microsoft Office. However, real-time development and updates were limited to command touchpoints because of issues resulting from a lack of proficiency.

To mitigate this challenge, personnel from both the JISE and J-2 operations remained engaged with partner elements via CENTRIXS to ensure available information was passed. This also enabled passing information associated with target development and acquisition.

LOOKING FORWARD

In future PANAMAX exercises, internalizing lessons and best practices may present options for improving the current infrastructure and the means to share information of value with the JOC. Modernization of the JISE is mission essential. While the JOC remains the central point to integrate all information of value to the command, the JISE classification guidance requires using the JISE to support presentation of classified information to leverage in decision making. This ranges from targeting to force protection to personnel recovery. Options to improve the workstations, displays, and VTC suites are paramount to supporting integration of intelligence into operations.

LESSONS AND BEST PRACTICES

The following are lessons and best practices for intelligence synchronization and CIP:

- Develop exercise injects and intelligence reports that are written for release to PNs.
- Look for ways to modernize the JISE.

CHAPTER 5

Partner Nation Relationship Building

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INTRODUCTION

The PANAMAX series of exercises is designed to execute stability operations under the auspices of a United Nations Security Council Resolution (UNSCR) and to build capacity among participants to plan and execute complex multinational operations. As with other iterations of this exercise, PANAMAX 22 (PMX22) fostered partner nation (PN) relationship building between United States and PN participants serving alongside one another as planners in conferences and in command and staff roles during training events, including the command post exercise (CPX). These events showcased participating countries' ability to successfully conduct multinational operations and increased human, procedural, and technical interoperability. The events also exposed areas for refinement to achieve greater dividends in future PANAMAX exercises.

PARTNER NATION TRAINING REQUIREMENTS IN EXERCISE DESIGN

The exercise design for PMX22 accounted for and enabled PN-led commands, including the Brazilian Army-led Combined Forces Land Component Command (CFLCC), to address and achieve PN training requirements. These ranged from specified training objectives to leadership and education gaps common among PNs in the U.S. Southern Command (USSOUTHCOM) area of responsibility (AOR). The rudimentary step in this process was to ensure PN participation in the initial, main, and final planning conferences (FPCs), which occurred from February to April 2022. During planning conferences, PN planners formulated training objectives, informed exercise designers and planners of any relevant national caveats, and conferred with their own headquarters (HQs) to review duty positions in the CFLCC Joint Manning Document (JMD) to be filled by each country. These planners also solicited feedback on the memorandum of understanding (MOU) to be signed by the heads of delegations during the FPC. MOUs proved to be vital for PNs filling JMD duty positions. MOUs served as a key source document during coordination among USSOUTHCOM, U.S. Army South (USARSOUTH), security cooperation offices (SCOs), and PN armed forces regarding exercise manning and funding. Several PN planners also attended the Joint Master Scenario Event List (JMSEL) conference in Suffolk, Virginia, to ensure exercise scenario injects would be linked to training objectives.

Contributing PN security forces (PNSF) in PANAMAX did not participate in the virtual Operations Summary (OPSUM)/Intelligence Summary (INTSUM) in July 2022. Though a key planning event, this lack of attendance did not affect incorporation of PN training requirements, but it hindered exercise design as one key input was the starting locations for all units—an input provided by PN-led components not in attendance.

The CFLCC identified training objectives during the initial planning conference (IPC) and refined them during the main planning conference (MPC). These training objectives included:

1. Conduct command and control (C2) during multinational operations.

2. Conduct the Joint Planning Process (JPP) to direct combined operations against asymmetric and conventional threats.

3. Integrate multinational sustainment and logistics in the Joint Operations Area (JOA).

4. Integrate information operations (IO) in the JOA.

5. Develop CFLCC interoperability procedures and operational concepts for sustainment, communications, rules of engagement (ROE), and planning.

6. Obtain, process, and disseminate information to support the targeting process and maintain awareness in the JOA.

USARSOUTH personnel from the G7 training and exercises (TREX), Security Cooperation Division (SCD), and other directorates and sections reviewed these training objectives throughout the planning conferences to ensure exercise design and academics would address these objectives.

Exercise design also accounted for national caveats identified during planning conferences. For instance, Argentina's National Defense Law 23.554/88, Decree 571/20 limits Argentinian Forces to combatting conventional forces. This led planners to outline within the PMX22 MOU that the participation of Argentinian Forces would be limited to "providing instruction and training support to the Armed Forces of New Centralia, humanitarian aid tasks to the affected civilian population, [and] logistical support to the forces of the engaged coalition," and that Argentinian Forces would only be employed against "conventional troops of other nation states."[11] As a result, exercise designers expanded opposing forces beyond unconventional and asymmetric threats to also include conventional forces.

A desire shared among PNs involved training at higher echelons to increase institutional knowledge and experience in command and staff roles in an HQ, as represented in a CFLCC or in its higher headquarters (HHQs), Multinational Force South (MNFS). Most of their senior officers hold positions at the brigade level or below—it is rare to find military leaders across Central and South America with experience at joint commands, or at higher echelons. This is a recognized PN gap across the USSOUTHCOM AOR in terms of leadership and education. This illustrates the value of PANAMAX as one of the few training events that helps to develop partner capability at these echelons. PMX22 at Joint Base San Antonio (JBSA)—Fort Sam Houston, Texas, exposed nearly 150 officers and noncommissioned officers (NCOs) from 19 PNs to a joint, interagency, intergovernmental, and multinational (JIIM) environment and provided them the experience of serving on a CFLCC or MNFS staff.

PREDEPLOYMENT TRAINING

Planning conferences provided initial exposure on task organization and unit capabilities to multinational planners. After the FPC, two Western Hemisphere Institute for Security Cooperation (WHINSEC) instructors visited Brazil to meet with the CFLCC commander and primary staff and review the military decision-making process (MDMP) in preparation for the MNFS and component Planning in Crisis (PIC) events. The CFLCC staff's proficiency in MDMP and the training scenario facilitated planning and orders production during both PICs and the CPX. The HQs managed time effectively with Brazilian staff members, leading partners through each step of the MDMP. This subject matter expert exchange (SMEE) represents the earliest academics-related event conducted in preparation for the exercise. This bilateral training event yielded a strong return on investment, as it enhanced mutual understanding and prepared Brazilian Army key leaders for their CFLCC roles. Based on this success, the USARSOUTH G7 TREX should be the office of primary responsibility (OPR), with SCD as the office of coordinating responsibility (OCR) for similar events. They should continue this practice of coordinating with WHINSEC to conduct a SMEE with the forecasted CFLCC lead before the MNFS and component PICs.

Training during academics, the communications exercise (COMMEX), and WARMSTART (mini rehearsal after COMMEX and before start of exercise [STARTEX]) generally addressed the necessary material to facilitate a successful CPX, but the CPX also revealed knowledge and training gaps that must be remedied at future PANAMAX iterations. The USARSOUTH briefings conducted in the two days dedicated to academics, just before STARTEX, provided participants with ample material on the scenario's context and opposing forces.

Academics best prepared participants through familiarization on the PANAMAX exercise scenario, opposing force capabilities and composition, and training objectives.

Shortfalls included a lack of familiarization, training, and experience on network systems, specifically on the Combined Enterprise Regional Information Exchange System (CENTRIXS) used in the CPX. This negatively affected the CFLCC staff's ability to communicate effectively during battle rhythm events and working groups (WGs). The CFLCC's lack of training and familiarization on equipment largely stemmed from not having a dedicated COMMEX, as there had been for the MNFS (which occurred the week before PN arrival to San Antonio, resulting in the COMMEX only involving U.S. participants).

Another factor was that during the planning conferences and PICs, in the months before the CPX, participants used the All-Partners Access Network (APAN) for all collaboration—not CENTRIXS, the main network used during the CPX. Although familiarization could have taken place following academics, most PNs had not completed the registration process to obtain a CENTRIXS account before arrival. This would have required PNs to identify, by name, all participants and then submit a foreign visit request (FVR) with the necessary clearance information, along with account request documents and training certificates. This did not happen. Given these circumstances, the G-6 (Director, Communications) set up a helpdesk at the academics site, enabling partners to complete necessary documentation. This expedited account creation during academics and enabled all MNFS and CFLCC members to have an account before STARTEX.

Participants also lacked familiarization with, and training on, Agile Client, the software used to establish and maintain a common operational picture (COP). In future PANAMAX exercises, academics must include a block of instruction on Agile Client to train participants and provide guidance on how to maintain a COP in real-time. During PMX22, the CFLCC obtained only two Agile Client accounts (one for each battle major) and did not provide training. This resulted in rudimentary and delayed battle tracking and maintenance of a COP shared among the MNFS and components. In the future, the CFLCC will need to identify at least four individuals for Agile Client accounts (e.g., a battle major for day and night shift, along with a designated individual from each shift to maintain the COP). This will enable the G-6 to request or create the volume of needed Agile Client accounts. Additionally, the 512th Engineer Detachment should then provide familiarization training during academics to facilitate WARMSTART.

Many CFLCC staff members also lacked a basic understanding of friendly forces (i.e., unit types, capabilities, and locations in the exercise) and duty position responsibilities in the MNFS and CFLCC staffs. Operations will be enhanced by more thoroughly covering task organization, command relationships, support relationships, and unit locations during academics. It all starts with identifying and securing positions submitted in the JMD request. The JMD must provide sufficient details on duty position requirements, describing needed position roles and responsibilities. USARSOUTH standard operating procedures (SOPs) and terms of reference (TOR) for the exercise should also identify and outline JMD position participation in WGs, inputs/outputs for the planning process, and main counterparts at the higher/lower HQs.

MNSF HEADQUARTERS AND THE IMPORTANCE OF BUILDING PARTNER NATION RELATIONSHIPS

The MNFS demonstrated the importance of building partner relationships by assigning PN personnel as staff directors or deputies for each staff directorate. This integration of PN leaders also included PN general officers, who served as the MNFS Deputy Commanding Generals for Sustainment (DCG-S) and Operations (DCG-O), as well as a PN Navy Captain as the Chief of Staff (CoS) and CJ3 director. These leaders participated in the PICs and the CPX, which attests to the importance the MNFS HQs have for their involvement, guidance, and direction.

The MNFS also demonstrated the importance of these relationships in IO and public affairs. Emphasizing strategic messaging, articles published and distributed by MNFS displayed a mixture of U.S. and PN flags and uniforms at operations across the JOA. Similarly, when local media outlets visited MNFS to conduct interviews and produce news stories on operations, MNFS HQs designated leaders from different nations to be interviewed. These practices helped to convey coalition resolve, strengthen legitimacy, and promote unity of effort across the region.

As security cooperation requirements emerged during the CPX, the MNFS also fostered the importance of building partner relationships by coordinating and conducting key leader engagements with critical JIIM partners represented by role players at the White Cell in Suffolk, Virginia. To support this, the MNFS commander adjusted the JMD to include two security cooperation personnel to coordinate persistent engagements with such organizations as the simulated Department of Defense (DoD) team at the U.S. Embassy in New Centralia. This cooperation and coordination is shown in Figure 5-1.

Figure 5-1. LTC Miguel Gonzalez, Security Cooperation Division, USARSOUTH (left) accompanies MG Ricardo Stangher, MNFS DCG-S, Chilean Army (right) during telephonic meeting with New Centralia's Minister of Public Security (USARSOUTH Public Affairs Office)[12]

MULTINATIONAL INTEROPERABILITY

> MN [Multinational] interoperability is an integral part of the Army's SC [Security Cooperation] efforts realized through international activities managed and conducted by HQDA Principal Officials, Army commands (ACOMs), ASCCs, and direct reporting units (DRUs). The Army will develop strategic plans that build partner capability and strong relationships to focus on shared security objectives.
>
> —AR 34-1, *Interoperability*, pages 3-4, 9 April 2020[13]

PMX22 strengthened multinational interoperability, or "the ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives,"[14] across the human, technical, and procedural domains to varying degrees. As is a key purpose of multinational training exercises, PMX22 greatly enhanced interoperability across the human and procedural domains, especially regarding the art of mission command and aligned procedures. However, in the technical domain, PMX22 yielded more limited value, particularly in communications and information systems (CIS), because of the exercise design and the use of only U.S. equipment and systems for the CPX. Given this constraint, PMX22 still accomplished its primary goal of building partner capabilities and strengthening relationships with all, focusing on a shared security objective—the defense of the Panama Canal.

