EXERCISE BOLD ALLIGATOR – 2012: FINAL REPORT

Expeditionary Warfare Collaborative Team (EWCT)
(Integrated Blue – Green Pillar)

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Disclaimer:
These observations and opinions were drafted by assigned team members and do not necessarily reflect an official USN / USMC position at time of publishing.

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Foreword

*Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, January 2012, highlights the continued importance of power projection in order to credibly deter potential adversaries and prevent them from achieving their objectives. The U.S. Navy and Marine Corps play an indispensable role in that effort. The *Air-Sea Battle Concept*, May 2010, developed with the Navy, Marine Corps and Air Force, describes our response to the growing Anti-Access/Area Denial (A2/AD) threats. Gaining and maintaining access should also be a part of a Navy-Marine Corps potential concept “**Single Naval Battle**” which should describe our unique contributions to the joint force commanders’ ability to project and sustain power, anywhere in the world, in the face of growing challenges to access and entry.

While challenges may exist across the range of military operations, the Single Naval Battle concept should nest within the broader concepts contained within the *Joint Operational Access Concept (JOAC)* January 2012, and fully acknowledge the importance of pre-conflict condition setting and the contributions of interagency, international and multinational partners. As the U.S. and its allies adjust from the land conflicts of the past decade, integration with joint and coalition forces is clearly required when formulating approaches for the decade ahead.

The U.S. Navy and Marine Corps provide the joint force commander with the capability for decisive action in the littorals and projecting expeditionary forces from the sea on to land. This includes the ability, when required, to gain entry into contested foreign territory to promote joint force freedom of action. **Bold Alligator 2012 (BA12)** was a power projection exercise focused on how we conduct entry operations against a hostile force.
Executive Summary

Significant contributions are made to U.S. security by our rotational expeditionary forces embarked aboard amphibious warships. These forces combine the advantages of an immediate, yet temporary presence, graduated visibility, and tailored, scalable force packages structured around amphibious warships, maritime prepositioning shipping and a Marine Air Ground Task Force (MAGTF). It became clear to Navy and Marine Corps leadership that a renewed effort is required to refocus the naval services on the unique capabilities and relationships.

The Bold Alligator Exercise series is unique in its focus on the Expeditionary Strike Group (ESG) and the Marine Expeditionary Brigade (MEB) command elements and supports the effort to “reinvigorate amphibious capabilities in the Navy and Marine Corps.” This not only speaks to the need to refresh skills, but also to adapt them to changes in force structure, technology, training, and culture that have developed since the existing doctrine was last reviewed and the skills last exercised. Bold Alligator 2011 (BA11) was conducted in December 2011 as the “crawl phase” to BA12, the “walk phase,” in training the ESG-2 and 2d MEB staffs for large-scale amphibious operations. This exercise was the culmination of a year-long series of training and planning conferences intended to “revitalize amphibious planning and execution skills within the context of emergent maritime operational concepts, doctrine and processes.”

This report represents the results of BA12. The stated mission of BA12 was to “Plan and execute a MEB-sized amphibious assault from a seabase in a medium threat Anti-Access/Area Denial (A2/AD) environment to improve naval amphibious core competency.” It was a live and synthetic, scenario-driven, simulation-supported exercise conducted from 30 January - 10 February 2012. At-sea forces operated in the vicinity of Onslow Bay, North Carolina and focused on how we conduct, plan, and execute entry operations against a hostile force.

The primary training audience of ESG-2 and 2d MEB was expanded for BA12 to include the Enterprise Carrier Strike Group (CSG) which was at sea conducting their Joint Task Force exercise. The training audience also included USS Iwo Jima Amphibious Ready Group (ARG) with embarked 24th Marine Expeditionary Unit (MEU), Mine Countermeasures (MCM) Squadron Three, and Riverine Group One and Riverine Squadron Three from Navy Expeditionary Combat Command. Initially intended as a response cell, the Coalition Force Maritime Component Commander (CFMCC) was robustly manned and actively responded as the common higher headquarters. Additionally, France, United Kingdom, Canada and the Netherlands participated with tactical forces and staff members. In all, 22 US ships including one Coast Guard vessel, three Coalition ships - a French LPD and two Canadian MCMs - and approximately 14,000 Marines and Sailors of nine nations participated in the exercise.

