

Global Maritime Partnerships Game

GAME REPORT



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U.S. Naval War College

Newport, Rhode Island

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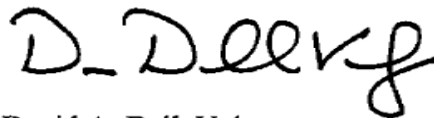
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14. ABSTRACT The 2010 Global Maritime Partnerships Game was held in October at the U.S. Naval War College and was developed and executed at the direction of the U.S. Chief of Naval Operations. The game explored maritime security cooperation with international maritime stakeholders. The 86 international participants from 47 nations including the U.S., identified the catalysts to instability at the sub-regional and super-regional levels and discussed the impediments to forming effective regional and global partnerships in the maritime domain. Players suggested the need for commonly developed and agreed upon regional and cross-regional norms, decision rules, procedures, standards and protocols for Maritime Domain Awareness networks, data exchange, and data classification. This report also suggest that the U.S. Navy concentrate more effort at the sub-regional and regional level and work towards transforming bilateral arrangements to achieve more robust global maritime understanding. This game enhanced U.S. and International stakeholders' understanding of the broad challenges and opportunities of maritime security cooperation and sought to prepare senior decision makers for ongoing international security cooperation policy and planning efforts.					
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The War Gaming Department of the U.S. Naval War College hosted the 2010 Global Maritime Partnerships Game on 3-8 October 2010. The following document was prepared by the War Gaming Department faculty and has been reviewed by the appropriate game sponsor staff personnel. The findings in this report reflect the observations, insights and recommendations that were derived from the participants during game play.

The War Gaming Department conducts high quality research, analysis, gaming, and education to support the Naval War College mission, prepare future maritime leaders, and help shape key decisions on the future of the Navy. The War Gaming Department strives to provide interested parties with intellectually honest analysis of complex problems using a wide range of research tools and analytical methodologies.

Game reports are developed for the game sponsor; however, the game report and related data may be available on an as-requested basis. For additional information please contact the Chairman, War Gaming Department, Naval War College, 686 Cushing Road, Newport, RI 02841 or via electronic mail at wargaming@usnwc.edu. Further information may be found on our website, located at www.usnwc.edu/wargaming.



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1. EXECUTIVE SUMMARY

During the period 3–8 October 2010, the United States Naval War College in Newport, Rhode Island hosted the Navy Title 10 Global Maritime Partnerships Game (GMPG, also Global '10), on a truly international scale (83 participants from 46 countries). The overarching purpose of the GMPG was to help the Navy better understand the complexity of the problems that it could face throughout the maritime environment by identifying the catalysts to instability at the national, regional and cross-regional levels and the impediments to forming effective regional and global partnerships in the maritime domain from both United States and international perspectives. This game could help the Navy better define the approaches necessary to establish maritime partnerships to address maritime security issues.

While the Navy has multiple inputs to theater security cooperation plans in the different regions, there should be a better understanding of how and why these forces and capabilities are being used, where they are being used, and what is necessary to achieve the desired end state described in the new Maritime Strategy, *A Cooperative Strategy for 21st Century Seapower* (CS-21).

The GMPG was structured to explore the following four specific objectives:

- Identify maritime regional and cross-regional challenges (e.g., resource scarcity, epidemics and pandemics, and regional and transnational criminality) from both international and U.S. perspectives
- Identify broad-based partnership requirements (e.g., policy, legal, technological, etc.) that will enable Maritime Domain Awareness in order to counter these challenges
- Provide an environment for participants to explore and appreciate the complexities of establishing and maintaining effective maritime partnerships through domestic and international perspectives
- Provide participants with an opportunity to familiarize themselves with a sampling of current technological research and innovations in Maritime Domain Awareness.

In order to address the mutually agreed upon objectives established by OPNAV N2/N6 and the Naval War College the following overarching research question is proffered in this game:

- Based on the catalysts to instability derived from the participants, what were the impediments and proposed collaborative solutions to forming effective partnerships at the sub-regional, regional and cross regional levels from both United States and international perspectives?

The Global '10 Game was designed to enhance participants' understanding of the complexities encountered in developing maritime partnerships, information sharing processes and Maritime Domain Awareness (MDA). For the players, the game served as an

experiential and educational venue to explore with other nations various current regional approaches to MDA and then consider how partners might collaborate through new relationships, improved information sharing regimes and enhanced MDA in order to better solve the varied, yet often intractable, maritime problems in each region. Additional understanding of these regional issues, which can become catalysts to regional and global instability, and the preferred solutions, informs US Navy and other maritime service decision making about maritime security from a US perspective (USC Title 10 requirement to: organize, train, equip). Research events in support of the game design can be found in Appendix C.

For this descriptive game, the game design created a collegial atmosphere where the players could learn from each other, and enabled the perspectives and experiences of the players to be recorded for subsequent post-game analysis. At the conclusion of the game, the Data Collection and Analysis Team (DCAT) applied a variety of qualitative tools and techniques to aggregate data and identify key themes that may prove of interest to the sponsor for future research, policy making, and resourcing purposes.

This was not a single, stand-alone game; but rather, was designed to be serial in nature along a research path paralleling development of international maritime partnerships. This game draws on broad experience from other NWC games over the past several years that focused on the maritime security challenges, specifically: MDA Connectivity Workshops, Global 2008, Irregular Challenges Game 2010, MDA Operational Game, SEALIFT 2010 and the Multilateral War Game 2010.