HUMAN DOMAIN

In the human domain, interactions in the PICs and CPX established trust and understanding among participants, especially among key leaders such as the MNFS commander, component commanders, and staff leads. Art of command interoperability refers to "the ability of the force to operate with a tactical and operational unity of purpose and recognized unity of command that allows the commander to exercise authority and direction using mission orders to achieve the desired objective."[15] Regular touchpoints between U.S. and PN leaders during the PICs and CPX provided additional opportunities to discuss the exercise, convey commander's intent, and achieve mutual understanding. The CFLCC demonstrated art of command interoperability during the component PIC, as the Brazilian-led CFLCC with staff leads from various PNs conducted staff planning and orders production nested with MNFS guidance and operations. Operations during the CPX displayed this at the operational level only, as simulated units at the tactical level could only report scripted interoperability effects among subordinate multinational units. Decisions during the planning process, along with continuous operations in the CPX, demanded an atmosphere of unity of purpose between the MNFS and CFLCC to succeed.

PMX22 also enhanced individual-level human interoperability to an extent, or when "individual members of the force possess respect, rapport, knowledge of partners, mission focus, trust, and confidence in multinational partners, built upon the foundation of language skills, regional expertise, and cultural understanding."[16] Throughout the PICs and CPX, participants cultivated mutual trust and confidence as they gained experience working together through the planning process and battle tracking operations. Such interactions engendered respect and trust for principles of national sovereignty and human rights serving to shape behaviors, actions, and pursuits well beyond this exercise.

> "During PANAMAX 22, we witnessed the [MNFS] commander's constant preoccupation to plan operations within a framework of legitimacy and legality to defeat the enemy in a difficult information war of irregular and insurrectional combat."
>
> —MG Rodrigo Ferraz Silva, CFLCC Commander,
> Closing Ceremony at Fort Sam Houston, 12 August 2022[17]

English was the official language for PMX22. Participants published all orders and products in English and conducted briefings in English. The language barrier often hindered understanding and interfered with planning and operations. Many CFLCC staff members collaborated in Spanish, given most staff sections contained all or nearly all native Spanish speakers or bilingual individuals. English-only staff members were the exception.

Of note, the MNFS PIC at JBSA—Fort Sam Houston lacked an interpretation contract. This is sorely needed in the future to support discussions in warfighting function WGs and to promote mutual understanding during MDMP cycle events. The CFLCC used contracted interpreters during the CPX to provide simultaneous interpretation during briefings, which enhanced understanding. In some instances, when a contracted interpreter was not available, staff members could not accomplish their duties. For instance, a PN officer in the CFLCC G-2 responsible for the intelligence, surveillance, and reconnaissance (ISR) collection plan carried out the tedious process of copying text into free online translation tools to understand intelligence reports in English. However, he still required an interpreter to communicate with his counterpart at the MNFS to request ISR support. Contracted translators provided translations on key documents, but this required time and delayed analysis and operations. This contractor team also compiled and translated a list of useful acronyms from English to Spanish—a vital document for future PANAMAX exercises, as the battle rhythm (in English only) listed acronyms for meetings and WGs, which almost none of the PN participants understood.

A way to promote human interoperability of a more enduring nature is to incorporate more members of the National Guard into PANAMAX. Many countries in the USSOUTHCOM AOR participate in the State Partnership Program (SPP), which builds relationships among Guardsmen and PNs with whom they train and interact. Greater National Guard involvement may also help to fill JMD shortages, enhance the readiness of sourcing units, and strengthen SPP bonds through an externally funded training event.

Another factor to consider in future PANAMAX exercises is expanding the PN NCO participation level. In the USSOUTHCOM AOR, there is a wide disparity among PNs regarding roles and functions of NCOs. A greater emphasis in PANAMAX by USARSOUTH and USSOUTHCOM leaders encouraging more PN NCO development may generate traction. Of the 88 duty positions in the CFLCC JMD, only 13 were NCOs. Of those 13, 6 were sourced from the United States and 7 from Belize. They served in intelligence, psychological operations (PSYOP), logistics, civil affairs (CA), engineer, and liaison officer (LNO) positions. The PN NCOs proved to be engaged in these duties covering the friendly and enemy situation. It is recommended that during planning conferences, the CFLCC lead facilitator consider how to adjust the JMD to better incorporate NCOs and then collaborate with PNs to fill billet requirements. Figure 5-2 shows CFLCC staff discussing enemy composition, disposition, and strength.

Figure 5-2. CFLCC staff discussing enemy composition, disposition, and strength (G-3 Visual Information, U.S. Army South)[18]

PROCEDURAL DOMAIN

One of the hallmarks of PMX22 and a recurring theme in PANAMAX is procedural interoperability as staffs navigate the planning process and conduct operations. This exercise's operations require "subordinate units from one nation […] to adopt higher headquarters procedures from another nation, which may not have multinational consensus."7 In PMX22, the Brazilian-led CFLCC did so with the U.S.-led MNFS by demonstrating a thorough knowledge of MDMP during the PICs, WGs, and other battle rhythm events during the CPX.

Similar trends emerged across warfighting functions, such as the tracking system in answering priority intelligence requirements and products developed for update briefings. The CFLCC staff learned and quickly adopted MNFS reporting standards. Examples include personnel and logistics status reports and inputs for decision boards. Mutual understanding also emerged for law of war concepts and ROE through collaboration during planning events, which included discussions on doctrine, policies, and authorities. This matured to the point of the CFLCC producing matrices outlining national caveats with country constraints in operations. The CFLCC also gained knowledge and showed proficiency on security classification guides and safeguarding information.

During the CPX, the CFLCC staff garnered appreciation for U.S. staff structure at a HHQs and the duty position responsibilities previously unknown to many. One such position was a battle major in the Joint Operations Center (JOC)—a position the Brazilian-led command adopted for day and night shifts that yielded benefits in mission command, battle tracking, leveraging LNOs, and maintaining a COP. PMX22 also served to advance aligned procedures, meaning:

"[The] ability of the force to use standardized tactics, techniques, and procedures, products, and values for anticipated tasks or situations that can be dealt with effectively by using routine, structured responses. It is underpinned by a common professional language, an understanding of each contributing nation's units' military organization, doctrine, equipment, and inherent capabilities and limitations; this understanding helps to achieve unity of effort."[19]

Generally, the PN staff in the CFLCC HQs lacked a clear understanding of the capabilities and limitations of simulated CFLCC downtrace units and equipment, and of external units supporting the CFLCC. This became more apparent as the CPX progressed. Examples included the confusion when the CFLCC wanted to employ U.S. and Colombian aviation assets, Peruvian air defense artillery and radars, and the Ecuadorian Army's military police battalion. The CFLCC encountered a similar dilemma with U.S. equipment and units, especially when requesting support from the MNFS or other components.

There were several contributing factors resulting in knowledge gaps directly affecting the HQs processes and procedures. First, capabilities briefings during planning conferences involved only Brazilian Army light infantry and U.S. aviation units and equipment. This may be remedied by incorporating capabilities briefs into the MPC and FPC in future exercise iterations.

Second, there was limited U.S. presence in the CFLCC to provide explanations of unit functions and capabilities, given U.S. personnel accounted for only 17 percent of the CFLCC staff, compared to 88 percent in the MNFS (this figure is from two days into the CPX, after the MNFS granted two additional U.S. future operations planners and two logistics planners to the CFLCC). These knowledge gaps quickly surfaced during the WARMSTART and at STARTEX. To address this challenge, the CFLCC JMD should incorporate billets assigned to U.S. personnel and distribute those billets among sections.

A third factor was the CFLCC's lack of LNOs from each component during the CPX. The MOU signed during the FPC listed an LNO from the MNFS and each component (mostly sourced by PNs). However, during the CPX, the CFLCC staff was provided only two MNFS LNOs and one Combined Forces Air Component Command (CFACC) LNO. All three LNOs were U.S. personnel. Ultimately, this lack of staffing resulted from organizing MOU billets by personnel locations, rather than sourcing unit. For instance, the Combined Forces Special Operations Component Command (CFSOCC) LNO to the CFLCC appeared on the JMD under the CFLCC; the CFSOCC did not account for that individual in terms of funding and coordination with SCOs.

TECHNICAL DOMAIN

During initial planning stages, planners identify required communications, issues of spectrum management, and controls on access to information.

Liaison teams, with adequate communication gear, reduce the severity of some of these problems. Communications planners anticipate these requirements during initial planning, evaluate host nation communication resources, and integrate the requirements into the communications plan. These means must satisfy operational requirements.

—FM 3-16, *The Army in Multinational Operations*, page 2-17, 8 April 2014[20]

In terms of technical interoperability, PMX22 granted participants exposure to U.S. systems commonly used in a coalition environment but did not yield as high of a degree of return as it did in human and procedural domains. The PN participants generally lacked operational experience with CENTRIXS, but they acquired experience through daily duties during the CPX. They became familiar with Jabber (chat client) and other tools, which also enhanced their understanding of primary, alternate, contingency, and emergency (PACE) communications plans. Similarly, select staff members gained experience on Agile Client for battle tracking.

A recognized area to improve will require a hard look at equipment, systems, and message routing used at PANAMAX to advance technical interoperability. The CFLCC task organization had maneuver and support units from various PNs, but the exercise with simulated downtrace forces did not test the CFLCC ability to communicate with each other using their organic equipment. The same is true for early warning of threats, such as the process of sharing information from Peruvian radar systems with their Ecuadorian Brigade HQs, and from U.S. and Colombian aviation platforms in the CFLCC, or the Colombian-led CFACC. Planners identified key weapons systems for CFLCC units, but as PNs committed forces to the CFLCC task organization during planning conferences, the necessary analysis was not accomplished to identify if the equipment would actually be compatible or interoperable under real deployment conditions. Rather, such interoperability was a planning assumption made to facilitate this staff-centric exercise and may not hold true for real-world operations.

This minimal effect was also evident for CIS interoperability, or "the ability of the force to communicate and pass information using technical means to create a shared understanding within the organization, while also providing the infrastructure to quickly disseminate the intent."[21] Throughout planning conferences and the PICs, staffs demonstrated the ability to accomplish this by using APAN, which is accessible on any unclassified computer/network, to collaborate and share exercise-related materials. This technical means of information sharing did not involve any foreign hardware or command, control, communications, computers, and intelligence (C4I).

During the CPX, operations and information sharing were transitioned from APAN to software programs on U.S.-provided computers on CENTRIXS. These methods served the purpose of this exercise, focused on higher-echelon staffs, with simulated forces for echelons at the brigade level and below. But it did little to improve CIS interoperability other than showing participants they could effectively use CENTRIXS and other U.S.-provided hardware to conduct mission planning and battle tracking.

Other exercises with tactical units are more effective to address CIS interoperability, where multinational forces must identify communications compatibility shortfalls and overcome technical difficulties to have interoperable systems between the U.S.'s and PN's hardware. These often "favor indigenous military procurement of C4I systems" that will probably not "readily operate with U.S. systems."[22]

CONCLUSION

PMX22 enhanced mutual readiness, improved interoperability, and increased capacity among participants to plan and accomplish complex multinational operations. Additionally, the shared experiences strengthened PN relationships. Both the challenges and successes will be used as a baseline at future rotations.

LESSONS AND BEST PRACTICES

The following are lessons and best practices for PN relationship building:

- Schedule early during the WHINSEC to conduct a planning process SMEE with the CFLCC to begin the process of establishing interoperability and to increase proficiency in MDMP.
- Produce, post, and distribute a translated acronym list for CFLCC PN staff.
- Add a theater security operations planner to the CFLCC JMD.
- Assign at least two MNFS officers to augment the CFLCC staff to assist with their planning and execution during the CPX.

CHAPTER 6

Exercise Networks

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> For Army units involved in multinational operations, one of the major operational considerations is the ability to operate with units of the other nations. Interoperability is the ability to operate in synergy in the execution of assigned tasks.
>
> —FM 3-16, *The Army in Multinational Operations*, page 12-6, 8 April 2014[23]

OVERVIEW

Army Regulation (AR) 34-1, *Multinational Force Interoperability*, defines interoperability as the ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives.[24] It consists of the human, procedural, and technical domains. During PANAMAX 22 (PMX22), the U.S. Army South (USARSOUTH) G-6 either directly or indirectly affected and supported all three domains. Within the human domain, the G-6 established communication links, enabling multinational participants to establish rapport and thereby build the team regardless of the operating location. To support the technical domain, the G-6 established and maintained exercise networks that provided digital services to enable the human and procedural domains to function.

Supporting the procedural domain, the G-6 (but more so the command knowledge managers) established policies and procedures and selected digital toolsets to integrate similar and dissimilar staff processes. Additionally, they fused data, creating information and awareness for the commander and staff.

EXERCISE NETWORKS

Five distinct network enclaves were established during PMX22, but USARSOUTH relied on the U.S. Southern Command's (USSOUTHCOM) Combined Enterprise Regional Information Exchange System, Inter-American Naval Telecommunications Network (CENTRIXS-IANTN) to provide the primary coalition exercise network. CENTRIXS-IANTN is a SECRET/RELEASEABLE network that supports voice, data, and video exchanges across the force and with higher command headquarters (HQs). Since its roll-out in 2007, USSOUTHCOM has continually improved the network enclave's reliability, ease of use, and digital tool sets. However, the network enclave fails to meet full Mission Partner Environment (MPE) capability because of its lack of wide-spread distribution and usage on a day-to-day basis throughout the USSOUTHCOM area of responsibility (AOR).