Observations and assessments made by subject matter experts from the Center for Naval Analysis, Expeditionary Warfare Collaborative Team, Strike Force Training Atlantic, MAGTF Staff Training Program, Combined Joint Operations from the Sea Centre of Excellence, Navy Warfare Development Command and Marine Corps Center for Lessons Learned were thoroughly analyzed, along with the after action reports from ESG-2 and 2d MEB. This analysis identified patterns and specific gaps that require further attention. These gaps have been grouped into the following ten key findings along with the number of associated recommendations.
• **ESG / MEB training and education programs.** The loss of standing amphibious MEBs and the Navy’s Amphibious Groups has eroded the habitual command relationship between the MEB and the ESG. This shortfall adversely impacts the ability for the staffs to plan and execute at the operational level. Specific skills, capabilities and operational level command and support relationships experienced while deployed are not common practice in the day-to-day CONUS operations. Whether as an ad hoc staff rapidly responding to crisis or a methodical work-up to a deployment, the individuals and staffs of the MEB and ESG require training and education. **Recommendations (8): Doctrine (2), Training (4), and Leadership (2).**

• **Exercise Construct.** The mixing of live and synthetic forces, combining multiple certifications, and incorporating higher headquarters staff response (white) cells was challenging. The limited duration of BA12 and the availability of live assets prevented a full assessment of MEB lift requirements on amphibious shipping. Furthermore, without a clear definition of the requirement, MEB lift cannot be replicated in a virtual or constructive environment. Continued fiscal pressures will likely drive us to employ more live-virtual-constructive (LVC) exercises to reduce training costs, further increasing the need to make them as realistic and seamless as possible for the training audience. LVC will allow the training audience to operate with the appropriate scale and scope of ESG/MEB level operations to stimulate the commanders and their staffs with the complex challenges of the operating environment. Providing a wide array of simulations, response cells and exercise control requires a great deal of planning, training and coordination. Integration of unique capabilities that normally would not be available in the live exercise can be replicated within simulation. CFMCC, CFACC and other responses cells need to be appropriately manned with experienced staffs to enhance realism. **Recommendations (14): Doctrine (1) and Training (13).**

• **Shipboard spaces and C4 systems.** Shipboard spaces, available C4 systems and configurations were not fully conducive for integrating Navy and Marine Corps planning and operations at the ESG and MEB level. Multiple FO/GO staffs strained both the capabilities and capacities of existing spaces and systems aboard L-Class amphibious shipping – particularly aboard the LHDs where the majority of the staffs were located. The LHD class ship does not have the communications suites and capability to support an ESG/MEB staff during amphibious operations. Voice over Secure IP (VOSIP) systems were employed, but only through the use of the Marine Corps' shore-based VOSIP network and the VOSIP conferencing capabilities resident at the Navy Warfare Development Command’s (NWDC) Navy Center for Advanced Modeling and Simulation (NCAMS). There were no Navy Program-of-Record (POR) VOSIP systems available. **Recommendations (12): Doctrine (2), Organization (1), Training (1), Materiel (7), and Personnel (1).**

• **Coalition Forces** made critical contributions, but C2 and information flow was challenging. LNOs were the key to the successes observed. All commands reported needing training and additional CENTRIXS terminals, printers, and scanners to increase information flow and to enable collaborative planning. U.S. Forces must learn to function routinely on CENTRIXS networks in the coalition environment and by exception on U.S. only networks. U.S. reliance on SIPR chat, SIPR email, SVTC, VOSIP, and PowerPoint briefs vice formal messages, operations orders and doctrinal communication channels also limited coalition integration. Processes and procedures for transferring critical information from US-only systems to coalition partners (including, but not limited to Foreign Disclosure Officer (FDO) speed and
capacity) were slow and inadequate to support integrated planning and flexible execution. **Recommendations (9): Doctrine (1), Organization (1), Training (3), Leadership (1), Materiel (2), and Personnel (1).**

- **ESG-2 Manning** was not sufficient to support an immediate deployment to execute MEB sized amphibious operations. Specific functions expected of a deployed ESG are not inherent in current CONUS ESG staffing and many missing capabilities are required early in planning. Although some functions can be brought in through individual augmentation (IA) to the staff, arrival of large numbers to the standing staff generates unfamiliarity and causes additional stress. Liaison requirements to and from the core ESG Staff need to be preplanned and codified in operational plans, staff organization and the battle rhythm. When deployed with a MEB, the ESG should have appropriate counterparts in each of the staff areas. In BA12, the augment of the ESG staff with the CPR-4 staff provided additional amphibious experience. However, the CPR-4 staff was not collocated with the ESG staff, and did not have sufficient numbers of personnel to simultaneously support amphibious planning, execution and perform shipboard duties. **Recommendations (2): Organization (1) and Personnel (1).**

- **Amphibious Warfare Commander (AMWC).** ESG-2 designated CPR-4 as AMWC to plan and oversee the details of ship-to-shore movements. ESG-2 reported that the AMWC was useful because it allowed the ESG staff to focus on the operation as a whole. However, the roles and responsibilities of the AMWC are not specified in doctrine, nor is there a clear distinction between this position and the Central Control Officer. This led to confusion. BA12 did not provide sufficient information to assess the value of establishing an AMWC or what its roles and responsibilities should be. **Recommendations (2): Doctrine (2).**