Analytical Findings and Recommendations:

- To achieve global MDA through maritime partnerships, the United States should pursue involvement in all current regional MDA/partnership efforts. By working to develop and mature the individual regional MDA/partnership solutions, the United States will become a trusted partner in sharing information and addressing the key issues upon which the regional nations are focused. Participants expected that once the initial regional focus is successful, participating nations will be willing to expand their maritime partnerships beyond their immediate region. Connected regions would then be able to build broader, more comprehensive MDA partnership solutions. MDA will grow from within one region and overlap neighboring regions, progressively providing a global solution to MDA and maritime partnerships.
- Given the wide range of partnership barriers encountered by the international participants, the U.S. Navy should concentrate more of its efforts at the sub-regional and regional levels and work towards transforming bilateral arrangements into broader multilateral arrangements to achieve a more robust global maritime understanding. A bottom-up vice top-down approach to address regional issues is preferred in each region to establish and develop maritime partnerships, information sharing processes and MDA

- All navies and governments should work towards establishing standard processes, procedures and protocols for MDA networks, data exchange, and data classification at the national, sub-regional, regional and cross-regional levels. This will of necessity be a lengthy, messy process. Standard processes in one region will not be the same as in another region. Only as regional growth leads to cross-regional linkages can conflicting processes be resolved in this preferred bottom-up solution.
 - Efforts should be focused to work within existing sub-regional and regional organizations (e.g., political – Gulf Cooperation Council (GCC), Indian Ocean Naval Symposium (IONS), African Union (AU), Economic Union of Central African States (ECCAS), Economic Community of Western African States (ECOWAS)), and leverage bilateral agreements as well as the International Maritime Organization (IMO) on a case by case basis to facilitate standardization development at the regional and cross-regional levels.
- In order to overcome the legal barriers of information sharing and maritime security operations, individual nations should work towards aligning domestic legislation through the adoption of international regulations.
 - Leverage existing models such as the Regional Cooperation Agreement on Combating Piracy and Armed Groups in Southeast Asia, Proliferation Security Initiative, and existing political organizations (EU, NATO, GCC, etc.) as proposed cooperative maritime security models.
- All navies and governments should work towards increasing funding of non-technology aspects of partnership building (training, coalition conferences/seminars, and travel). Investments in relationship building should have a higher priority than investments in new systems and technology.
 - The U.S. Navy working with international partners should develop a GMP/MDA distant education initiative (e.g., web-enabled program, CD-ROM based correspondence program) whereby all U.S. and international maritime stakeholders (e.g., military, civilian, industry etc) would have access to a common resource database that provides literature, live news feeds and upcoming events on existing partnerships and MDA initiatives at the national, sub-regional, regional and cross-regional levels. Specific documentation noted by the players include MDA and GMP strategies, policies, laws, best practices, peer-reviewed articles, symposium briefings etc.
 - The U.S. Navy should enhance international military education and training funding (e.g., noted by players through Section 1206 and Combatant Commander funds) across all regions for those countries who seek to engage in international maritime security partnership initiatives.

- All navies should leverage existing exercises and establish new exercises and training opportunities to enhance relationships. Multiple regions preferred mil-to-mil exercises as the first step to partnerships, but concluded that secure, long-lasting partnerships would need to come through diplomatic relationships.
 - The Chief of Naval Operations should designate research and development funds over the next 5 years to improve information sharing processes and understanding of technological interoperability requirements through academic gaming and research. These funds would be separate funds dedicated towards advancing the theory and practice of Maritime Domain Awareness at the sub-regional regional and cross-regional levels.
- The U.S. Navy should increase Navy Liaison Officer billets to meet the requirements of staffing and expanding maritime security partnerships focused at the sub-regional and regional levels.
 - Within the FAO program, seek to create an MDA focus or career track (e.g., education, training, and experience with international partners and industry). Personnel should work closely with key regional maritime stakeholders and U.S. leadership on operational and strategic information sharing issues at the sub-regional and regional levels.
- Procure and install MDA infrastructure (shore radar, communications, port facilities, coordination centers, laboratory facilities, fixed and portable equipment), operational assets (e.g., patrol vessels and aircraft), and pursue education and training opportunities for both individual personnel and organizations to build partnerships.
- Leverage and integrate existing regional and trans-regional technologies to share unclassified shipping data (VRMTC, MSSIS, REMIX, and SUCBAS etc). Work towards developing technological working groups to integrate existing MDA infrastructure and develop technical common standards at the national, sub-regional, regional and cross-regional level. Technical feasibility studies were suggested by the players as a mechanism to support these working groups.
- All navies and governments should work towards fostering increased governmental appreciation of important maritime issues by developing a shared understanding of the importance of the ocean to a individual countries through building relationships with governmental leaders and increasing their maritime knowledge by providing them relevant maritime talking points, facts, briefing materials, articles, etc.
- All MDA participants should focus MDA cooperation and coalitions around maritime (body of water) commonalities, processes and protocols vice those that are land based.