Leading up to the command post exercise's (CPX) start of exercise (STARTEX), all Joint Exercise Life Cycle (JELC) events and planning used the proven All-Partners Access Network (APAN). USSOUTHCOM and USARSOUTH have leveraged the APAN collaborative environment since its introduction in 2010 when it was used during a humanitarian response to an earthquake in Haiti that year. APAN, like CENTRIXS, has undergone many modifications and revisions. The APAN digital tool set has been improved to provide shared awareness. Its information exchange capabilities have been broadened amongst its members. USSOUTHCOM and USARSOUTH knowledge management (KM) staffs transferred relevant information, such as operations orders (OPORDs), Road to Crisis, Operational Area Situational Updates, etc., from APAN to CENTRIXS just before STARTEX. This ensured access to key foundational information upon exercise commencement.

Both sites performed well, handling the load with no major issues during planning or execution phases of the exercise. While some individual command and control (C2) nodes and select services faced minor challenges, most were attributed to "exercise cyber play," or user unfamiliarity versus actual network or system issues.

NETWORK CHALLENGES

A primary challenge for PMX22 was the late receipt and processing time for partner nation (PN) CENTRIXS user account requests. Procedures used during PANAMAX 2018 were not revisited or used, resulting in many PN accounts not being processed until the last day of academics. The large turn-over of personnel within the USARSOUTH and USSOUTHCOM staffs between PANAMAX 2018 and 2022 was cited as one of the main causes.

This, coupled with opportunities lost from COVID-19 to host and conduct a large-scale, multinational exercise was evident as USARSOUTH, along with other participating commands, struggled to get back into the routine. While 95 percent of the accounts were completed, not all were correctly provisioned during the creation process. User accounts were not properly linked to their component organizational unit, such as the Combined Forces Land Component Command (CFLCC) or Combined Forces Maritime Component Command (CFMCC), etc., resulting in loss of fidelity for contact rosters and read/write permissions on the CENTRIXS SharePoint portal and other minor issues.

NETWORK REMEDIES

One primary means to overcome both system familiarity and user accounts would be accommodating routine access and integrating CENTRIXS-IANTN into daily use across the AOR. Current deployment covers roughly 50 percent of the AOR but is limited predominantly to PN naval elements. Wider distribution of an MPE solution and daily usage to communicate amongst the various country participants ensures familiarity and access before traveling to an exercise location.

Another option would be to plan for additional training on CENTRIXS-IANTN during academics and reception, staging, onward movement, and integration (RSO&I) before STARTEX. This would help ensure participant familiarity with the system layout and digital toolsets, allow for creation of distribution lists in Microsoft Outlook, and provide time for the staff to locate and organize critical documents on the SharePoint repository. This additional time to familiarize participants with their "weapons system" ensures they can focus on exercise operational and tactical problems rather than trying to understand how to communicate.

While APAN provides a trustworthy capability offering access from anywhere, its primary shortfall rests with the lack of user verification before authorizing access. Access requests are completed via web request without face-to-face verification; therefore, commands are hesitant to use APAN for critical C2 functions, orders distribution, and key reports.

If technical interoperability is to make any progress in the USSOUTHCOM AOR, the shortfalls of each of these networks must be addressed, ensuring only authorized users have access to the information and those users are able to access these reliable, secure communications networks at the tactical, operational, and strategic levels.

Although PMX22 revalidated USSOUTHCOM's CENTRIXS-IANTN network enclave and capabilities, it did so in a closed environment where CENTRIXS-IANTN computer systems, printers, and audio visual (A/V) capabilities were provided. Current Joint Staff and Headquarters Department of the Army (HQDA) MPE framework and broad vision for Joint All-Domain Command and Control (JADC2) are scheduling and resourcing select, perhaps more capable partners, while delaying and potentially neglecting to connect smaller, less capable, but just as important partners in other Combatant Command (CCMD) AORs, including USSOUTHCOM.

Mitigation or resolution to address these shortfalls rests primarily with the CCMD because of multiple foundational requirements to implement an MPE enclave. The largest hurdle to overcome is the establishment of multilateral information sharing agreements and classification guidance, which rests at the CCMD level and higher. Collaboration must occur at the highest levels, encouraging increased PN interest and participation on a multinational network across the AOR. Of note, USSOUTHCOM is not alone in its pursuit of a true AOR-wide MPE, yet it faces challenges unlike those found in other CCMDs, such as United States European Command (USEUCOM) and U.S. Indo-Pacific Command (USINDOPACOM). The adage that a partnership can only move at the speed of the slowest member seems to hold true for MPE. Where USEUCOM and USINDOPACOM have member nations possessing near-equal tactical telecommunications systems and an interest in leveraging them, USSOUTHCOM does not.

NETWORK SUCCESSES

On a positive note, PMX22 set a new benchmark as the first year all exercise participants were able to obtain a logon account for CENTRIXS. Historically, there have been one or two countries whose participants were not permitted to physically interact on a CENTRIXS terminal. This has limited their awareness of information, unit locations, operational updates, etc. Establishing a multinational collaboration environment is only effective if all members can access it. In PMX22, all PNs could access and operate on CENTRIXS, marking a huge step forward for partners across the USSOUTHCOM AOR.

LESSONS AND BEST PRACTICES

The following are lessons and best practices for exercise networks:

- Plan and conduct additional CENTRIXS-IANTN training during academics before STARTEX.
- In coordination with the Joint Staff, develop DoD-wide MPE, including applications and services supported by the Joint Communications Support Element (JCSE) for all Geographic Combatant Commands (GCCs).

CHAPTER 7

Knowledge Management

MAJ Auguston B. Cobba,
Knowledge Management Officer, U.S. Army South

> Knowledge management is the process of enabling knowledge flow to enhance shared understanding, learning, and decision-making (ADRP 6-0). Knowledge flow is the ease of movement of knowledge in organizations.
>
> Knowledge management uses a five-step process to create shared understanding. The steps of knowledge management include: (1) Assess, (2) Design, (3) Develop, (4) Pilot, and (5) Implement.
>
> —ATP 6-01.1, *Techniques for Effective Knowledge Management*, page 1-1, 6 March 2015[25]

OVERVIEW

Multinational Force South (MNFS) successfully performed knowledge management (KM) and information management across the command and mission partners. This enabled the MNFS commander to operate coherently, effectively, and efficiently. The KM team established a composite digital environment that simplified the knowledge flow process along established Department of Defense (DoD) networks to enhance and speed up the commander's decision making. PANAMAX 22 (PMX22) used the following digital systems:

- Army 365 Microsoft Teams (MS Teams)
- All-Partners Access Networks (APAN)
- Combined Enterprise Regional Information Exchange System, Inter-American Naval Telecommunications Network (CENTRIXS-IANTN)
- Mission Partner Environment (MPE) SharePoint

PLANNING INTEGRATION

The new Army 365 MS Teams application empowered U.S. Army South (USARSOUTH) to collaborate on and integrate planning efforts in real-time for the first time since the MNFS headquarters (HQs) was established in 2014. The USARSOUTH staff leveraged this application to meet, chat, and conduct certain steps in the military decisionmaking process (MDMP). Additionally, MS Teams provided invaluable staff running estimates and enabled USARSOUTH staff to better integrate relevant mission information to establish and maintain a common operational picture (COP) while improving interoperability with mission partners.

KNOWLEDGE FLOW

Access to knowledge products requires DoD networks to enable knowledge flow and enhance decision making. The MNFS knowledge management officer (KMO) facilitated interoperability between mission partners and MNFS through MPE and APAN digital environments. MPE and APAN SharePoint sites ensured digital collaboration between the U.S. and authorized mission partners from Argentina, Brazil, Columbia, Peru, and other partner nations (PNs). MPE enabled the sharing of authorized, sensitive, classified knowledge securely while leveraging APAN to provide relevant unclassified foreign disclosure-approved information to support mission partners who had no access to traditional DoD networks. The MNFS KMO's use of MPE and APAN eased the flow of knowledge and enabled MNFS to operate coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives.

The MNFS KMO also enabled knowledge flow along established DoD networks to enhance decision making. This included leveraging the Combined Enterprise Regional Information Exchange System (CENTRIXS), provided by United States Southern Command (USSOUTHCOM), to achieve a timely and accurate COP between HQs (USSOUTHCOM, MNFS, and coalition forces for air, land, maritime, and special operations). Further, leveraging CENTRIXS enabled formations to achieve interoperability.

KM efforts were not devoid of challenges during PMX22. Significant man-hours were expended at the onset of the exercise to transfer knowledge products to authorized and approved environments. Moreover, there was confusion between MNFS and its higher headquarters (HHQs) about the KM communication's primary, alternate, contingency, and emergency (PACE) plan. Future exercises must be preceded by staff exercises (STAFFEXs) for the staff to familiarize themselves with available KM tools and understand how they will collaborate, generate, and transmit reports along with designating which platforms to use for each staff function. A clearly defined KM PACE plan will also eliminate confusion amongst participants and further enhance the flow of knowledge during exercises.

CONCLUSION

The MNFS KMO was responsible for facilitating the movement of knowledge for the command to establish a COP and enhance shared understanding to support mission command at PMX22. This was achieved by facilitating interoperability through the combined use of MS Teams, MPE, and APAN digital environments.

LESSONS AND BEST PRACTICES

The following are lessons and best practices in knowledge management:

- Conduct a conditions or objectives-based STAFFEX before start of exercise (STARTEX) to ensure the staff has access to all systems, has adequate understanding, and can rehearse internal and external processes.
- Leveraging the MS Teams application empowered USARSOUTH to collaborate on and integrate planning efforts in real-time.

CHAPTER 8

Visualizing and Conducting Multi-Domain Operations

COL Lane A. Bomar, G-3 Operations, U.S. Army South
CW5 Shawn U. Fogarty, G-3 Aviation, U.S. Army South

> "The Western Hemisphere is our neighborhood, and we all have shared interests and values here."
>
> —MG William L. Thigpen CG, U.S. Army South and Multinational Force South at PANAMAX 22[26]

To visualize multidomain operations (MDOs) in the United States Southern Command (USSOUTHCOM) area of responsibility (AOR), one must first understand the intersecting complexities within the operational environment (OE). A multinational response, while best suited for the region, produces a myriad of challenges in conducting MDOs. According to U.S. Army Training and Doctrine Command, MDO is defined as the "rapid and continuous integration of all domains of warfare."[27] As the U.S. Army pursues unified action across the five domains (air, land, maritime, space, and cyberspace) the ability to process data into decisions is becoming increasingly challenging.

PANAMAX is an exercise that uses communication themes and operational understanding between multinational, joint, combined, and interagency operations to increase interoperability. Partner nation (PN) involvement was critical to Multinational Force South's (MNFS) ability to emphasize common interests and establish cooperative solutions through comprehensive and integrated responses to the simulated transnational threats in the region.

This year, the MNFS headquarters brought together more than 1,500 U.S. personnel and nearly 500 total military personnel from Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Spain, and Uruguay. This volume of diverse participants from respective Army, Navy, Air Force, Marine, and Special Warfare PN services required extensive and thorough communication and planning to combat the increasingly complex challenges present in the MDO environment.

Staffs from these multiple nations and service components is shown in Figure 8-1. Each country involved has independent capabilities and specialties. MNFS employed each country's strengths through time and space to achieve complementary effects across all five domains based on the MNFS commander's prioritization for that phase of the operation.

Figure 8-1. MNFS staff from across multiple nations and service components (PAO, U.S. Army South)[28]

Situational understanding across the five domains requires a lot of trust in subordinate component commands, effective communication, and harmonization to the battle rhythm. It requires the staff to conceptually consume and refine data spanning all domains, intersecting composite warfighting functions like intelligence, sustainment, or maneuver elements. A present challenge to situational understanding is the bandwidth to which the staff at echelon can consume, process, and refine data into decision points tailored to relevant actions that will maximize an effect against the enemy or in support of the civilian population. Data is the "ammunition" to achieve this all-domain convergence.[29] Therefore, Joint All-Domain Command and Control (JADC2) systems are needed now. JADC2 is the Department of Defense (DoD) concept of a cloud-like environment used to connect sensors from all the services into a unified network, facilitating seamless information sharing and faster decision making.[30] Provided a transparent multinational application exists that is shareable with PNs, JADC2 will enhance the MNFS ability to understand and visualize the political, military, economic, diplomatic, and integrated technological and informational environment. This inclusive nature and challenges of interoperability about MDO is also evident in other combatant commands (CCMDs). The North Atlantic Treaty Organization's (NATO's) 'working' definition of multi-domain operations (MDOs) is "the orchestration of military activities, across all domains and environments, synchronized with non-military activities, to enable the Alliance to deliver converging effects at the speed of relevance."[31]

The evolution of civil affairs (CA) and interagency integration across domains was an additional and specific challenge at PANAMAX. This represented the main point for coordination and support transmitted daily within the USSOUTHCOM Joint Interagency Coordination Group (JIACG). While coordination and support grew via the JIACG over the course of the operation exercise, the overall challenge was when information at times moved faster than the MNFS staff's ability to process, assess, and implement a remedial action. Figure 8-2 shows staff discussions at JIACG. It was essential to integrate non-kinetic effects and kinetic fires across all domains.