- **Military Sealift Command (MSC) provided a variety of shipping support throughout the exercise with assets from both the prepositioning program and Combat Logistics Force (CLF). Prepositioning assets (the T-AK and T-AVB) provided logistical support to the assault echelon; typically prepositioning program assets are associated with assault follow on echelon operations. CLF assets including the T-AKE and T-AO provided traditional support functions in refueling and resupplying of the amphibious force. Additionally, the T-AKE hosted a number of experiments and interoperability studies associated with the future integration of the T-AKE into the Marine Corps prepositioning program and exploring the integration of the T-AKE into the ESG/MEB sustainment process. While expanding and integrating the role of MSC shipping into the amphibious force has proven to be a demonstrated key capability, there is inherent risk associated with operations in other than permissive environments. Anchoring the T-AK off the beach to conduct Amphibious Bulk Liquids Transfer System (ABLTS) operations at D+3 may be an unrealistic expectation. Although risks were mitigated in the BA12 scenario, this should be considered an exception to normal operations. **Recommendations (3): Training (3).**

- **Fires.** While deliberate targeting requirements were processed and executed, many deliberate targeting requirements that would have been necessary to support real-world operations were not conducted due to exercise construct. Targeting objectives to support CFMCC operational objectives and ESG/MEB/CSG tactical objectives and tasks were not developed. Tactical objectives and tasks should be prioritized on a daily basis, and used to develop daily prioritized targeting objectives at the maritime targeting working group (MTWG). Since this was not done, the CFMCC approved targeting objectives (i.e., operational priorities)
did not drive maritime targeting. The CSG and ESG/MEB staffs appeared to work independently in developing a daily Air Tasking Order (ATO) to source targeting requirements and coordinate air allocation between CSG and ESG/MEB. Joint Automated Deep Operations Coordination System (JADOCS) was not used to its full capability for coordinating dynamic targeting across the maritime force and with other coalition forces. MSELs that injected dynamic targets into the scenario were not fully developed and most dynamic target development within JADOCS was conducted by the white cell dynamic targeting personnel. In addition, maritime forces did not have input to the identification and prioritization of dynamic targets to support changing operational priorities at the MTWGs. Comprehensive integration of collection management with targeting must be included in naval training, and proficiency developed in ISR support for targeting. **Recommendations (13): Doctrine (4), Training (8), and Materiel (1).**

- **Navy Expeditionary Forces (NEF)** have unique capabilities that proved useful to the MEB and ESG, however integration with the amphibious force was ad hoc. The NEF should integrate across amphibious planning, C2 (Command Relationships), naval staff alignment, doctrine, SOPs and training. In BA12, the NEF was conducting security cooperation activities ashore before the arrival of the amphibious force allowing them to be employed in supporting functions early and widely. Although employing NEF ahead of the ESG/MEB may be an unrealistic expectation, the unit filled gaps and seams in amphibious force capabilities and capacities (i.e., inter-coastal / littorals, ABLTS security, etc.). **Recommendations (3): Doctrine (1) and Training (2).**

- **Automated Planning tools.** Aspects of planning and execution would have benefited measurably from greater automation; specifically, development of the landing plan. The preparation and management of the detailed documents supporting the landing is labor intensive and requires manual updates to multiple systems. A single program that manages all inputs and propagates any changes to all applicable documents (i.e., “TurboTax®-like approach for amphibious planning”) would make the process more responsive and agile as well as reduce the probability of error. Existing automated tools, such as Joint Mission Planning System - Expeditionary (JMPS-E), were not used to their full potential due to the lack of trained personnel. **Recommendations (2): Training (1) and Materiel (1).**

BA12 accomplished all exercise objectives. Lessons were learned and gaps in processes and procedures were identified. This report offers specific recommendations to not only improve coordination between ESG-2 and 2d MEB, but also enhance future Navy and Marine Corps exercises and operations. It is published as an interim product with the expectation that the ideas, key findings and recommendations be refined and expanded into capability development actions and serve as a point of departure for wide-ranging discussions, wargames, experimentation and seminars to improve our amphibious capability.
Introduction

The United States remains a maritime nation that relies heavily on the oceans and waterways of the world for the free exchange of ideas and trade. To secure our way of life and ensure uninterrupted freedom of navigation, we must retain the ability to operate simultaneously and seamlessly while at sea, ashore, from the sea, in the air and, perhaps most importantly, where these domains converge—the littorals. Operating in the littoral environment demands the close integration of air, sea and land power. The Navy and Marine Corps Team is increasingly relevant in meeting the exigent military needs of our nation in these unique environments. Working seamlessly as a single naval force and by using the sea as maneuver space, flexible naval forces provide the capability for massing close to a foreign shore, while maintaining a diplomatically sensitive profile. At a time of our nation’s choosing, we can quickly respond, providing the essential elements of access across the range of military operations.