2. INTRODUCTION

- 2.1. **Overview.** The War Gaming Department of the U.S. Naval War College hosted the Global Maritime Partnerships (GMP) Game, 3 - 8 October, 2010. The game was sponsored by OPNAV N2/N6 on behalf of the Chief of Naval Operations, ADM Gary Roughead. The game was held in McCarty Little Hall at the Naval War College in Newport, Rhode Island.

The Global Maritime Partnerships Game featured 83 participants representing 46 countries, all of which were selected based on their locations as well as their willingness to participate in a MDA-related information sharing experience. The following nations participated: Argentina, Australia, Azerbaijan, Benin, Brazil, Bulgaria, Cameroon, Canada, Chile, Colombia, Ecuador, Egypt, France, Gabon, Georgia, Germany, Ghana, Greece, Guatemala, India, Israel, Italy, Japan, Kenya, Lebanon, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Oman, Panama, Pakistan, Peru, Poland, Saudi Arabia, Senegal, Singapore, Spain, Sweden, Tanzania, Togo, Turkey, Ukraine, United Kingdom, and the United States (List of attendees available in Appendix A).

- 2.2. **Background.** The U.S. Navy has embarked on an ambitious initiative to implement a new maritime strategy, *A Cooperative Strategy for 21st Century Seapower* (CS-21). This is the first new U.S. Navy strategy that addresses the post-Cold War and post-9/11 realities of global terrorism. The new strategy is consistent with the National Security Strategy and the National Strategy for Maritime Security, as well as with other national guidance. As a key part of this strategy, Global Maritime Partnerships (originally titled the 1000-ship Navy) is a key tenet of U.S. naval policy.

Current and future efforts to bring about Global Maritime Partnerships must address the ongoing challenge of information sharing or Maritime Domain Awareness (MDA). Information sharing will not only enhance the Navy's war fighting capabilities but will also help the Navy meet the two new core capabilities, maritime security and humanitarian assistance missions that are an integral part of the new maritime strategy.

Information sharing and maritime partnerships create the environment to provide security and stability against WMD proliferation, piracy, weapons, illegal immigration, slavery, fishery violations and drugs in the maritime domain. That security and stability has an effect on global economics.

A maritime partnership is an association of maritime nations that participate in international commerce, each having a stake in security and freedom of the seas. The partnerships are necessary to confront the large, complex challenges and to maintain stability. Partners assist all countries in using the sea for lawful purposes including commerce.

The purpose of Global '10 was to identify the catalysts to instability at the national, regional and cross-regional levels as well as the impediments to forming effective regional and global partnerships in the maritime domain from both United States and international perspectives.

Understanding these impediments is important to Navy Title 10 (organize, train, equip) responsibilities because these catalysts to instability (including, but not limited to resource scarcity, epidemics and pandemics, and regional and transnational criminality) foster broad challenges to U.S. national security policy. The U.S. Navy plays a critical role in confronting such challenges through forward presence, deterrence, sea control, power projection, maritime security and Humanitarian Assistance/Disaster Response (HA/DR). As emphasized by players in Global'08 , such efforts cannot be sustained without effective regional and international engagement and cooperative maritime security partnerships (i.e., Maritime Domain Awareness).

The Global Maritime Partnerships Game drew on the broad experiences from other NWC games that focused on the maritime security challenges, specifically: Global '08, International Seapower Symposium (ISS) XIX, Irregular Challenges Game 2010, MDA Operational Game 2010, Strategic SEALIFT 2010 and the Multilateral War Game 2010.

Each event reported consistent findings that maritime security issues can be best addressed through partnerships developed to counter the various instability factors that affect the global commons. As CS-21 declares, cooperative relationships between nations contribute to a secure and stable maritime domain. For a more detailed description of each of the referenced events, see Appendix B.

2.3. **Purpose of GMPG.** Identify impediments to forming effective regional and global partnerships within the maritime domain from both international and U.S. perspectives.

2.4. **GMPG Objectives.** In support of the above purpose, there were four objectives:

- Identify maritime regional and cross-regional challenges (e.g., resource scarcity, epidemics and pandemics, and regional and transnational criminality) from both international and U.S. perspectives.
- Identify broad-based partnership requirements (e.g., policy, legal, technological, etc.) that will enable Maritime Domain Awareness in order to counter these challenges.
- Provide an environment for participants to explore and appreciate the complexities of establishing and maintaining effective maritime partnerships through domestic and international perspectives.
- Provide participants with an opportunity to familiarize themselves with a sampling of current technological research and innovations in Maritime Domain Awareness.

2.5 Research Questions

One of the most important functions of gaming is to answer timely research questions posed by the sponsors. In order to do so, capturing data that is germane to a specific area of interest is critical, because successful data capture enables useful analysis and ensures a symbiotic relationship between game design and subsequent findings.

Accordingly, it is important to remember that the role of any war game is to aid the sponsors, participants, and consumers of game results to investigate the processes of combat, strategy and human decision making not necessarily to calculate the outcome of a specific engagement. This was a highly inductive, descriptive game employing the qualitative methodology known as a case study. This research strategy investigated a phenomenon within its real-life context by employing in-depth, focused surveying and broader open-ended facilitation. This allowed researchers to explore causation in order to find underlying principles and reasoning behind participant actions.