Figure 8-2. MNSF staff in discussions after JIACG (PAO, U.S. Army South)[32]

MNFS's success was further based on the ability to harness the tenets of MDO. The Road to Crisis enabled effective planning to calibrate force posture, bringing together capabilities spanning more than one domain. An example was employing land-based fires to target adversary sea capabilities or cyberspace capabilities to degrade an adversary's situational awareness (SA) about MNFS activities. The MNFS use of expeditionary forces combined with national-level capabilities from multiple nations minimized any gaps in capability. The convergence of cross-domain synergy proved instrumental for subordinate components as they transitioned from supporting efforts to the main effort throughout phases of the operation.

U.S. Army South (USARSOUTH), in preparation for the next PANAMAX and continued growth to conduct MDO, requires a broader knowledge base in all five domains. MNFS's purpose is to provide the combatant commander (CCDR) a plethora of options for rapidly executing operations across all domains to present an adversary with multiple, simultaneous dilemmas. Whereas USARSOUTH is most relevant in the land domain, it is necessary to further enhance staff experience about Joint Services capabilities and constraints. To support the national strategic guidance and combatant commander directives, USARSOUTH must continue to seek out opportunities to train, integrate, and eliminate challenges to interoperability with PNs.

LESSONS AND BEST PRACTICES

The following are lessons and best practices in visualizing and conducting MDO operations:

- Understand and employ the strengths of each country's capabilities throughout the multinational force.
- Review, refine, and ensure a shared understanding spanning the systems and processes the staff uses to transform data into decisions.
- Situational understanding is relative. The OE continually changes, thus requires an enduring devotion to interpret, analyze, and assess.

CHAPTER 9

Targeting and Integrating Lethal and Nonlethal Fires

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LTC Carlos A. Ramos, Information Operations Chief, U.S. Army South

CW4 Juan P. Deleon, Interface Control Officer, U.S. Army South

Land Component Commanders (LCCs) contribute to the joint targeting cycle by assisting the Joint Force Commander (JFC) in formulating guidance, integrating land component fires with other joint fires to support JFC operations, conducting target development, synchronizing, and coordinating the use of collection assets, engaging targets, and providing feedback as part of the assessment process. These functions remain constant regardless of how the joint force is organized (functional or Service components).

Coordination and communication between the components, theater analyst, and multinational partners is critical executing fire plans and engaging targets of opportunity.

—ADP 3-19, *Fires*, pages 3-9 – 3-10, 31 July 2019[33]

BACKGROUND

Lethal targeting is not routinely trained on and practiced at U.S. Army South (USARSOUTH) outside of the PANAMAX series of exercises. As a result, many of the military skillsets and digital tools required refinement during execution. Additionally, transitioning from an Army Service Component Command (ASCC) to a multinational force headquarters (HQ) required restructuring the Fires and Effects Directorate (FED) into the CJ36 (Fires), CJ38 (Cyber Electromagnetic Activities), and CJ39 (information operations) for Multinational Force South (MNFS). As part of this transition, a partner nation (PN) colonel from Peru was brought in to lead CJ36 and the targeting effort. A colonel from Argentina led CJ38 as the Cyber and Electromagnetic Activities (CEMA) director, and a major from Colombia served as the CJ39 deputy director.

Joint Publication (JP) 3-60, *Joint Targeting*, defines targeting as "the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities."[34] During the preparation and execution of PANAMAX 22 (PMX22), the MNFS CJ36, CJ38, and CJ39 worked in parallel using a lethal and non-lethal targeting working group (TWG). Both TWGs provided target nominations to the MNFS commander. The MNFS CJ3 was responsible for the targeting process and chaired the TWG.

Unfortunately, a lack of exercise background data on the targeting cycle caused delays in the process, especially for the Combined Forces Air Component Command (CFACC), which was led by 612th Air Operations Center (AOC). By exercise design, PMX22 began at D+40 (day 40) into the operation. Realistically, the MNFS would have executed multiple iterations of the targeting cycle by D+40. However, as of the WARMSTART of the exercise, the cycle began from a cold start. The 612th Air Tasking Order (ATO) cycle required 24 hours of planning and estimating the type and quantity of weapons before any sorties were flown in support of the MNFS. This 24-hour delay in both targeting and the ATO resulted in missed opportunities to shape the operational environment (OE) for the command when the exercise started.

PLANNING

U.S. Southern Command (USSOUTHCOM) provided a restricted target list (RTL) before the notional initiation of the exercise contingency plan (CONPLAN). This provided the only target list for planners to work with as the exercise began. The RTL consisted of key leaders within declared hostile force and their supporting facilities. These targets were more suitable for attack by lethal means, specifically by the CFACC. No nonlethal reference points were contained on the RTL or any other targeting list or database to stimulate nonlethal targeting efforts. The absence of not having a USSOUTHCOM Joint Integrated Priority Target List (JIPTL) forced targeting efforts to generate from the bottom-up. Another area that must be addressed in the future is not having a standing G-2 targeting section on the USARSOUTH staff.

PREPARATION

Before the start of the exercise (STARTEX), the USARSOUTH FED developed a targeting standard operating procedure (SOP) to use during PMX22. This product provided a baseline for routine operations within a 72-hour targeting cycle. As PMX22 began, the CJ3 led the effort to establish the command's battle rhythm. After determining there were too many meetings for the MNFS commander to attend on any given day, the CoS directed many meetings to be combined.

As part of the battle rhythm, the CJ36 conducted a daily TWG with components attending through virtual means or by sending a liaison officer (LNO). Key staff across the warfighting functions also contributed at the TWG. The CEMA CJ38 and information operations (IO) planners in CJ39 provided outputs from the Cyber Operations Working Group and the Information-Related Capabilities Working Group (IRCWG) to feed the targeting process. The TWG used the Joint Targeting Cycle and its 72-hour framework, reviewed the commander's guidance, and conducted target development, capabilities analysis, force assignment, and targeting assessments.

During PMX22 academics week, the FED gave a targeting class to better close the joint targeting knowledge gap of the multinational partners. However, the TWG struggled early in the exercise to develop target nominations and use the Joint Targeting Cycle. This was further compounded by communication challenges with the components caused by their remote locations. In addition to academics, practical exercises for the TWG should be conducted to educate components and staff before the next PANAMAX.

As the CJ3 built the battle rhythm and combined meetings, the doctrinal Targeting Decision Board (TDB) was cut in favor of a Commander's Guidance and Decision Board (CGDB). The target nomination process is shown in Figure 9-1. This would be the forum for all staff sections to present issues for the commander's consideration and approval. This became the only venue to present targets to the commander during PMX22. Overall, the process was overburdened by the volume of topics that needed the commander's consideration, resulting in a lag for target approval. The second-order effect was MNFS needed to catch up in the USSOUTHCOM targeting cycle when nominating targets that required their resourcing or approval.

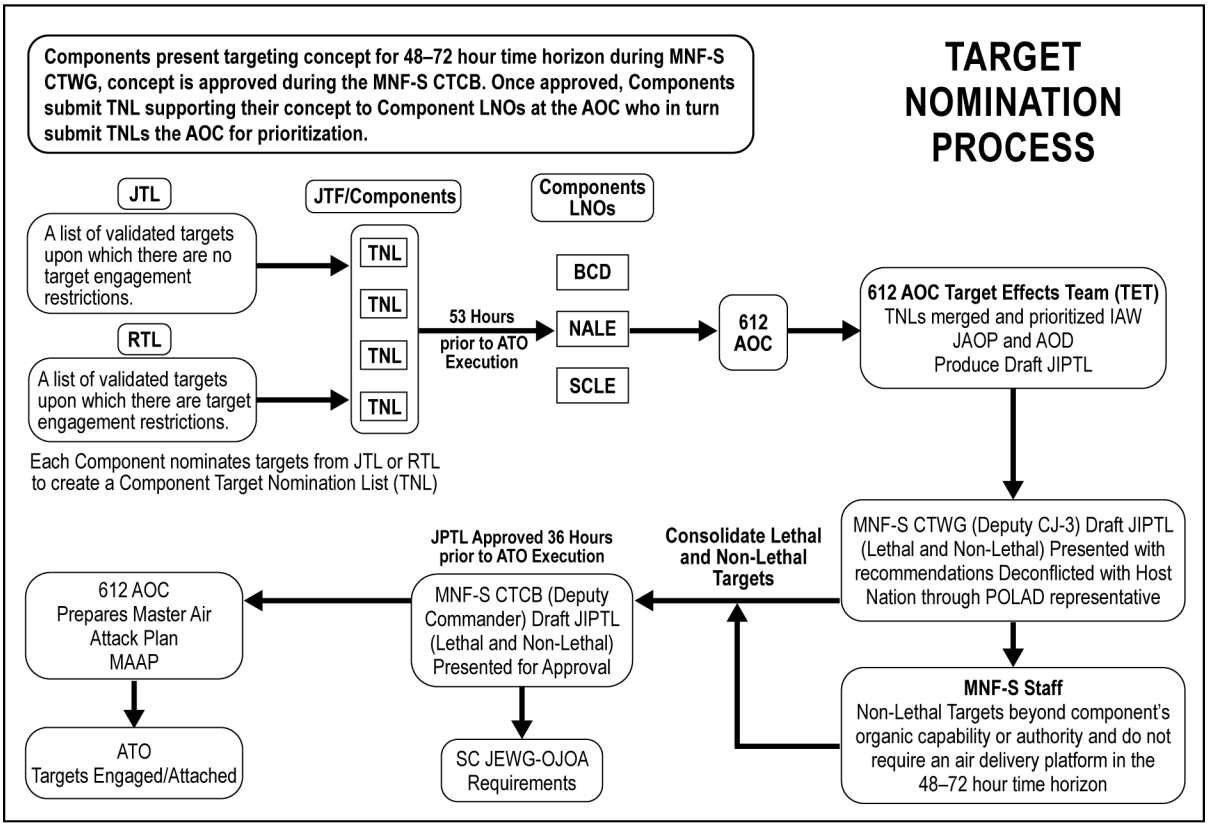

Figure 9-1. MNSF Target Nomination Process (FED, U.S. Army South)[35]

While the staff made the battle rhythm work in the end, the CJ3 recommended for the next PANAMAX that MNFS execute the doctrinal TWG and TDB (synchronized with the USSOUTHCOM targeting battle rhythm) to ensure a more dedicated flow of targets and information.

EXECUTION OF LETHAL FIRES

The area in which the CJ36 enjoyed the most success was the CFACC completion of the RTL. The 612th AOC ran a 48-hour ATO cycle and was so efficient that by the end of the exercise they had exhausted their target list.

However, MNFS struggled with fires in three areas. First, MNFS struggled regarding targets of opportunity in CJ33 current operations (CUOPS) and the Command Post Combined Operations and Intelligence Center (COIC). This may be directly attributed to zero rehearsals conducted in the COIC to prepare for dynamic targets when they were presented. This resulted in unnecessary confusion over the authorities and decisions to strike targets. This led to targets not being serviced or moving out of detection, including several high-value targets, such as the CLUB-K anti-ship missile batteries, which were the number one target on the high-payoff target list (HPTL). Confusion could have been mitigated with scheduled, proper rehearsals and a better common understanding of strike authorities.

The second area where MNFS struggled was with target nominations from the Combined Forces Land Component Command (CFLCC). The CFLCC was led by multinational partners and required an increased ratio of U.S. staff to assist them. Additionally, the CFLCC needed to better understand the targeting process and how to employ organic artillery to strike targets in their battle space. To compound these issues, the CFLCC suffered from communication problems throughout the exercise, which impeded the CJ36 ability to give guidance and intent. This led to unresponsive fires from the CFLCC. To mitigate this issue, the next PANAMAX must include a practical exercise during the academics week, along with a fire support rehearsal to train multinational partners and synchronize components before STARTEX. Had proper U.S. LNOs been assigned to the CFLCC, better coordination and planning would have been achieved. For the next PANAMAX, this presents a unique opportunity to employ a Security Force Assistance Brigade (SFAB) contingent with the CFLCC to act in the LNO capacity.