Our Service-level requirement to deploy globally, respond regionally, and train locally necessitates a combination of tactical airlift, high-speed vessels, amphibious warships, maritime prepositioning shipping, organic tactical aviation, and strategic airlift. The Navy and Marine Corps Team is in a state of persistent forward presence aboard amphibious warships and remains the most economical, agile and ready force immediately available to deter aggression and respond to crises. Rotational Amphibious Ready Groups (ARG) and Marine Expeditionary Units (MEU) form together to provide forward deployed naval forces in all Geographic Combatant Command areas of responsibility. These forces combine the advantages of an immediate, yet temporary presence, graduated visibility, and tailored, scalable force packages structured around the Marine Air Ground Task Force (MAGTF). Not only do they provide the capability for crisis response, but they also present a means for day-to-day engagement with partner nations and a deterrent to conflict in key trouble spots.

Operations Enduring Freedom and Iraqi Freedom have drawn the focus of the Department of Defense’s efforts for approximately 10 years. The focus on these land operations reduced opportunities for the Navy and Marine Corps to exercise traditional amphibious operations. As a result, most junior and many mid-career Sailors and Marines have little experience integrating for amphibious operations. The Navy and Marine Corps had deployed ARG/MEU teams over the past decade (albeit at a decreased frequency) so there has not been a complete gap in amphibious training at the ARG/MEU level. The identified shortfall was in large-scale operations.

An Expeditionary Strike Group (ESG) and Marine Expeditionary Brigade (MEB) team is not simply a combination of ARG/MEU teams overseen by an added staff; it involves qualitatively different elements and is capable of accomplishing a broader range of missions. In addition to organic subordinates, the ESG and MEB commanders are also responsible for integrating other forces that could include Carrier Strike Groups (CSGs), Special Operations Forces (SOF) elements, Theater Antisubmarine Warfare (Theater ASW), Mine Countermeasures (MCM) forces, Navy Expeditionary Combat Command (NECC) forces, Military Sealift Command (MSC) shipping, and several coalition elements. The larger and more diverse force as well as the scale of operations make coordination and command and control relationships different and more complex than the existing ARG/MEU exercises. In short, re-shaping maneuver warfare from the sea by encompassing allied, ESG and CSG-based air and strike capabilities is a crucial element of the way ahead.
Navy and Marine Corps leadership identified the requirement to reset the naval services’ efforts to enhance the amphibious capabilities and relationship that make them unique to our strategic security efforts. In July of 2008 the Commandant of the Marine Corps (CMC) called for a “revitalization of our amphibious competency” and stated that the “initial aiming point for regaining our amphibious forcible entry capabilities is training to ESG-MEB CE [Command Element] amphibious assault requirements.” A CMC message from 2008 further stated, “I am directing that we conduct a series of workshops… and the intent of this initial series is to achieve the staff proficiency required to robustly exercise simulation-supported and real-world ESG-MEB CE planning and execution.” In 2009 the CNO provided guidance that, “Marine Corps roots are at sea. Navy ships underpin expeditionary operations… We must integrate warfighting capabilities with the Marine Corps to meet the objectives of the Maritime Strategy and Naval Operations Concept.”

The Bold Alligator series was developed to “reinvigorate amphibious capabilities in the Navy and Marine Corps.” This not only speaks to the need to refresh skills, but also to adapt them to changes in force structure, technology, training, and culture that have developed since the existing doctrine was last reviewed and the skills last exercised. The exercise has focused on training the Commander and staffs of ESG-2 and 2d MEB. The first Bold Alligator (BA11) was conducted in December of 2010. It was a simulated MEB-sized landing and non-combatant evacuation operation in a low-threat environment. It was successful as the “crawl phase” in training the ESG-2 and 2d MEB staffs for large-scale amphibious operations.

BA12 was designed to take the ESG/MEB to the “walk phase” of their training. The exercise mission was to “Plan and execute a MEB-sized amphibious assault from a seabase in a medium threat Anti-Access/Area Denial (A2/AD) environment to improve naval amphibious core competency.” It was a live and synthetic, scenario-driven, simulation-supported exercise conducted from 30 January to 10 February 2012. The primary training audience of ESG-2 and 2d MEB was expanded to include the Enterprise CSG. Additional at-sea and ashore Naval assets, a robustly manned Coalition Force Maritime Component Commander (CFMCC) and numerous coalition forces and assets completed the training audience of 22 ships and over 14,000 Marine and Sailors.

**BA12 Commander’s Intent:**
- BA12 will be a live and synthetic, scenario-driven, simulation supported exercise.
- Designed to train ESG-2 and 2d MEB Commanders and their Staffs to plan and execute as MEB-sized amphibious assault from a seabase in a medium land/maritime threat, A2/AD, environment to improve naval amphibious core competency.
- Complete CSG integration in support of ESG/MEB operations.

**BA12 Focus areas will include, but not limited to:**
- Load Plan and force embarkation
- Force Employment
- Naval staff integration
- Examination of current C5I capabilities
- C2 relationships throughout all phases of Amphibious Operations
Key Findings

Based on recommendations from BA11, the BA12 exercise planners developed a plan to capture the information generated during BA12 that could guide changes across the Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities (DOTMLPF) spectrum. The Center for Naval Analyses Report (Appendix A) is a detailed reconstruction of exercise events and an analysis of issues identified. Appendices B through I capture observations, lessons learned, and interviews from subject-matter experts and exercise participants. These sources were reviewed in totality and for the “data set” upon which this report was built.