This game was unique in that the players, both military and civilian, identified the catalysts to instability, impediments, and proposed collaborative solutions through partnerships at the sub-regional, regional and cross-regional levels in order to improve maritime safety and security. The intent of identifying and then exploring catalysts to instability in the game design was to provide a rich, political-military environment that enabled each cell to explore a wide range of diplomatic, informational, military, and economic interactions for enabling partnerships at the sub-regional, regional, and cross-regional levels.

In order to address the mutually agreed upon objectives established by the OPNAV Staff sponsor and the Naval War College, the following overarching research question was developed for this game:

- Based on the catalyst to instability derived from the participants, what were the impediments and proposed collaborative solutions to forming effective partnerships at the sub-regional, regional and cross-regional levels from both United States and international perspectives?

The broad central question employed in this study examined the central phenomenon of "Global Maritime Partnerships". The intent of this question was to decipher the complex set of factors surrounding the central phenomenon and present the varied perspectives or meanings that both U.S. and international participants hold. Because of the highly inductive, descriptive approach of this study, the central question explored in this game was intended to be broad in nature so that the data collection and analysis would not be limited. The subsequent descriptive and inferential sub-questions were designed to provide a greater level of depth to exploring this complex area of study. At a more structured level, this game sought to inductively examine the following research questions:

- What did the international participants in this game consider to be the present-day catalysts to instability at the sub-regional, regional and cross-regional levels?
- What did the U.S. participants in this game consider to be the present-day catalysts to instability at the sub-regional, regional and cross-regional levels?
- What did the international participants in this game consider to be the impediments to forming maritime partnerships at the sub-regional, regional and cross-regional levels?
- What did the U.S. participants in this game consider to be the impediments to forming maritime partnerships at the sub-regional, regional and cross-regional levels?
- What did the international participants in this game consider to be the solutions to forming maritime partnerships at the sub-regional, regional and cross-regional levels?
- What did the U.S. participants in this game consider to be the solutions to forming maritime partnerships at the sub-regional, regional and cross-regional levels?

3. GAME DESIGN & RESEARCH METHODOLOGY

3.1. Game Design Introduction

3.1.1. The Global Maritime Partnerships Game 2010 (GMPG) was designed to enhance participants' understanding of the complexities encountered in developing maritime partnerships, information sharing processes and Maritime Domain Awareness (MDA). For the players, the game served as an experiential and educational venue to explore with other partner nations various current regional approaches to MDA and then consider how partners might collaborate through new relationships, improved information sharing regimes and enhanced MDA in order to better solve the varied, yet often intractable, maritime problems in each region. Additional understanding of these regional issues, which can become catalysts to regional and global instability, and the preferred solutions, informs US Navy and other maritime service decision making about maritime security from a US perspective (USC Title 10 requirement to: organize, train, equip). Additionally, the game served as a vehicle for the War Gaming Department at the Naval War College to inductively generate knowledge in order to develop hypotheses that can be tested in future research. Research events in support of the game design can be found in Appendix C.

For this qualitative, descriptive game, the emphasis of game design was to both create a collegial atmosphere where the players could learn from each other, and to enable the perspectives and experiences of the players to be recorded for subsequent post-game analysis. Data was captured primarily through ethnographic (i.e., observed) collection by trained environmental recorders in the game cells and auditorium plenary sessions, through the group products developed by the players in the game cells and presented in the plenary sessions, and via self-declared player data and insights garnered through web-based, individual player structured surveys. At the conclusion of the game, the Data Collection and Analysis Team (DCAT) applied a variety of qualitative tools and techniques to aggregate data and identify key themes that may prove of interest to the sponsor for future research, policy making, and resourcing purposes.

Collegial experience and individual surveys provided a rich understanding of the perspectives of the individual international players. These perspectives provided well-developed regional overviews where the area of focus was well represented by international players. When the sub-region was not adequately represented, cell focus became either blind or hyperopic. To correct for these defects and better inform US maritime strategy and maritime security decision making, themes and data developed through other research efforts are triangulated with data developed in GMPG and deductively analyzed. The broad themes and implications from several research paths become key trends, critical vectors, governing factors and lenses that inform decision making at procurement and policy levels of government.

- 3.2. **Game Design.** To foster a player environment favorable to collegial interaction, the game was built around the perceived needs of the international participants (the game schedule is available in Appendix D). GMPG was the first potentially large game where the preponderance of the players was international by design. Invitations to over 100 countries for 2 players each created the opportunity for and necessitated planning for a large event. In addition to designed international collaboration by players, a separate US Government cell comprised of maritime stakeholders was expected to convene to listen to and learn from the efforts of the international players.

The size of the international game cells was crafted to encourage robust dialogue in the cell. Game cell size was targeted in the 10-12 player range, with a minimum of 7 and a maximum of 14 as design parameters. The small size encouraged participation by all players while providing social space to fit the acknowledged diverse cultural norms of the players. English was designated as the language for all events and appropriate language skills were requested of each international participant to enable the players to dialogue collegially without the additional burden of language translation.

Each country was asked to send two players at the navy commander - captain, or army lieutenant colonel - colonel (action officer) level to the game. Each was requested to be an MDA subject matter expert, with one player a member of the navy or coast guard (maritime services) and the second player from another government agency that is either a key contributor to MDA or key consumer of MDA information (e.g. customs, border security, port authorities, fisheries, maritime industry oversight, etc.).