The third area causing fires issues was a lack of a common fires knowledge network between MNFS and USSOUTHCOM. Because of the volume of 19 PNs from Central and South America in PMX22, the MNFS used the Combined Enterprise Regional Information Exchange System (CENTRIXS) as the common computer network for the exercise. But USSOUTHCOM did not have access to CENTRIXS and required all targeting communications with them be executed at the Top Secret (TS)/Secret Compartmented Information (SCI) level, which is what their communications architecture is designed for. This mismatch of systems never resolved during the exercise and no suitable work-around was found. It is highly recommended USSOUTHCOM incorporate CENTRIXS for the next PANAMAX as it operates at the highest security classification level that MNFS can operate at with PNs.

LESSONS AND BEST PRACTICES

The following are lessons and best practices for targeting and integrating lethal and nonlethal fires:

- Conduct targeting cycle in the CPX WARMSTART/communications exercise (COMMEX) to test the network and set STARTEX conditions.
- Refine the targeting SOP and ensure it is translated and distributed to components and multinational partners before the exercise.
- Plan for and conduct a practical exercise for the targeting process during the academics portion of the exercise.
- Plan for and conduct a combined fire support rehearsal to synchronize all components.

- Ensure MNFS develops and conducts battle drill rehearsals for dynamic targets.
- Ensure the Combined Targeting Coordination Board (CTCB) is part of the battle rhythm.
- Plan for and roster appropriate senior USARSOUTH staff and PN representation at MNFS Planning in Crisis (PIC) exercise at Joint Base San Antonio (JBSA)—Fort Sam Houston.
- Employ an SFAB battalion or brigade command post element with the CFLCC to act as an LNO section in support of the MNFS to enable integration and synchronization. The SFAB is also equipped with the communications required to assist the CFLCC commander in maintaining contact with MNFS.
- Task organize representatives from all IRCs under an ICFT (under the direction of the MNFS CJ39) to plan, develop, and execute IO in support of MNFS. Include representatives from all IRCs and have robust psychological Operations [PSYOP] element, fires, intelligence support to IO/CYBER, assessments, and inter-agencies to optimize effectiveness of IO to compete, seize, and own the narrative.
- Ensure Joint Master Scenario Event List (JMSEL) injects are viewed by digital viewers (i.e., Advanced Field Artillery Tactical Data System [AFATDS], Air and Missile Defense Workstation [AMDWS], Common Data Link Interface Module [CDLIM], Air Defense Systems Integrator [ADSI], and common operational picture [COP] via Agile Client.) Briefs to the MNFS commander should start with a view of the COP in which the commander can view the last 24-hours of events on a map. An example is shown in Figure 9-2.
- Establish in the MNFS command post a tactical and COP link to Joint Staff J7 (JS J7) Exercise Cell to improve interoperability. This tactical link should consist of ADSI and CDLIM to JS J7 ADSI with Global Combat Support System-Army (GCSS-A) to Global Combat Support System-Joint (GCCS-J) connection to JS J7. Agile Client cannot be used for targeting, it is simply an SA tool. Tactical systems recognized across services for near real-time SA and command and control (C2) are Battle Command Sustainment Support System (BCS3), Tactical Data Analysis (TDACS), Link Monitoring and Management Tool (LMMT), AFATDS, ADSI, CDLIM, and Joint Range Extension (JRE).

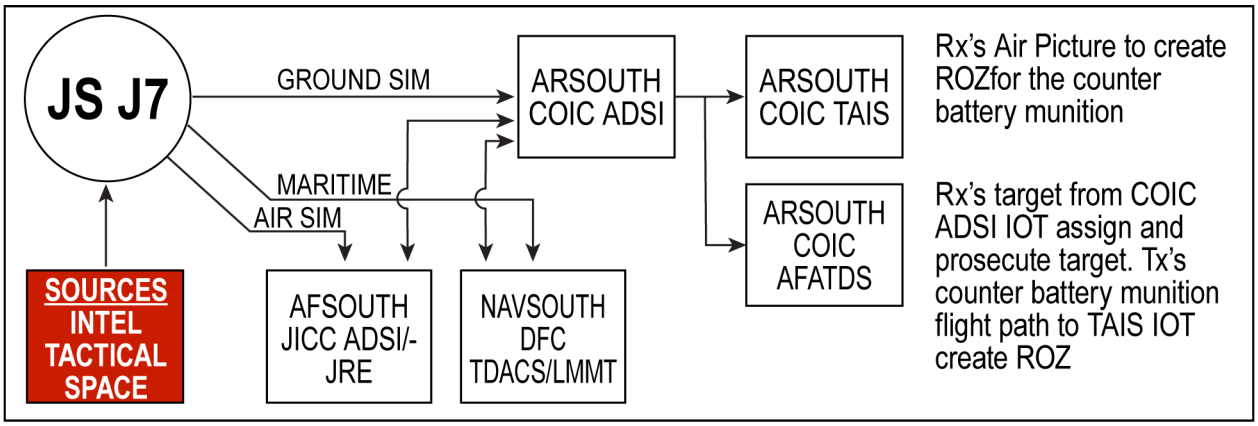

Figure 9-2. MNSF COP Network (G-6, U.S. Army South)[36]

CHAPTER 10

Planning and Conducting Joint and Multinational Logistics

LTC PHILLIP M. MCDOWELL, G-4 CUOPS CHIEF, U.S. ARMY SOUTH

> The theater Army is the primary vehicle for Army support to joint, interagency, intergovernmental, and multinational forces (MNFs). The theater Army headquarters (HQs) perform functions that include reception, staging, onward movement, and integration; logistics over-the-shore operations; and security coordination.
>
> —ADP 4-0, *Sustainment*, page 2-10, 31 July 2019[37]

OVERVIEW

In today's operational environment (OE), logisticians will likely be working with multinational partners. Although the U.S. maintains the capability to act unilaterally, it is likely that the requirement, and the desire, to operate with multinational partners will continue to increase. Multinational logistics (MNL) is a challenge. However, leveraging MNL capabilities increases the combatant commander's (CCDR's) freedom of action. Additionally, many multinational challenges can be resolved or mitigated by having a thorough understanding of the multinational partners' capabilities and procedures before operations begin. Integrating and synchronizing logistics in a multinational environment requires multinational information sharing; developing interoperable logistics concepts and doctrine; and clearly identifying and integrating the appropriate logistics processes, organizations, and command and control (C2) options. Careful consideration should be given to the broad range of MNL support structures.[38]

TASK ORGANIZATION

Task organization in the Panamax series of exercise will change each time as it is dependent on the partner nations (PNs) that provide forces. As for the U.S. forces, there are some considerations to be made at the Planning in Crisis (PIC) events when the task organization is finalized. The inclusion of the Theater Sustainment Command (TSC) and Expeditionary Sustainment Command (ESC) were critical in the success of Multinational Force South (MNFS). These units allowed the MNFS to focus on its set of sustainment tasks at the operational level, instead of having to focus at the tactical (ESC), or strategic levels (TSC). These formations must continue to be included in future PANAMAX exercises.

CONCEPT OF SUPPORT

The Combined Forces Land Component Command (CFLCC) did not outline clear support channels. This created some confusion on how support was to be provided. Specifically, this affected how supplies and equipment were brought in from PN countries. A reason this condition existed was the exercise did not accommodate PHASE 0 and PHASE 1 operations because it starts in late PHASE 2 going into PHASE 3.

ACQUISITION AND CROSS-SERVICE AGREEMENTS

The United States Southern Command (USSOUTHCOM) negotiated and established acquisition and cross-service agreements with key countries throughout the USSOUTHCOM area of responsibility (AOR). Currently, no more agreements are assessed as required.

PLANNING AND CONDUCTING JOINT AND MULTINATIONAL LOGISTICAL SUSTAINMENT

Having the right type of personnel in the CFLCC C-4 (Combined Staff, Director Logistics) staff is critical for planning and execution. However, the C4 did not have actual logisticians from any PN as part of their staff. This caused some challenges, which negatively affected reporting and logistics assessments data. To mitigate this, U.S. personnel augmented and assisted the CFLCC staff with logistics management and operations. U.S. personnel were able to alleviate some of these challenges by having knowledgeable liaison officers (LNOs) inside the components that allowed quicker communication and response to issues.

Additionally, the lack of an air logistics planner initially hindered analysis of airfields and support requirements. The results from this exercise prove an air logistics planner must be in the CJ4 (Combined/Joint Staff Director Logistics) for the next PANAMAX. Of note, an air logistics planner was on the Joint Manning Document (JMD), however, this individual did not show up to the exercise.

OPERATIONAL CONTRACT SUPPORT

Operational contract support (OCS) played a critical role in synchronizing contract support for the MNFS staff. They provided oversight across the components and facilitated coordination with USSOUTHCOM and the 167th TSC.

An OCS integration cell (OCSIC) was established and properly resourced with augments from 410th Contracting Support Brigade (CSB) and the Defense Contract Management Agency (DCMA). The OCSIC assisted components with their requirements development and directed their non-organic support to the correct level for execution and resourcing. The team engaged with the CFLCC C4 and provided OCS training and products in both Spanish and Portuguese to enhance PN understanding. They also maintained a common operational picture (COP) for sustainment across all components, tracking contractors on the battlefield, critical contracts, and PHASE-specific OCS equities in the joint operations area (JOA).

LESSONS AND BEST PRACTICES

The following are lessons and best practices for planning and conducting joint and multinational logistics:

- Position and leverage PN capabilities in leadership roles and integrate them in all aspects of the operation. This is key to achieving enhanced interoperability.
- Leverage the TSC to focus on the strategic level of the conflict and an ESC to handle the tactical level. This is key to MNFS sustainment training objectives.
- Ensure the engineer, medical, and CJ1 (Combined/Joint Staff Director, Personnel) are at the same location as the CJ4. This is critical to success in enabling quick coordinating sustainment across the JOA.

CHAPTER 11

Legal Considerations

COL JOSEPH A. KEELER, STAFF JUDGE ADVOCATE, U.S. ARMY SOUTH

> The joint force SJA also assists the J-3 and J-5 in coordinating U.S. ROE and use of force policies with partner nations during planning for coalition operations and in understanding any national caveats partner nations may have regarding use of force and/or employment of multinational forces, equipment, or weapons systems. Other areas that require review include legal validation of proposed targets, detention and interrogation operations, treatment of civilians, integration of contractor personnel, fiscal authorities, and intelligence operations.
>
> —Joint Publication (JP) 3-84, Legal Support, page 11-9, 2 August 2016[39]

PURPOSE

Per the U.S. Army South (USARSOUTH) Exercise PANAMAX 22 (PMX22) operations order (OPORD), dated 18 May 2022, the mission of the USARSOUTH Office of the Staff Judge Advocate (OSJA) consisted of seven tasks:

1. Coordinate with Multinational Forces South (MNFS) J-3 and J-5, as well as U.S. Southern Command (USSOUTHCOM) OSJA to review rules of engagement (ROE) requirements. Attempt to identify partner nation (PN) ROE caveats for dissemination among the command and directorates as required.

2. Continue ROE review as required through execution.

3. Provide a legal review of all written orders before publication.

4. Provide guidance and assistance to G-3 future operations (FUOPS) and current operations (CUOPS) in development of multinational ROE matrix and ROE message no later than 21 June 2022.

5. Participate in planning efforts and provide subject matter expert assistance as necessary.

6. Receive and integrate Joint Manning Document (JMD) and PN participants.

7. Lead the National Caveats and ROE Working Group (WG) during planning conferences and other planning venues. In coordination with G-35 FUOPS, complete the ROE matrix for distribution to components.

SUCCESSES

From a practical standpoint, the same judge advocate (JA) action officer who participated in PANAMAX was involved during the entire planning process (i.e., he was a member of the core planning cell as soon as planning began). This JA integrated into the planning staff and was an integral part of the team. He was involved in discussions and was not simply "the lawyer" the planners consulted in an emergency. It is essential that this action officer JA attends all planning conferences, MNFS, and component crisis action planning (CAP) events to capitalize on the rapport built with action officers from other directorates and PN participants.

Despite multiple key staff members involved in a permanent change of station (PCS) move to USARSOUTH mere weeks before the start of exercise (STARTEX), the MNFS staff overcame communication and coordination challenges and quickly communicated efficiently to resolve any confusion or procedural hurdles. For example, staff members initially thought anything involving the ROE to be a legal question or issue—which is not usually the case. Although the OSJA reviews and advises on the ROE, the publication of the ROE belongs to the G-3/J-3. This was confused at the beginning by MNFS staff members; nonetheless, through inter-directorate communications, the OSJA was able to work through this. The recommendation is to sustain mission-focused communication and inter-directorate discussion.