BA12 event information was recorded in the form of observations - behaviors, statements made, or actions seen (observed) throughout the exercise. The collection of observations was reviewed in the light of the larger body of knowledge and new thoughts and patterns emerged that revealed a capability or an impact. The resulting set of insights that corroborated from multiple sources and supported by quantitative and statistical comparisons and amplified by qualitative observations and assessments could then be classified as findings. The list of findings was consolidated and those findings assessed as actionable are listed as key findings.

The key findings fell into ten focus areas. For each of the key findings, recommended solutions were developed and categorized according to the identified DOTMLPF gaps. The recommendations were numbered for tracking. They are not prioritized.

- **ESG / MEB training and education programs.** The loss of standing amphibious MEBs and the Navy’s Amphibious Groups has eroded the habitual command relationship between the MEB and the ESG. This shortfall adversely impacts the ability for the staffs to plan and execute at the operational level. Specific skills, capabilities and operational level command and support relationships experienced while deployed are not common practice in the day-to-day CONUS operations. Whether as an ad hoc staff rapidly responding to crisis or a methodical work-up to a deployment, the individuals and staffs of the MEB and ESG require training and education.

Recommendations

**Doctrine:**

1. Develop ESG and MEB and combined ESG/MEB METs that define and identify the tasks associated with assigned or anticipated missions from which the ESG/MEB staffs will need to train.

2. Develop an ESG/MEB Handbook of required training and standing operating procedures.

**Training:**

1. Develop an ESG/MEB staff training course that brings the two staffs together for planning and execution of amphibious operations.

2. Incorporate JTF, CFMCC, Carrier Strike Groups, Navy Expeditionary Forces, Coalition Forces, etc. into MEB/ESG training to emulate expected command and control relationships.
3. Develop a training progression for Naval Amphibious Sailors and Marines that includes formal education and training in service and joint schools.

4. Reinstitute periodic and scheduled Type Commander Amphibious Training (TCAT) to promote shipboard familiarization of staffs and operators.

**Leadership:**
1. Develop individual education courses for specific leadership positions and staff functions within the ESG and MEB.

   2. Ensure existing Joint and service courses include accurate, up to date and appropriate level education on amphibious operations.

**Exercise Construct.** The mixing of live and synthetic forces, combining multiple certifications, and incorporating higher headquarters staff response (white) cells was challenging. The limited duration of BA12 and the availability of live assets prevented a full assessment of MEB lift requirements on amphibious shipping. Furthermore, without a clear definition of the requirement, MEB lift cannot be replicated in a virtual or constructive environment. Continued fiscal pressures will likely drive us to employ more live-virtual-constructive (LVC) exercises to reduce training costs, further increasing the need to make them as realistic and seamless as possible for the training audience. LVC will allow the training audience to operate with the appropriate scale and scope of ESG/MEB level operations to stimulate the commanders and their staffs with the complex challenges of the operating environment. Providing a wide array of simulations, response cells and exercise control requires a great deal of planning, training and coordination. Integration of unique capabilities that normally would not be available in the live exercise can be replicated within simulation. CFMCC, CFACC and other responses cells need to be appropriately manned with experienced staffs to enhance realism.

**Recommendations**

**Doctrine:** Identify amphibious lift requirements for the most likely MEB configurations.

**Training:**
1. Given the complexity of LVC, exercise observers and analysts should thoroughly capture and de-conflict the perspectives of the training audience and providers and document as lessons learned to inform future exercises.

   2. Pre-exercise road to war documents must be developed in order for the training audience and exercise participants to avoid a “cold start” and have increased situational awareness and reduced confusion.

   3. For safety reasons, it is especially important to have correct and verifiable accounting and positive communication procedures for all live forces.

   4. The collection and processing of observations should be standardized to assist in the post-exercise analysis.
5. Conduct a detailed force synchronization conference of competing priorities (COMPTUEX, CERTEX, JTFEX) to identify requirements and resolve scheduling conflicts.

6. Intel injects should allow JIC to build Intel picture with a robust daily CFMCC DISUM.

7. Playbooks, standard operating procedures and products for response cells need to be developed to ensure unity of effort, i.e., EASTCOM/CFC (JECG) Overarching OPLANs, Orders, & OPORDs.

8. MSEL injects for deliberate and dynamic targeting need to be developed.

9. Expand mass casualty drill to exercise ESG/MEB level capability and capacity.

10. Targeting process (PED) is critical to driving the training audience to conduct the JTCB, develop products (JIPTL) and critical processes, and should be incorporated and assessed as a training objective in future events.