Forty-six countries sent 83 players to the game. Two countries sent 4 participants, four countries sent 3 participants, twenty-three countries sent 2 participants and seventeen countries sent 1 participant. Less than 10 percent of players were from outside the navy/coast guard (maritime agency) of their country. Of those outside players, most were from border/customs agencies. During the game the broad collegiality of the maritime services--sailors with common experience on the sea--was a noted asset; however, the additional intent to focus on the broad MDA process within and across countries—most MDA activity happens on land—was perhaps muted by the homogenous nature of the players.

In addition to the 2 players in the international game cells from the United States, a separate US cell was comprised of 34 players representing maritime stakeholders with MDA equities from across the agencies of the government. This ‘whole of government’ cell was foremost chartered to engage in ‘active listening’ throughout the week and convey to the international participants that the United States was sincerely listening to their issues, concerns and recommendations. Having thoughtfully considered the international perspectives and input, the U.S. cell would begin to articulate the potential Title 10 implications of the international recommendations for the U.S. maritime services, and particularly the U.S. Navy. Of note, due to travel requirements and other personal scheduling issues, when the U.S. cell convened after the completion of the

game to consider broader implications from the game, only half (16/34) of game participants were in attendance.

The week was divided into three broad phases. In the first phase the players focused on the current state of the maritime environment, both issues and implemented solutions. In the second phase players built from the current set of maritime partnerships, information sharing regimes and MDA to develop better solutions to maritime problems and near-term recommendations for solution implementation. Immediately following the conclusion of the game, players had the opportunity in the third phase to attend an MDA technology symposium.

Phase 1 began on Sunday. Players were welcomed at a luncheon and received overview briefings about the week ahead. Following the briefings, players were grouped into their prospective game cells with moderators to conduct initial introductions and complete initial individual baseline surveys. Additionally, the moderator introduced the expected focus issue for initial cell work in phase 2 and determined if all players had an affinity for participation. Phase 1 continued on Monday with regionally focused briefings on current implementations of maritime partnerships, information sharing regimes and MDA presented by current regional participants in those activities.

Phase 2 consisted of small cell seminar work by the player teams and large group plenary panel presentations to present cell results to all participants. On Tuesday, Wednesday and Thursday, seminars were led by an NWC moderator and assisted by an NWC facilitator to produce templated briefing products for plenary panel discussions. The plenary presentation product constituted the primary analytical output for the cell. At the conclusion of the seminar session, players took individual web-based surveys covering their seminar's work.

Phase 2 plenary panel discussions were included to enable broad sharing of the work done in individual seminars. Game Control focused plenary panel sessions on specific areas of interest from across the player cells. These sessions not only enabled broad dissemination of the recommendations from the seminars, but also enabled constructive criticism and inclusion of additional ideas from the broader audience. The Friday morning plenary panel was attended by VADM Dorsett, USN, OPNAV N2/N6, and he made concluding remarks at the end of the game to wrap-up the event and provide thanks to the players for their work. Player out briefs are available in Appendix E.

Phase 3 introduced various MDA technologies to the participants on Friday afternoon. In short, group presentations in the auditorium, presenters demonstrated their technology to participants. Additionally, some technology solutions were presented in smaller room settings. The purpose was to demonstrate options available and not to market or endorse any specific technologies. Presentations were made by both U.S. and international organizations. The technologies presented and the detailed descriptions of the overall game design are found in Appendix F and Appendix G.

3.3. Analytic Framing. The overall analytic framing of the Global Maritime Partnerships Game 2010 consisted of an inductive, qualitative-descriptive process. The post-game analytic methodology follows a widely-used process referred to as triangulation. Current thinking in the field of social research suggests that a variety of analytic tools should be employed in behaviorally based activities such as war games, thus maximizing the credibility of the work. One widely accepted methodology that takes advantage of multiple techniques is triangulation. This approach allows the researcher to derive the same or very similar conclusions using different datasets or methods. Much of the strength of triangulation stems from its ability to distinguish between the idiosyncratic...and the representative. Moreover, this method also allows the researcher to base inquiry in the assumptions being used and evaluate questions with the appropriate methodology, rather than the methodology driving the evaluation.

Consistent with this approach, the thirteen data streams collected during this game (see Appendix H for details) incorporated a variety of research procedures into subsequent analysis. A brief description of each analytic tool follows.

- **Content Analysis:** Described as a method whereby a researcher seeks objectively to describe the content of communication messages that people have previously produced, this approach involves identifying coherent and important examples and patterns in the data and subdividing data into coherent categories, patterns, and themes, as supported by player actions, comments, or White Cell assessment.
- **Grounded Theory:** A more detailed and methodologically sound approach to analysis than the initial step of content analysis, grounded theory employs systematic, hierarchical procedures to develop inductively derived theory grounded in data. Grounded theory directs researchers to look for patterns in data so that they can make general statements about the examined data. For the purposes of this game's analysis, the Data Collection and Analysis Team employed an inductive, theory discovery methodology that allowed the researchers to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data.
- **Data Visualization:** Post game, by comparing and contrasting the players' activities in the areas of maritime security, stability operations, and building partnerships within the context of capabilities, benefits, and intended consequences, overlapping the Venn diagrams produced in the seminar game cells and developing link charts in i2 Text Chart and Analyst's Notebook, respectively, the Data Collection and Analysis Team was able to identify gaps, seams, and overlaps in U.S. Navy actions supporting other nations and organizations.