For PMX22, the OSJA participated in the targeting cycle and provided manning for the Joint Operations Center (JOC) floor to maintain full coverage of all battle rhythm events. The OSJA was staffed with the SJA (Army O-6), Chief National Security Law (NSL) JA (U.S. Army O-4), two JAs (one Army, one U.S. Navy), and two paralegals (U.S. Navy E-6 and U.S. Army E-5). The section also had two PN JAs. Having PN JAs assigned to OSJA was vital to understand international caveats and authorities, including interpreting ROE and international treaties from their perspective. The Brazilian counterpart, who was proficient in English, was extremely valuable in all aspects of the legal mission, while the OSJA had difficulty communicating with the other PN officer who only spoke and understood Spanish. The recommendation is to sustain successful teamwork across branches.

The San Remo ROE Handbook is an exceptional foundation for any exercise with PNs. It provides a common reference point and ROE source document wherein all nations can work and communicate together and there are no concerns about classification. It facilitates interoperability and was a key factor to helping ensure working with PN attorneys was a success.

CHALLENGES AND WORKAROUNDS

The source of challenges encountered by OSJA primarily evolved around two issues: the coordination of the ROE and the language barrier.

First though, the starting point for ROE was the Standing ROE (San Remo); the mission-specific ROE was not developed like a normal operation in which the subordinate headquarters (HQs) G-3 and G-5 determine what specific operational authorities they would need to accomplish their mission and with the NSL attorney help draft a document wherein a list of specific approval authorities is requested for actions their commander does not have authority to approve.

With minimal prior discussion, a specified ROE (approval authorities) from USSOUTHCOM was released the afternoon before STARTEX. In addition, for some reason it was not received by the J-3 but came through OSJA channels. This initially caused confusion about coordination and caused the MNFS J-3 to think the proponent of the ROE was the OSJA. In addition, since the HQs had not gone through the process to determine what operational authorities would be needed for mission accomplishment, HQs (the MNFS) missed important opportunities to get WGs effectively functioning from the beginning.

Because there was minimal opportunity to coordinate and deconflict the ROE and develop the ROE matrix between MNFS J-3 and OSJA before STARTEX, there was confusion early in the exercise regarding approval authorities for different strikes and delayed execution of notional in-exercise missions. Moreover, the ROE needs to be clear about precluding actions at certain classification levels to prevent spillage.

The recommendation is for USSOUTHCOM and all subordinate units to determine the specified ROE during the component Planning in Crisis (PIC) Phase (Phase III) so that discrepancies can be resolved, and the foundation is properly built before STARTEX.

Second, language barriers presented another major obstacle to completing this mission. The Brazilian counterpart had an excellent working knowledge of English and could operate in an English-spoken environment, other PN counterparts only spoke Spanish. Even though translators were available, they were not always available when needed. To make matters more challenging, all exercise documents were in English, making it more difficult to communicate, share, and exchange information with this PN legal officer. Thus, despite significant efforts, the PN officer was not fully integrated, and his real-world experiences could not be adequately used. The recommendation is for USARSOUTH OSJA to have NSL attorneys who speak Spanish and have more translators be made available. Additionally, more efforts should be put into translating key exercise documents.

RECOMMENDATIONS AND FUTURE ISSUES

Multinational Force South and Component Crisis Action Plan Legal Brief

Although the OSJA gave a legal brief at the MNFS PIC Phase, there was no follow-on discussion between the G-3 and OSJA regarding ROE mission requirements. As mentioned already, there was confusion about the ROE and authorities. The issue was never fully resolved before STARTEX, and the ROE and other documents were simply adopted as "final." A legal brief at the onset of MNFS and work on the ROE at the component planning (Phase III) would allow everyone on the MNFS staff, HHQs, and subordinates to know the standing ROE and specified ROE to be requested before the beginning of the exercise.

24-Hour Operations

The MNFS was directed to conduct 24-hour operations; however, exercise injects did not occur overnight, which resulted in personnel sitting idle for extended periods of time, getting neither training value nor sleep. The recommendation is to inject scenarios during night shifts or shorten the staffing requirements to allow staff sections to manage their sleep plans more efficiently. Individual staff sections can also inject their own scenarios to test and develop their personnel. Directorate chiefs should be prepared to run them accordingly.

Partner Nation Personnel Information

The OSJA did not have confirmation of PN legal personnel, such as names or ranks, or any contact information until STARTEX. This resulted in the inability to plan for an appropriate number of workstations and degraded the ability to effectively integrate PN personnel. The recommendation is to coordinate and confirm PN presence and contact information at least by the component PIC Phase (Phase III). This would have allowed MNFS to find out language abilities and real-life experience of the PN personnel and have enough workstations before STARTEX.

Working Group Locations

At the start and throughout the exercise, WG locations were not clearly marked or annotated in battle rhythm documents. This resulted in confusion throughout the exercise because people did not know where to go for each WG. The recommendation is to clearly annotate meeting locations for WGs no later than the last PANAMAX operational planning team (OPT) before STARTEX.

Authorities to Enter Panamanian Territory

One issue of contention is the territorial waters of Panama. This is a topic that has real-world consequences for Panama. Panama claims the entirety of the Gulf of Panama in the Pacific Ocean as Panamanian territorial waters, while the U.S. only recognizes 12 nautical miles as Panamanian territory. Anything beyond 12 nautical miles is considered international waters. This can become an issue for MNFS when planning operations within the exercise and whether permission to enter Panamanian waters is required. It is essential from STARTEX that the boundaries are clarified and, for the purpose of the exercise only, that the international standard of 12 nautical miles is used as the starting point for when to request permission from Panama to enter its territory.

Humanitarian Action and Internally Displaced Persons and Refugees

Another instance of an overly U.S.-centric planning and focus during the exercise was in humanitarian action and internally displaced persons (IDPs) and refugees. The U.S. often neglected to consider which resources and authorities the PNs were equipped with to deal with and support IDPs or refugees. Although the U.S. might not be able to fund or take specific actions concerning a self-created IDPs humanitarian crisis, PNs might be able to assist when the U.S. cannot. The MNFS needs to do better at incorporating the resources and authorities of PNs and make it a genuinely multinational and joint effort.

LESSONS AND BEST PRACTICES

The following are lessons and best practices for legal considerations:

- Ensure the same JA action officer is involved throughout the planning process.
- Ensure the ROE is staffed with specified ROE authorities sent to and approved by HHQs before STARTEX. Conduct a legal brief at the MNFS and during component CAP concerning the ROE.
- Invite PN legal officers to all exercise planning events, including the MNFS and component planning phases.
- Incorporate the resources and authorities of PNs in plans and orders.

ANNEX A

Key Leader Interviews

CAPT Javier Gonzales (Chilean Navy), Chief of Staff, Multinational Force South and **COL E. Scott Himes**, Deputy Chief of Staff, Multinational Force South, interview conducted 12 August 2022.

Mr. Richard C. Merrin, Foreign Policy Advisor, Multinational Force South, interview conducted 18 August 2022.

BG Lynn M. Heng, Deputy Commanding General-Operations, Multinational Force South, interview conducted 23 August 2022.

BG Hernando Garzon Rey, Deputy Commanding General-Interoperability, Multinational Force South, interview conducted 29 August 2022.

MG William L. Thigpen, Commander, Multinational Force South, interview conducted 1 September 2022.

CAPT Javier Gonzales (Chilean Navy) Chief of Staff, Multinational Force South, and COL E. Scott Himes, Deputy Chief of Staff, Multinational Force South, 12 August 2022

Question: How did Multinational Force South (MNFS) visualize and synchronize multi-domain capabilities and what was learned on prosecuting multi-domain operations (MDO)? What went well and not so well?

CAPT Gonzales response: We have already completed the after-action review (AAR). It is clear to me to synchronize multi-domain capabilities; it is very important to keep everyone informed and let them talk. We initially had several communication problems before the start of the exercise. It is key before starting an exercise to ensure all the networks are working. You may have the systems, but everyone needs to learn how to use them. I call it man-machine interface (M-M-I). So, when we started the exercise there were some challenges. I believe it takes a couple of days to connect between the MNFS and the components. After this, we began to synchronize the multi-domain capabilities.

COL Himes response: In my everyday duties, I am the U.S. Army South (USARSOUTH) Deputy Commander for operations and am currently the interim Chief of Staff (CoS). For this exercise I was the MNFS Deputy CoS.

This exercise started at D+41 (Day 41), so there were some artificialities. This created some difficulties as we asked the commander to visualize, describe, and direct in order to understand, integrate, and get after multi-domain capabilities and operations. Because we came in kind of late in the scenario and the friction with partner nations (PNs) coming in, coming together as a Multinational Task Force saw initial challenges. We did not have a lot of time to do staff exercises (STAFFEX), go through our battle rhythm, or run some battle drills to really understand how we were going to operate. We did not have that preliminary opportunity to do all of this before we started our operations.

Question: What were the greatest challenges to achieving joint and multinational interoperability and how did you overcome roadblocks under current policies and using current available systems?

CAPT Gonzales response: I have heard some very nice words on interoperability that I will repeat from MG Garzon from Colombia (USARSOUTH Deputy Commanding General-Interoperability). "Multinational interoperability within a multinational coalition depends on understanding the policies and national caveats of each country. What they can and cannot do on the battlefield, across the area of responsibility (AOR), and in all the joint area of operations (JOA)." This is a great challenge to understand and implement all these policies. They must be reviewed by a team of lawyers from all the different countries that participate in the exercise. I believe this is a new task but believe nowadays it is one of the most important tasks to accomplish before the next PANAMAX. I submit this must be done before we start planning the exercise. Before the next exercise, we also need to develop terms of reference (TOR), which we did not have for PANAMAX 22 (PMX22).

We in Chile used Joint Publication 3-0, *Joint Operations*; and Joint Publication 3-33, *Joint Task Force Headquarters*, to prepare for this exercise. I do not believe other PNs used them. In my view, these are such important manuals that all must be familiar with them before they come to the next exercise.

Also, the PANAMAX Joint Manning Document (JMD) must be understood and agreed to by all. There was a big problem in not having a J-5 for the exercise. Additionally, this position was not filled at the MNFS Planning in Crisis (PIC) or at the component PIC. When I arrived here, I took a team from Norfolk to be my J-5 section to support planning in PANAMAX.

COL Himes Response: The United Nations Security Council Resolution (UNSCR) provided us the necessary guidance and legitimacy. But like CAPT Gonzales said, getting together a team of lawyers early on to review documents would be beneficial. We always tend to look at things through our own U.S. lens and we need to look at products through the eyes of all the PNs. This will ensure we are seeing and saying the same things. Some doctrinal terms may mean one thing to the U.S. but may have a different meaning to another country. Understanding all of that up front and then having the different lawyers by country review it is a good idea. We saw some moments of friction occur when we did not have that common understanding in place.

Question: What were the successes and challenges for MNFS operations within the information environment (IE)?

CAPT Gonzales response: I will take the words of MG Ferraz from Brazil where he said, "we have been successful because we have been training a lot together and know the importance of understanding each other to make things happen." In the IE, this is the type of work that must become one of the most relevant tasks to support our troops on the ground and to support the population. Appropriate actions made in the IE support legal requirements and brings legitimacy to the operation. It informs legality if you are under a resolution of the United Nations (UN).

Legitimacy are the eyes of the people we are helping, and the view of the many countries involved.

For example, let us look at operations in the Ukraine. Everyone now realizes that Russia's Putin is the "bad guy," and that the President of Ukraine, Volodymyr Zelenskyy is a "great guy." Through the IE, there is a lot of support for Ukraine, and they are winning the war in that environment. That gains legitimacy for the operation. This kind of operation depends on both legitimacy and legality to have success.

COL Himes response: We talked about needing to be aggressive in our information operations (IO). Our IO officer and public affairs officer (PAO) understood this from the start. For example, in the New Centralia scenario, there were two children allegedly killed by MNFS forces. There was no quick reaction by the country of New Centralia to dispel this account to the local population. So, immediately the tide turned against the MNFS because we were not aggressive enough even though we continued to preach that we needed to be aggressive. This is not unlike it was in Afghanistan and Iraq. My old boss used to say, "You do not have to be right; you just have to be first and not wrong." You just get the word out first, so you are not in the reaction mode. Doing this, you are forcing the enemy to have to react, which is always much better. Also, understanding all available mediums is important: social media, radio, television, newspapers, etc. We did not initially capitalize on all these, were somewhat slow out of the start, and then eventually got better.

Question: What are your takeaway lessons and best practices from OPERATION FUTURO NOBLE (PMX22)?

CAPT Gonzales response:

- All countries demonstrated a lot of professionalism and know how to perform their duties.
- Exercise must be set upon arrival.
- Before the start of the exercise (STARTEX), all must know, receive training on, and be proficient on the different communication devices and networks.
- All assigned positions must be filled before STARTEX.
- There is only a short amount of time to make things happen—if you want to train on a specific task or get to a certain result, you must factor this in and do it early.
- Exercise proved to have several very nice results and there was much improvement in a short amount of time.
- All of the PNs have much capability and know different ways to go to the same point.
- If PANAMAX were to last another two to three more weeks, there would even be more improvements to include refined briefings, more efficient and effective working groups (WGs), and better products.