11. Joint air defense planning should be a key training objective for exercises.

12. Simulation must incorporate realistic C2 for logistics processes.

13. Feasibility of extending live exercises may be unrealistic but longer term sustainment exercise planning should be conducted in virtual or synthetic exercises.

- **Shipboard spaces and C4 systems.** Shipboard spaces, available C4 systems and configurations were not fully conducive for integrating Navy and Marine Corps planning and operations at the ESG and MEB level. Multiple FO/GO staffs strained both the capabilities and capacities of existing spaces and systems aboard L-Class amphibious shipping – particularly aboard the LHDs where the majority of the staffs were located. The LHD class ship does not have the communications suites and capability to support an ESG/MEB staff during amphibious operations. Voice over Secure IP (VOSIP) systems were employed, but only through the use of the Marine Corps' shore-based VOSIP network and the VOSIP conferencing capabilities resident at the Navy Warfare Development Command's (NWDC) Navy Center for Advanced Modeling and Simulation (NCAMS). There were no Navy Program-of-Record (POR) VOSIP systems available.

**Recommendations**

**Doctrine:**

1. For exercise and real-world operations, define coalition accessible networks as the default for both planning and execution.

2. Develop TTPs for ESG and MEB-level FO/GO staffs to integrate across a broad range of afloat and ashore locations with potentially wide ranging C2/C4 capabilities with staffs either aggregated or split.

**Organization:** Revalidate requirement for dedicated, LCC-like C2 platforms in support of large scale amphibious operations.
Training: Use coalition accessible networks as the default during both planning and execution.

Materiel:
1. ESG and MEB provide continuing input to the Naval Amphibious Baseline (NAB) effort to develop and implement common baseline designs and capabilities for amphibious C2 spaces.

2. Develop a NAB-like effort to standardize organic and "carry-on/plug-in" C2 spaces and C4 capabilities across the range of MSC shipping for embarking staffs/units.

3. Develop and implement standardized VOSIP capabilities across afloat platforms with conference bridge capability as a core requirement.

4. Increase Service-level support for continued NAB funding and MSC NAB-like effort.

5. Increase interoperability across the multiple range of collaboration and situational awareness tools systems employed across Joint and Coalition forces.

6. Examine LHA(R) and LHD Mid-life design modifications to allow for increased capability to support multiple, simultaneous FO/GO staffs.

7. Identify the full range of coalition communications capabilities and requirements early in the planning process and fully integrate into communications plans.

Personnel: Determine requirements for permanent assignment of USMC communications personnel to L-Class shipping.

• Coalition Forces made critical contributions, but C2 and information flow was challenging. LNOs were the key to the successes observed. All commands reported needing training and additional CENTRIXS terminals, printers, and scanners to increase information flow and to enable collaborative planning. U.S. Forces must learn to function routinely on CENTRIXS networks in the coalition environment and by exception on U.S. only networks. U.S. reliance on SIPR chat, SIPR email, SVTC, VOSIP, and PowerPoint briefs vice formal messages, operations orders and doctrinal communication channels also limited coalition integration. Processes and procedures for transferring critical information from US-only systems to coalition partners (including, but not limited to Foreign Disclosure Officer (FDO) speed and capacity) were slow and inadequate to support integrated planning and flexible execution.

Recommendations

Doctrine: Develop and streamline existing processes and procedures for ensuring all releasable information is shared with Coalition partners, including the use of CENTRIXS as the primary communications environment when appropriate.

Organization: Publish releasable versions of all orders to maintain coalition situational awareness.
Training:
1. Train to and enforce real world communications using formal messages and orders.
2. Incorporate coalition coordination into all future exercises to increase familiarity with systems and procedures.
3. Include an FDO in all stages of exercise planning.

Leadership: Reinforce in education courses the importance and art of producing formal operation orders and messages.

Materiel:
1. Determine CENTRIXS LAN requirements (terminal, printers, scanners, etc).
2. Install terminals as well as shipboard printers and scanners for the CENTRIXS LAN.

Personnel: Determine staff FDO requirements and adjust permanent manning or identify the source(s) for augment(s).

- **ESG-2 Manning** was not sufficient to support an immediate deployment to execute MEB sized amphibious operations. Specific functions expected of a deployed ESG are not inherent in current CONUS ESG staffing and many missing capabilities are required early in planning. Although some functions can be brought in through individual augmentation (IA) to the staff, arrival of large numbers to the standing staff generates unfamiliarity and causes additional stress. Liaison requirements to and from the core ESG Staff need to be preplanned and codified in operational plans, staff organization and the battle rhythm. When deployed with a MEB, the ESG should have appropriate counterparts in each of the staff areas. In BA12, the augment of the ESG staff with the CPR-4 staff provided additional amphibious experience. However, the CPR-4 staff was not collocated with the ESG staff, and did not have sufficient numbers of personnel to simultaneously support amphibious planning, execution and perform shipboard duties.