3.4. Collection Approach. The GMPG was constructed in a manner that ensured the overarching research question was adequately addressed. In order to do so, thirteen data streams were collected during the game. (see Appendix H for details).

These thirteen data streams analyzed in this game were deemed descriptive because they revealed the nature of certain situations, settings, processes, relationships and systems. Accordingly, they were aggregated and assessed in order to clarify the information that has been gathered. Lastly, quality assurance/quality control of the eleven international player cells and one U.S. cell datasets was conducted in order to ensure that consistency for coding and grounded induction was present.

- 3.5. **Identification of Independent and Dependent Variables.** The independent variables in this game are the impediments to forming partnerships at the sub-regional, regional and cross-regional levels, while the primary dependent variables are the solutions to forming partnerships at the sub-regional, regional and cross-regional levels.

3.6. **Definition of Key Term.**

Catalyst to Instability - For the purposes of this game, catalyst to instability is defined as anything that initiates, accelerates, or causes an event or series of events to adversely impact the safety, security, economy, or environment of a nation, region, or super-region.

4. ANALYSIS & RESULTS

4.1. Themes, Insights & Implications

Players, through an inductive reasoning process, derived a number of themes throughout the game and combined them on the final day of game play. Then, the analysis team utilized a grounded theory approach whereby themes were identified through a process of constant comparison and then tested throughout the data. The analysis team developed the implications and recommendations by exploring these player-derived themes and linking them to current literature in the area of international cooperation and information sharing (see Appendix I for sub-region/region cell analysis). Based on data grounded from the international participants during the game, this method attempts to inform leaders on the U.S. Navy's approach to maritime security cooperation and Maritime Domain Awareness.

The insights discussed here result from an inductive reasoning approach and do not test a conclusive set of hypothetical actions that could be executed in a different context – for instance, in the real world or even in other scenarios. The underlying maritime issues, partnership linkages, and supporting activities were developed by experts with a significant understanding of the region and functional areas that were broad in nature and intend to inform Navy decisions concerning organizing, training, , and equipping the future Forces.

Elements of Effective Strategic Partnerships

The **voluntary nature** of partnerships was recognized by the players as a necessary characteristic for effective cooperation among international partners. Partnerships can only occur as a result of an agreement, whether implied or formal, between two or more parties. Voluntary partnerships were noted by the players as a “self-organizing process based on shared purpose and mutual trust.”

A **common purpose or issue** is needed as a pillar to forging new partnerships and maintaining existing ones. This common purpose is formulated based on clear, common goals and must be mutually agreeable to all of the stakeholders involved. Participants recognized the value of understanding the goals, motivations and approaches of all individual nations within the context of maritime security and information sharing. One regional cell was unwilling to establish new partnerships in the game without the presence of other nations in the region. Having all parties involved “early and often” was essential to optimizing the benefit of sharing information.

Trust between all parties involved was derived as the foundation for enduring partnerships. Mutual trust significantly encourages the sharing of information and development of partnerships. The development of trust was viewed by the players as a long-term process unbounded by any certain period of time. “As time goes on, and a greater level of trust has been established, the sensitivity of data shared will also

increase.” Trust was also believed to influence the confidence level between partners of their ability to safeguard and protect data across classification levels. Enhancing trust and partnerships between nations allows for disparate parties to coalesce into a cooperative security framework, increasing the number of beneficiaries and partners.

Leveraging cooperative security frameworks in the maritime environment was highly desired and welcomed by all of the players. There was no single model found or developed that could be used in forming partnerships at the national, sub-regional, regional or cross-regional levels. Many of the cooperative models that exist are centered on addressing a specific catalyst to instability or maritime issue. More players were inclined to using an existing regional cooperative framework as a mechanism for sharing information and forging new partnerships, rather than developing a new model. Substantial support from organizations such as the IMO in assisting in the development of common standards, procedures and protocols for technology integration, data sharing processes, and classification levels was required. It was also recognized that there is a “long, drawn-out, time consuming political process” that accompanies this supportive mechanism. The IMO was viewed as a necessary component in the long term stability and standardization of information sharing efforts at the regional and cross regional levels.

95% of players concluded that commonly developed and agreed upon norms, decision rules, procedures, standards and protocols for information sharing at the national, sub-regional, regional and cross-regional levels would assist their respective countries and regions to effectively address the demands and challenges it encounters in the maritime environment. Throughout the game, the GMPG participants recognized that the lack of information sharing and coordination at the national, sub-regional, regional and cross-regional levels is due to the lack of ***standardization of processes, procedures and protocols*** for MDA networks, data exchange, and data classification. Standardization would help the coordination problem by forcing all parties to make mutually consistent decisions while realizing mutual gains. Competing definitions for information and intelligence were brought up often during the game as a major issue for sharing information. An international regime can serve simply as an activity (PSI) or formal organization (NATO) in which stakeholders (e.g., people, organizations, and nations) can realize those mutual gains, but only by making mutually consistent decisions.