COL Himes response:

- Conducting a STAFFEX before the command post exercise (CPX) is key to refine the battle rhythm.
  - We went through the growing pains as we do even for a U.S.-pure operation.
  - In the first couple of days, we were still trying to figure out the battle rhythm.
  - Until you have everyone in the same space actually going through it, producing products, and conducting the briefings, it is only a paper drill until you actually do it. Until then you really do not know how well it is going to work.
  - There were too many meetings to attend, which often resulted, at the end of the day, in not having firm answers on tasks.

- Conduct a communications exercise (COMMEX) before the CPX that includes not only the MNFS staff, but also our higher headquarters (HHQs) and subordinate commands.
- PNs had incredible capability and talent and were in key leadership positions. It helped me learn what are the key lesson takeaways for the U.S. even after multiple deployments in Afghanistan and Iraq.
- Watching CAPT Gonzales orchestrate the staff in itself was a learning experience for me as a career infantry officer. He is a Chilean Navy submariner and is the CoS of a multinational force headquarters (HQs) for land operations.

CAPT Gonzales response: Last but not least, the ones who start planning the exercise, the team for PANAMAX, has to be at all planning sessions, meetings, and events to include the MNFS PIC, component PIC, and the PANAMAX CPX at the end. It must be the same team. This, however, is a challenge. For example, for this exercise some of the PNs went to the MNFS PIC, changed personnel, and others went to the component PIC or to this CPX. This often is due to PN funding. For example, a country may have funding for 15 personnel and to receive this training had five personnel go to each of the three different major events.

I would prefer a country goes through the whole process and those five guys go to all the events to learn more. Then, when they return to their country, they can teach on all this. A good example is the Brazilians who had the same team go through all the planning events and came here for the PANAMAX CPX. They built a team and also prepared for PANAMAX in Brazil. They are a very good example.

COL Himes response: That is a key point, because for us, the normal summer transition is in July. We may need to consider scheduling the PANAMAX CPX before the summer rotation, or well after it, so folks have gone through the transition and are the ones who have longevity.

Richard C. Merrin, Foreign Policy Advisor, Multinational Force South, 18 August 2022

Question: What were the challenges and successes you experienced during the exercise?

Answer: PANAMAX shaped my time at U.S. Army South (USARSOUTH) in many positive ways. I was so new to USARSOUTH when PANAMAX began that I didn't even have access to the unclassified email system until the first morning of the exercise. In the tents set up to replicate what a command HQ might look like in a real operation, I started working with multinational partners, as well as the colonels, majors, noncommissioned officers (NCOs), and other U.S. staff who I now engage with daily.

When issues arose, I sometimes did not know who to ask, or where they were. But with each challenge, I learned more and played my role of advising on foreign policy matters more fully.

Question: What was the most impactful policy advice and counsel you provided the MNFS commander during the fight and what was the effect?

Answer: I provide advice to align military actions with interagency-driven foreign policy. The MNFS commander always supported such alignment. He tasked me to ascertain whether USARSOUTH could pursue certain tactical moves. I had not yet fully understood the significance of "authorities," but quickly worked both with the legal advisor and connected with the embassy to understand what was already permitted, what might be considered, and what was clearly unacceptable. Through these efforts and my advice, the commander changed orders to several joint warfighting functions, preparing for a possible action.

Question: In your view, what would make PANAMAX to be a more effective and realistic exercise in the diplomatic and interagency space?

Answer: I keep wondering about whether the White Cell should have been formed more fully or staffed in a more robust manner. (The White Cell essentially is a call center staffed by highly experienced officials who role plays various inter-agency officials.) I did not know which organizations were represented in the White Cell. I also found it increasingly difficult to get people on the line who played such roles, even when making multiple calls. That said, I particularly appreciate advice given by a retired ambassador who went out of role on several occasions to counsel me in my role and to guide me in what questions we really should be asking.

Additionally, to be more effective and operational, we should all have been trained on Combined Enterprise Regional Information Exchange System (CENTRIXS) well in advance. I saw many personnel, including some senior leaders, trying to access CENTRIXS during PANAMAX.

On a related note, I suspect that, when we do not have access to such systems, U.S. personnel try their best to meet deadlines and pull together whatever they can. In so doing, we may have a tendency to rely on our compatriots, possibly to the detriment of working jointly with PNs. This makes mastery and functionality of our information systems all that more important.

As a diplomat, I also was troubled to see that we did not make best use of mealtimes to develop friendly working relationships with PN participants. Those staffing some joint warfighting functions pulled together snacks and a coffee machine. But frequently, PN participants took a bus offsite for their meals (perhaps missing a few hours of participation) while U.S. participants went off in search of food or ate their packed lunches at their tables. I do not think a real operation would look like this. Particularly for our AOR, where much can develop over a meal, including understanding and reaching agreement. We missed a good opportunity. Just standing in line and complaining about the food can build rapport that might pay off years down the road.

Question: What are your takeaway lessons and best practices?

Answer:

- Broaden the meal plans. Many Latin American cultures place a much higher value on knowing each other, rather than just working on a task.
- I wonder whether partially staffing the night shift with PN participants would have added value. Too few overnight PN participants likely meant providing U.S.-generated perspectives during morning briefings.
- I fondly remember a proposal generated by one joint warfighting function to which I quietly yet strongly objected. Such exercises are good times to test limits and make mistakes. I know I made them and would rather do it in an exercise than in a real situation.
- I would encourage any foreign policy advisor to jump into these sorts of exercises, even if brand new. They orient us on the very essence of our role to the commander for future missions. They pull us into the organization, help us be known, and to know our colleagues. Someone at Army South told me that, through OPERATION FUTURO NOBLE, I am four months ahead of some foreign policy officers in getting to know USARSOUTH personnel. I look forward to the next exercise and hope I will serve better, while making new mistakes.

BG Lynn M. Heng, Deputy Commanding General-Operations, Multinational Force South, 23 August 2022

Question: What were the successes and challenges in establishing and making progress to achieve multinational interoperability?

Answer: We achieved success by meeting the goal of functioning as a joint and combined staff with 19 PNs. In any type of event like this, there are always language barriers to overcome. The Chileans specifically did a fantastic job of identifying their senior leaders who could speak very good English, which helped tremendously. They were my primary engagements, including the Chilean Army Deputy Commanding General (DCG), CoS, and to a lesser extent with the G-3. Additionally, not only the Chileans, but most of the other countries could speak English during their briefings and updates. Our PNs really took the lead in the communications environment, with many speaking English, as I and many of their U.S. counterparts do not speak Spanish or Portuguese.

The other big success was, we all learned from each other. This is a key to any exercise bringing in joint and PN forces. You could see this demonstrated by the different countries represented in the Joint Operations Center (JOC) as we put our strategy, efforts, and reporting together. The main goal was interoperability. Along the way, we developed many friendships as well, which is key to long-term success in our AOR.

A primary challenge was understanding the expected roles and responsibilities at the DCG level, as there were three of us. A week out, I was being told by the staff that I would not have a role in this exercise. I visited the Commanding General (CG) to confirm, and he stated I would be the Deputy Commanding General-Operations (DCG-O). I requested we discuss this with the U.S Army South staff as MG Stangher from Chile was identified to be the DCG for PANANAX and that MG Garzon, USARSOUTH Deputy Commanding General-Interoperability (DCG-I) (Colombian Army 2-Star) was also identified to participate in the exercise. Everything had been designed to have the Chilean 2-Star as the DCG. The CG acknowledged and immediately identified MG Stanger as the DCG, I would be the DCG-O, and MG Garzon would be the DCG-I.

Initially, we did not quite understand our roles, but MG Stangher was great, and we were here to support him. He was very gracious with no ego. Even though initially confusing, we worked out our roles and responsibilities at the DCG level.

Question: What were the successes and challenges in the information advantage space and how did MNFS control the narrative?

Answer: IO is critical to the force, along with cyber. IO has been important for many years, but we must stay ahead in the IO game. I thought there was great daily feedback from our IO folks, which showed the daily progress on what we were doing to overcome negative and false information, which allowed us to build on our successes. Our IO campaign capitalized on the good things we were doing and highlighted the bad things the enemy was doing. We inundated the public domain with information. Over the course of the exercise, you could definitely see our IO campaign was working in our favor. We utilized many IO tools across the IE.

Importantly, we were not digressing to the enemy's level in distributing lies. A real-world example of this is Russia, who has been distributing lies for years to the public, believing if you put enough information out there, people will start to believe it. For example, in PANAMAX an incident came up where the MNFS considered saying we killed a senior enemy leader when in reality, we had not. Upon further discussion between senior MNFS leadership, including bringing in the opinion of USARSOUTH's political advisor (POLAD), we decided putting this misleading information was not the right thing to do at this time. In my view, if you put it out in the media and it later comes up in the media he is still alive, you lose your credibility. If you choose to put out false IO narratives, the only way you may be able to get around such a discrepancy is reporting it as not something the U.S. Government (USG) says, but as reported by a private news agency.

A challenge is trying to understand the mindset of the local population in the AOR. It is critical to know just who the enemy is and what support they are getting over time from the local population. Many of us are familiar with the AOR but are not experts.

Question: How did you visualize and what went well and not so well in PMX22? What can be done to make the next one better?

Answer: What the MNFS senior leaders quickly discovered concerning our reporting process happened when we first briefed the combatant commander (CCDR) to then have our MNFS subordinate components brief immediately after us. It started with one, then all joined in. Normally, subordinate commands should not be briefing after we briefed and already talked about their status. But it became quickly clear to us, this is what the CCDR wanted to happen to promote interoperability. It facilitated opportunities for our components to let their subordinate commands brief, at this level, enabling them to interact with all of their counterparts at echelon. I am glad this was identified initially, which quickly eliminated confusion on the matter. Once we understood the boss wanted this, there was absolutely no confusion.

MG Stangher and I conducted a few co-interviews together with the news media. I did this also with MG Garzon. We also traded off covering requirements when the MNFS commander was out. It all worked out great. All understood what needed to be accomplished in this complex combined/joint fight.

Those are the good things. One thing that did not go so well was a misunderstanding with the exercise's senior mentor. Across MNFS, we understood interoperability was the key. However, the exercise's senior mentor, a retired Navy Vice Admiral, kept hitting us up to provide the CG with mission courses of action (COAs) to include for the invasion of Panama. Overall, this was the only thing he ever talked to me about. I informed him we were not getting into that depth of mission planning and execution because of the exercise's short number of days and 12-hours a day clock. Moreover, that interoperability and working with our partners were the priority.

When it was identified that interoperability was the main focus, we made certain allowances and divested from some of the formal reporting, planning, and mission development parts you normally do. Again, this was done in order to center on interoperability and relationship building. With this, many partner countries participating under only a week-long exercise, to do anything more than the basics is not reasonable. Certainly, to get into detailed COA analysis on all major missions and brief these to the commander is probably hopeful at best and not realistic. It just did not happen. This is OK. You must understand your limitations and go after major goals and objectives.

Question: What are your takeaway lessons and best practices from OPERATION FUTURO NOBLE (PMX22)?

Answer: These types of events are key to building relationships with our partners. China is out there throwing millions of dollars at these countries. We are not able to do this. We talk about "Defense and Fraternity," and this is one of the ways we do it. For us to build these relationships, we depend on exercises, key leader engagements (KLEs), country visits, and staff talks. These are our best tools to keep the doors open with these countries. Again, they get a lot of foreign money thrown at them and, unfortunately, they often do not understand all the strings tied to it. These types of exercises enable us to create friendships and mutual understanding on how each of our organizations operate. This is invaluable and will pay great dividends in the future. We cannot afford to buy friendship like the Peoples' Republic of China (PRC). However, we can continue these combined/joint exercises to keep our relationships strong.

The last thing I would like to mention is guidance we received from the CCDR to look at conducting the PANAMAX exercise more often than currently scheduled. Now it is conducted every other year. I do not think it is possible to make it a full-blown annual exercise. This is due to required planning events to make it happen, funding, and the schedules of both our components and partners.

Conducting PANAMAX every other year seems about right. Perhaps a tabletop exercise (TTX) or a virtual event to reduce costs and operations tempo (OPTEMPO) can be built in to keep up the momentum between PANAMAX rotations.

Question: Is there anything not asked you would like to address?

Answer: Nothing really to add, but to reiterate, due to our budget and personnel constraints these operations are invaluable to our continued success in theater. If we do not do these, we may fall further behind, lose more connectivity, and lose or jeopardize more democracies in the AOR. These exercises are vital.