**Recommendations**

Organization: Review and update required operational capability (ROC) and projected operational environment (POE) for ESGs.

Personnel: Man the ESGs and subordinate commands to the requirement set in the ROC and POE to include staffing for expected augmentations and liaison officer requirements to and from the ESG.

- **Amphibious Warfare Commander (AMWC)**. ESG-2 designated CPR-4 as AMWC to plan and oversee the details of ship-to-shore movements. ESG-2 stated that the AMWC was useful because it allowed the ESG staff to focus on the operation as a whole. However, the roles and responsibilities of the AMWC are not specified in doctrine, nor is there a clear distinction between this position and the Central Control Officer. This led to confusion. BA12 did not
provide sufficient information to assess the value of establishing an AMWC or what its roles and responsibilities should be.

**Recommendations**

**Doctrine:**

1. Investigate potential roles and responsibilities for the AMWC and clarify its relationship to the Central Control Officer (CCO).

2. Determine whether establishing the AMWC provides greater value than integrating a CPR staff into the ESG to oversee ship-to-shore details and retaining a traditional CWC construct.

- **Military Sealift Command (MSC)** provided a variety of shipping support throughout the exercise with assets from both the prepositioning program and Combat Logistics Force (CLF). Prepositioning assets (the T-AK and T-AVB) provided logistical support to the assault echelon; typically prepositioning program assets are associated with assault follow on echelon operations. CLF assets including the T-AKE and T-AO provided traditional support functions in refueling and resupplying of the amphibious force. Additionally, the T-AKE hosted a number of experiments and interoperability studies associated with the future integration of the T-AKE into the Marine Corps prepositioning program and exploring the integration of the T-AKE into the ESG/MEB sustainment process. While expanding and integrating the role of MSC shipping into the amphibious force has proven to be a demonstrated key capability, there is inherent operational risk associated with operations in other than permissive environments. Anchoring the T-AK off the beach to conduct Amphibious Bulk Liquids Transfer System (ABLTS) operations at D+3 may be an unrealistic expectation. Although risks were mitigated in the BA12 scenario, this should be considered an exception to normal operations.

**Recommendations**

**Training:**

1. Expand the understanding of MSC operations and limitations throughout the fleet through continued integration into live exercises.

2. Plan and conduct training with current and future MSC platforms to educate staffs.

3. Identify relevant academic venues and requirements to incorporate training on MSC capabilities and employment.

- **Fires.** While deliberate targeting requirements were processed and executed, many deliberate targeting requirements that would have been necessary to support real-world operations were not conducted due to exercise construct. Targeting objectives to support CFMCC operational objectives and ESG/MEB/CSG tactical objectives and tasks were not developed. Tactical objectives and tasks should be prioritized on a daily basis, and used to develop daily prioritized targeting objectives at the maritime targeting working group (MTWG). Since this was not done, the CFMCC approved targeting objectives (i.e., operational priorities) did not drive maritime targeting. The CSG and ESG/MEB staffs appeared to work
independently in developing a daily Air Tasking Order (ATO) to source targeting requirements and coordinate air allocation between CSG and ESG/MEB. Joint Automated Deep Operations Coordination System (JADOCS) was not used to its full capability for coordinating dynamic targeting across the maritime force and with other coalition forces. MSELs that injected dynamic targets into the scenario were not fully developed and most dynamic target development within JADOCS was conducted by the white cell dynamic targeting personnel. In addition, maritime forces did not have input to the identification and prioritization of dynamic targets to support changing operational priorities at the MTWGs. Comprehensive integration of collection management with targeting must be included in naval training, and proficiency developed in ISR support for targeting.

**Recommendations**

**Doctrine:**
1. Assign a single USN and/or USMC command to lead the development of a Naval-wide JADOCS SOP.

2. Assign command(s) to coordinate maritime targeting TTP refinement that has the authority and scope to investigate the process across MOCs, CSGs and ESGs/MEBs.

3. Develop a stand-alone Navy doctrinal publication for maritime deliberate targeting to update/replace the Navy-wide OPTASK Targeting.

4. Doctrine needs to be reviewed with an intelligence and operations (N2/N3 & G2/G3) team approach to ensure that all amphibious publications are aligned and complete in their discussion on ISR/Collection Management WRT maritime targeting.

**Training:**
1. Incorporate dynamic targeting scenarios into pre-deployment training that exercise the range of dynamic targeting requirements.

2. Designate the command responsible for providing/coordinating comprehensive maritime force training for appropriate USN/USMC operating forces in war fighting processes that span operational and tactical organizations (ESG/MEB/CSG/MOC).

3. Incorporate collateral damage estimation (CDE) process training into all training exercises.

4. Evaluate ATO production training; specifically, integration of CSG, ESG and MEB assets during the 96 – 48 hour timeframe and make appropriate modifications.

5. Exercise planning and training needs to incorporate collection management with maritime targeting.

6. Provide JADOCS training to all ESG and MEB fires personnel.

7. Identify which subordinate commands would benefit from access to JADOCS and/or additional training.
8. Provide JADOCS training to White Cell personnel who will support fires processes in future exercises.