When establishing an information sharing or maritime security initiative at any level, players leaned more towards the use of formal ***agreements***, contracts or treaties. The lack of standardization in each of the areas identified by the players was attributed to national laws, regulations and policies governing various matters such as economic “trade-secrets” (e.g. cargo manifest) , personal privacy (e.g., crew list) and national security (e.g. military vessels). These types of formal agreements were said to instill a stronger commitment to share because of the “political top-cover” provided by individual nations. Formal agreements enable parties to understand and accept the

reciprocal duties, responsibilities, and purposes of those involved. Within each of the partnerships identified during the game, players determined there appeared to be sufficient national and international legal frameworks in place to support the development of partnerships initiatives. In order to overcome the legal barriers to information sharing and maritime security operations, players concluded that individual nations should align domestic legislation with international norms through the adoption of international regulations. The Regional Cooperation Agreement on Combating Piracy and Armed Groups in Southeast Asia and the Proliferation Security Initiative were noted by the players as ways which national legislation can be leveraged in support of maritime security cooperation. As a result, maritime stakeholders would garner shared awareness and knowledge of the maritime domain.

Shared awareness and knowledge was a common theme that emerged from the game. Knowledge sharing was an activity through which knowledge is exchanged among individuals, organizations or countries. Specifically, knowledge sharing was noted within the context of information (data), skills, and expertise acquired through education, training or experience. Accordingly, there was a strong emphasis on non-technology aspects of partnership building, such as leveraging existing education, training, exercises and games as a mechanism for advancing partnerships and MDA. Specifically, the structure of these events should be tailored more at the sub-regional and regional levels with broad participation from military, civilian and industry stakeholders.

Throughout the game, there was a need to bridge the gap between disparate knowledge to enable collaboration in the maritime environment. Specifically, players learned about a variety of MDA and partnership initiatives that currently exist cross-regionally but, surprisingly, even though these initiatives existed within their own sub-regions and regions, they were unaware of the effort. Enhancing cooperation and coordination through the execution of these initiatives at all levels is critical to maximizing the sharing of data. Within this context of disparate knowledge, sea-blindness was defined by the players, as “a lack of political and public focus and understanding of important maritime issues, resulting in the maritime domain receiving low priority without appreciation for the consequences of neglect.” The lack of political awareness of these issues was derived as a primary reason for the limited amount of capacity and capabilities of nations to effectively address the diverse challenges encountered in the maritime environment.

The lack of ***resources and funding*** significantly impairs sharing data and performing maritime security operations in the real world. Specific capacity building opportunities that emerged from the game included the procurement and installation of MDA infrastructure (shore radar, communications, port facilities, coordination centers, laboratory facilities, fixed and portable equipment), operational assets (e.g., patrol vessels and aircraft), and education and training opportunities for both individual

personnel and organizations. The sustainment of robust programs and funding is an essential pillar to fostering continued growth of maritime security partnerships.

The Role of ***technology in maritime cooperation*** was approached as an impediment to information sharing that is “simplest to overcome”. However, while players felt that a bottom-up approach is essential to maximizing the amount of information contributed to MDA at the regional and cross-regional levels, they were still very much in support of establishing cross-regional information sharing linkages. Across all of the cells, players concluded that the amount of existing regional and trans-regional technologies were adequate to share unclassified data. Some regional cells still identified a strong desire for obtaining additional technological resources specifically in the areas of systems integration fusion and analysis and Common Operating Pictures (COP).

The Range of Cooperative Strategies for Achieving Efficacy in MDA

Players asserted that maximizing the contribution to Maritime Domain Awareness requires “more of a bottom-up than top-down approach.” A greater emphasis at the sub-regional and regional levels held true across all of the regional player cells. Specifically, the players felt that in order to share the full spectrum of maritime information at the sub-regional, regional and cross-regional levels, individual nations need to solve their domestic information sharing issues first, then systematically work towards the sub-regional and regional levels. Players noted that most domestic and international information sharing partnerships are established as bilateral agreements. Individual player surveys indicated that 91% of the participants believed, “based on three days of game play and reflection that the best solution to information sharing at the regional level is through multilateral agreements.” Similarly, 95% of the players indicated, “Based on three days of game play and reflection that the best solution to information sharing at the cross-regional level is through multilateral agreements.”

The game data showed through derivation that as the geographical scope of partnerships expands, the greatest contribution to Maritime Domain Awareness comes from expanding relationships and agreements from bilateral into multi-lateral. Players noted that mil-mil relationships often initiate these partnerships. The use of Navy LNO’s and FAO’s were highly desired and welcomed by majority of the players. Players concluded that an expansion of personnel in these roles would help meet the demands for establishing and enhancing partnerships worldwide. However, players concluded that the key to long term stability and cooperation is through diplomatic and political relationships. The primary, long-term cooperative strategy to forming partnerships derived from the game, whether through bilateral or multilateral arrangements, was formal in nature. Players discussed this formality in terms of agreements, contracts, and treaties coupled with the use of national and international laws as necessary characteristics to establishing partnerships at any level.

Players repeatedly recognized various national capability gaps and barriers to conducting Maritime Domain Awareness and broader maritime security operations such as trust,

technology interoperability, legislation, corruption, standard protocols and procedures. Moreover, the maturity level of interagency cooperation varied considerably across the wide range of participants. Even through the structure of the game required the players to operate within a certain geographical area; the players demonstrated a strong desire and commitment to continue pursuing cross-regional partnership initiatives, and as an example stated “considering that no one-size-fits-all solution exists in maritime security cooperation, maritime stakeholders should continue pursuing a holistic approach to examining the specific challenges and stressors, social, cultural and legal phenomenon’s that are unique at the sub-regional and regional levels.”