BG Hernando Garzon Rey, Deputy Commanding General-Interoperability, Multinational Force South, 29 August 2022

Question: What were the greatest challenges to achieving joint and multinational interoperability and how did you overcome roadblocks under current policies and using current available systems?

Answer: There are three dimensions in interoperability. They include the human, procedural, and technical domains. The main challenge during PANAMAX was in the human domain, specifically the language barrier and cross-cultural interactions. The way we solved it was by using interpreters and encouraging everyone to express their ideas and participate in discussions in their native language. This was important, because at the beginning, we realized that only those who spoke English were participating. After some encouragement, the level of participation of delegates from other nations in the discussions was increased. Something very important for the exercise was that the leaders from each directorate were foreign officers. This motivated them to take a leadership position.

The other challenge was in the technical aspect. Some participants did not know how to use the platforms. But with training and practice we got over it. At the beginning, they were not familiar with certain digital systems to process the different requirements. At the end of the exercise, everyone was very well integrated and comfortable in their jobs.

In term of procedures, it was basically a planning exercise. All countries fundamentally use the same military decisionmaking process (MDMP) with a few changes. How do we overcome these obstacles? We overcome them by focusing on the similarities and not the differences. I think this is the key to be more interoperable.

Question: What changes would you make to PANAMAX for it to be an even better exercise for both the U.S. and the PNs?

Answer: This question is a bit difficult to answer because it would be arrogant to make changes to an exercise that is very well done and has been improved every year. Each day we considered the lessons learned from the previous exercise. So, rather than making changes, I think it would be advisable for the next PANAMAX to include an analysis of the national policies of each country to employ forces in a multinational peacekeeping or peace enforcement operation. Each country has certain restrictions and limitations that must be considered and planned for. If tomorrow we had to form a coalition to counter a regional threat, what would be the position of the different countries? Understanding the positions of the other countries under a multinational force command is a key task. Carefully examine each country's legal considerations and structure for the multinational force. Each country may understand and apply some international laws in different ways. In this sense, each country has specific directives and different political sensitivities to assume the risks of collateral damage. In the end, the laws and policies of every country define the grand strategy.

Question: What are your takeaway lessons and best practices from OPERATION FUTURO NOBLE (PMX22)?

Answer: The main lesson learned is that an exercise like PANAMAX has the transversal objective of strengthening alliances and interoperability. In other words, the coalition is the most important thing. When leaders understand this, they will always look for ways to cooperate, improve their understanding, and adapt their capabilities.

The other great lesson is that there are no obstacles that cannot be overcome when you want to work together and multinationally. More participation in the exercise is the only way for armies to become interoperable because in training, the leader understands that he needs to adapt and that he must improve. Also, he understands what are the capabilities that need to be acquired to be more interoperable, what are the policies to adopt or understand, and what is the orientation and leadership.

MG William L. Thigpen Commanding General, Multinational Force South, 1 September 2022

Question: What are your thoughts and concerns on roles and responsibilities of an Army Service Component Command (ASCC) transitioning to a Multinational Force HQ?

Answer: We must plan for this type of training way in advance. This is due to the scale and scope of the operations. For OPERATION FUTURO NOBLE (PMX22), first and foremost it involved collaborating with U.S. Southern Command (USSOUTHCOM) and multiple multinational forces. An ASCC transitioned to a Multinational Force HQ must be built on legitimacy with the U.S, host nation, and PN forces conducting operations side by side. In this case, under and supporting an UNSCR.

Figure A-1 shows a battle update briefing.

Figure A-1. DCG, MNFS (left); CG, USSOUTHCOM (center), and CG, MNFS (right) at Battle Update Briefing (PAO, U.S. Army South)[40]

Interoperability is the biggest concern. To enhance interoperability, we leveraged our PN liaison officers (LNOs) and had LNOs at our Combatant Command HQ. We must train and practice getting better at interoperability each and every day. This must be across all three aspects of interoperability in the human, technical, and procedural domains.

Question: What were the MNFS successes and challenges in the IE and how did you control the narrative?

Answer: First, let me say I am very proud of the team that planned and worked issues across the IE. I give credit to the Fires and Effects Directorate (FED) and specifically to the two Chilean Navy Officers who were the exercise's CoS, CAPT Gonzales and CJ3 (Director of Operations); and CAPT Gutierrez, who opened up many avenues in the IE space, maximizing capabilities of the 19 PN countries in the MNFS.

Another dimension of a Multinational Force HQ is you live in the JOA, which brings cultural awareness requirements. The IE is made better when it involves more than just a U.S. formation. We focused on controlling the narrative with input. Through the press and social media, we aggressively put out our strategic messages. This also served to counteract misinformation and disinformation being put out by the Brigada de los Martis de la Liberacion (BML), the exercise's portrayed hostile forces who we saw had their own IE activities attempting to influence the population. Our IO team, under FED, and the PAO employed a multinational approach to address the host nation, which proved to be effective with both the local population and in the international media.

Question: How did you visualize and converge multi-domain capabilities under a Whole of Government approach?

Answer: Operating under an UNSCR brings legitimacy and moves operations forward under a Whole of Government support structure. There are always political dynamics to consider. Legitimacy and legalities have effects at the highest level.

We effectively brought together multi-domain capabilities of air, land, maritime, space, and cyberspace under one HQ. We found each domain influences all other domain operations. To synchronize, we had a flag officer in each of those domains. Bringing together all these capabilities presents multiple dilemmas to an adversary. For example, conducting simultaneous amphibious and land domain operations allowed the Combined Forces Land Component Command (CFLCC) to exploit ground success.

Conducting MDO also enabled us to exploit success in the IE. It also denied BML the opportunity to take advantage in domains we were already dominating.

Question: Is there anything we did not cover that you would like to add?

Answer: The many PN experts in the MNFS HQ proved invaluable. This includes the Deputy Commanding General, MG Stangher from the Chilean Army, who ably provided guidance and made decisions across an array of multinational force operations.

MG Garzon, the USARSOUTH Deputy Commanding General-Interoperability, looked at and provided feedback on how our partners worked things out during planning and operations. His insights not only enhanced interoperability but also built PN relationships and over time will increase mutual readiness.

Our CoS, CAPT Gonzales, and CJ3 (Director of Operations), CAPT Gutierrez empowered the staff and drove the operations process. Again, both are Chilean Navy Officers.

Last thing, we took a hard look at the battle rhythm to make sure we were not fighting it. Having an efficient battle rhythm, with space between events, creates opportunities for the same staff members to attend required meetings and provides time for them to get back with and meet with their teams.

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GLOSSARY

ACRONYMS AND ABBREVIATIONS

AAR	after-action review
ADSI	Air Defense Systems Integrator
AFTDS	Advanced Field Artillery Tactical Defense System
AMDWS	Air and Missile Defense Workstation
AOC	Air Operations Center
AOR	area of responsibility
APAN	All-Partners Access Network
AR	Army Regulation
ASCC	Army Service Component Command
ATO	Air Tasking Order
A/V	audio visual
B2C2WG	boards, bureaus, centers, cells, and working groups
BCS3	Battle Command Sustainment Support System
BHO	battle handover
BML	Brigada des Martires Del Libération
C2	command and control
C4I	command, control, communications, computers, and intelligence
CA	civil affairs
CAP	crisis action planning
CCDR	combatant commander
CCMD	Combatant Command
CDLIM	Common Data Link Interface Module
CE2	Combatant Commander Exercise Engagement
CECG	Combined Exercise Control Group
CEMA	Cyber and Electromagnetic Activities
CENTRIXS	Combined Enterprise Regional Information Exchange System
CENTRIXS-IANTN	Combined Enterprise Regional Information Exchange System, Inter-American Naval Telecommunications Network
CFACC	Combined Forces Air Component Command
CFLCC	Combined Forces Land Component Command
CFMCC	Combined Forces Maritime Component Command
CFSOCC	Combined Forces Special Operations Command
CGDB	Commander's Guidance and Decision Board
CIP	common intelligence picture
CIS	communications and information systems

CJTF	Combined Joint Task Force
COA	course of action
COIC	Command Post Combined Operations and Intelligence Center
CONPLAN	contingency plan
COP	common operational picture
COMMEX	communications exercise
CoS	Chief of Staff
CPX	command post exercise
CSB	Contracting Support Brigade
CTCB	Combined Targeting Coordination Board
CUOPS	current operations
DCG	Deputy Commanding General
DCG-I	Deputy Commanding General-Interoperability
DCG-O	Deputy Commanding General-Operations
DCGS-A	Deputy Commanding General System-Army
DCMA	Defense Contract Management Agency
DIA	Defense Intelligence Agency
DoD	Department of Defense
DoS	Department of State
DSM	decision support matrix
DTT	deployable training team
ESC	Expeditionary Sustainment Command
FAAR	facilitated after-action review
FED	Fires and Effects Directorate
FMI	foreign military interaction
FPC	final planning conference
FUOPS	future operations
FVR	foreign visit request
G7 TREX	G7 training and exercise
GCC	Geographic Combatant Commands
GCCS-A	Global Command and Control System-Army
GCCS-J	Global Command and Control System-Joint
GP medium	general-purpose medium
GVS	Global Video Services
HHQs	higher headquarters
HPTL	high-payoff target list
HQs	headquarters
HQDA	Headquarters Department of the Army

IANTN	Inter-American Naval Telecommunications Network
ICFT	Inform/Influence Cross-Functional Team
IDP	internally displaced person
IE	information environment
INTSUM	Intelligence Summary
IO	information operations
IPC	initial planning conference
IRC	information-related capabilities
IRCWG	Information-Related Capabilities Working Group
ISR	intelligence, surveillance, and reconnaissance
JA	judge advocate
JADC2	Joint All-Domain Command and Control
JBSA	Joint Base San Antonio
JCSE	Joint Communications Support Element
JECC	Joint Enabling Capabilities Command
JELC	Joint Exercise Life Cycle
JEP	Joint Exercise Program
JIACG	Joint Interagency Coordination Group
JIM	joint, interorganizational, and multinational
JIIM	joint, interagency, intergovernmental, and multinational
JIPTL	Joint Integrated Priority Target List
JISE	Joint Intelligence Support Element
JMD	Joint Manning Document
JMSEL	Joint Master Scenario Event List
JOA	Joint Operations Area
JOC	Joint Operations Center
JP	Joint Publication
JPP	Joint Planning Process
JRE	Joint Range Extension
JTF	Joint Task Force
KLE	key leader engagement
KM	knowledge management
KMO	knowledge management officer
LMMT	Link Monitoring and Management Tool
LOE	line of effort
LOO	line of operation
MA	mission analysis
MDMP	military decisionmaking process
MDO	multi-domain operation

M-M-I	man-machine interface
MNFS	Multinational Force South
MNL	multinational logistics
MOU	Memorandum of Understanding
MPC	main planning conference
MS Teams	Microsoft Teams
NATO	North Atlantic Treaty Organization
NCO	noncommissioned officer
NSL	National Security Law
OAI	operations, activities, and investments
OCR	office of coordinating responsibility
OCS	operational contract support
OCSIC	operational contract support integration cell
OE	operational environment
OJOA	outside the Joint Operations Area
OPORD	operations order
OPR	office of primary responsibility
OPSUM	Operations Summary
OPT	operational planning team
OPTEMPO	operations tempo
OSJA	Office of the Staff Judge Advocate
PACE	primary, alternate, contingency, emergency
PAO	public affairs officer
PCS	permanent change of station
PIC	Planning in Crisis
PMESSI-PT	political, military, economic, social, information, infrastructure, physical environment, and time
PMX	PANAMAX
PN	partner nation
PNSF	partner nation security forces
POLAD	political advisor
PRC	Peoples' Republic of China
PSOP	planning standard operating procedure
PSYOP	psychological operations
ROE	rules of engagement
RSO&I	reception, staging, onward movement, and integration
RTL	restricted target list
SA	situational awareness
SCD	Security Cooperation Directorate

SCI	Secret Compartmented Information
SCO	Security Cooperation Office
SFAB	Security Force Assistance Brigade
SIMDECK	Simulation Deck
SIPR	Secret Internet Protocol Router Network
SMEE	subject matter expert exchange
SPP	State Partnership Program
STAFFEX	staff exercise
STARTEX	start of exercise
TCP	theater campaign exercise
TDACS	Tactical Data Analysis
TDB	Targeting Decision Board
TOR	terms of reference
TS	Top Secret
TSC	Theater Sustainment Command
TSVOIP	Top-Secret Voice Over Internet Protocol
TTP	tactics, techniques, and procedures
TTX	tabletop exercise
UN	United Nations
UNSCR	United Nations Security Council Resolution
USARSOUTH	United States Army South
USEUCOM	United States European Command
USG	United States Government
USINDOPACOM	U.S. Indo-Pacific Command
USSOUTHCOM	United States Southern Command
VTC	video teleconference
WG	working group
WHINSEC	Western Hemisphere Institute for Security Cooperation

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