**Materiel:** Identify benefit of linking TBMCS to SHARP/M-SHARP (flight scheduling software) and ship schedules.

- **Navy Expeditionary Forces (NEF)** have unique capabilities that proved useful to the MEB and ESG, however integration with the amphibious force was ad hoc. The NEF should integrate across amphibious planning, C2 (Command Relationships), naval staff alignment, doctrine, SOPs and training. In BA12, the NEF was conducting security cooperation activities ashore before the arrival of the amphibious force allowing them to be employed in supporting functions early and widely. Although employing NEF ahead of the ESG/MEB may be an unrealistic expectation, the unit filled gaps and seams in amphibious force capabilities and capacities (i.e., inter-coastal / littorals, ABLTS security, etc.).

**Recommendations**

**Doctrine:** Command relationships must be clarified in order for the NEF to support and be supported by CATF/CLF. Review doctrine in order to develop or update where appropriate.

**Training:**
1. NEF should be depicted in the common operational picture.
2. Incorporate NEF early into the planning process.

- **Automated Planning tools.** Aspects of planning and execution would have benefited measurably from greater automation; specifically, development of the landing plan. The preparation and management of the detailed documents supporting the landing is labor intensive and requires manual updates to multiple systems. A single program that manages all inputs and propagates any changes to all applicable documents (i.e., “TurboTax®- like approach for amphibious planning”) would make the process more responsive and agile as well as reduce the probability of error. Existing automated tools, such as Joint Mission Planning System - Expeditionary (JMPS-E), were not used to their full potential due to the lack of trained personnel.

**Recommendations**

**Training:** JMPS-E training is required if it becomes a Program of Record (POR).

**Materiel:** Develop a single networked computer program to automate the process of creating landing documents and automatically propagate changes to those documents as required.

**General Recommendations**
- Continue the revitalization of the full range of Amphibious Operations
- Institutionalize Bold Alligator Exercise Series for ESG-MEB
- Brief BA12 Report at Navy-Marine Corps Warfighter talks and all applicable OAGs
- Navy/Marine Corps capabilities development communities implement recommendations
Conclusion

As America’s Expeditionary Force in Readiness, our amphibious capability is paramount in providing the flexible crisis response options necessary to face the challenges of today’s complex operating environment. Our amphibious forces are scalable, adaptable and self-sustaining. To accomplish this mission, the close link between the Marine Corps and the Navy which forms the backbone of successful amphibious operations must be a priority for the leadership of both Services. As a result of the Navy-Marine Corps Warfighter Talks, Naval leadership has renewed their commitment to strengthen this bond from the waterfront to the Service headquarters.

The Bold Alligator series is unique among exercises in its focus on the MEB and ESG command elements as primary training audiences. BA12 focused on how we conduct entry operations against a hostile foe. However, seabasing provides for forward presence and deterrence efforts that might be the optimal means of providing sustained security cooperation and humanitarian relief. All of this can be conducted without violation of another nation’s sovereignty under international law.

While there were several area denial threats present during the exercise (including mines, submarines, FAC/FIAC, and anti-ship cruise missiles), these threats were not combined (e.g., attacks while transiting the mine threat area) and they were essentially eliminated prior to the landing operations. Although this was driven by exercise training objectives, it limited our ability to collect data on conducting amphibious operations in the presence of an A2/AD threat.

BA12 demonstrated several aspects of seabasing (MEB CE remained afloat, ACE remained afloat, ABLTS assembled, enhanced company operations experiment). However, all landing forces became synthetic upon arrival ashore therefore real-world challenges and support requirements were not exercised. The requirement for only notional support to forces ashore, combined with the short duration of the exercise did not present major challenges to stress the seabasing concept.

ESG-2 designated CPR-4 as AMWC to plan and oversee the details of ship-to-shore movements. ESG-2 reported that the AMWC was useful because it allowed the ESG staff to focus on the operation as a whole. However, the roles and responsibilities of the AMWC are not specified in doctrine, nor is there a clear distinction between this position and the Central Control Officer. This along with the AMWC’s embarkation on a separate ship led to confusion. BA12 did not provide sufficient opportunity to clarify the roles of the AMWC, which is necessary to make a recommendation regarding the value of establishing an AMWC separate from the CATF.

In order to revitalize our excellence in the core competencies of large scale amphibious operations, we executed a successful ESG-MEB level live and simulation-supported BA12. This capstone event in this initial series of exercises, serves as the foundation of a renewed focus on amphibious warfare core competency. During BA12, we revisited our doctrine and training involving forcible entry operations, planning, and command and control while examining the current seabasing concept, tactics, techniques and procedures. Going forward, the continuing series of BA exercises enables us to further strengthen our amphibious core proficiency, refine our naval training, doctrine, and hone warfighting skills.