4.2. Title 10 Implications

U.S. participants were asked to provide specific actionable recommendations for U.S. Navy Title 10 (organize, train and equip) responsibilities at the sub-regional, regional, or cross-regional levels. The section below discusses the overarching recommendations.

Organize

- Since 2005, the Global Maritime Partnerships Initiative has been well received from the international community and is still taking on a life of its own. Since its inception, the increase in multilateral cooperation in maritime security affairs has expanded across every region of the world. Nations have united both functionally and geographically to develop stronger partnerships by sharing maritime information in order to effectively address the catalysts to instability encountered in the maritime environment. Work in this area should continue.
- Establish sub-regional and regional liaison teams, assigned and manned by Naval Component Commands (NCCs), to provide persistent engagement in support of Foreign Humanitarian Assistance, environmental response and search and rescue operations.
- Establish Regional Maritime Operations Centers (RMOCs) in support of international maritime community interests. Integration of information operations, international shipping companies, and multi-agency representation was noted as essential to ‘Integration was noted as essential’ to enable effective regional efforts.
- Define Maritime Security Operations and develop concepts of operations, doctrine and TTPs to perform various maritime security mission sets. Close collaboration with the USCG is vital to this effort. The project should build upon the CNO’s Innovation Continuum Effort that examined Irregular Challenges in 2009.
- Incorporate overarching strategic guidance on theater security cooperation and global maritime partnerships into MDA Concept and CONOPS documents. Both

should focus more on the governance and strategy of MDA at the sub-regional and regional levels.

- International norms, decision rules, and procedures for sharing maritime related information at the cross-regional level, once developed, should be critical components of the U.S. MDA Concept.

Train

- Education is a key element for bridging the partnership gaps of U.S. and international participants at the sub-regional, regional and cross regional levels. The participants expressed a lack of knowledge of existing partnerships initiatives and specific lessons identified during the GMPG. The development of an online, interactive, professional maritime education initiative at the operational and strategic levels for U.S and international military, civilian and industry maritime stakeholders was recommended.
- Additionally, U.S. players proposed developing a curriculum focused on maritime security (CTF Organization and Operations, MOC Watchstanding Procedures, MDA Principles and Procedures, Maritime Law Enforcement, Area Search Procedures, etc.) for U.S. Navy personnel. Naval Education and Training Security Assistance Field Activity (NETSAFA) was noted as one potential means for developing this educational and training initiative.
- Leverage the existing Partnership Stations and existing bilateral and multilateral exercises to address as many maritime security issues as possible.
- Increase interagency representation during training exercises. Specifically, incorporate civilian elements into exercises to foster synergy among international maritime stakeholders and better understanding specific roles, responsibilities and capabilities of each organization.

Equip

- Increase funding for the relational aspects of partnership building (games, exercises, training, and symposiums).
- Provide funding for maritime operation centers and MDA technology at the sub-regional, regional and cross-regional levels. Continue support to existing centers and technical infrastructures to improve information sharing processes and classification restrictions.
- Provide additional funding and personnel in Foreign Disclosure Office programs. Additionally, expand and integrate FAO and LNO programs. In doing so, the process should be coordinated with DOS, DoD and CCDR representatives.

- Examine the U.S. Navy's role, responsibilities, capabilities, and strategy for achieving efficacy in MDA at the sub-regional, regional and cross-regional levels. Accordingly, in order to develop commonly agreed upon norms, decision rules and processes at the national level, players concluded that a long term U.S. MDA research project be funded.

4.3. Limitations of Game Design and Analysis

One of the greatest challenges for the Naval War College, War Gaming Department is to develop a game that provides the robust insights into an issue or problem sought by the game's sponsor. Accordingly, managing stakeholder expectations about what the final game report will tell them with respect to broad-based implications is essential. Stakeholders often seek findings that will provide them with predictive conclusions for decision-making purposes. Unfortunately, gaming is a predominately descriptive process because games are not experiments. Even if a game is repeated, it lacks sufficient controls over player inputs and the central limit theorem for a distribution to ensure validity. In other words, sponsors should not attempt to draw inferences beyond what a specific group of players did in a particular game to yield generalizability (i.e., the ability to apply the findings observed for a small population to the broader world around us).

Such is the case in the Global Maritime Partnerships Game 2010. This project was designed to be a highly inductive, lightly structured project analyzed primarily using open-ended, qualitative techniques. Specific themes were discerned as a result of post-game analysis, and gaps, overlaps, seams, and outliers were identified using grounded induction, content analysis, and data visualization. However, no inferentiality or generalizability can be assumed based on the results of this game.

The value gained from the interpretation of insights derived from game play results from the ability to develop new kernels of theories concerning partnerships and information sharing. From these new theories, hypotheses about implementing future cooperative security and information sharing models can be constructed and tested in future research efforts, such as through gaming. In this way, the inductive process conducting during the Global Maritime Partnerships Game 2010 will set the conditions to be tested in future deductive processes and games.

Analysis effectiveness of a research effort, such as this game, can be measured in terms of the internal and external validity of the analysis. Internal validity refers to the extent that cause-and-effect relationships identified in the game can be inferred from collected data. External validity refers to the extent that the results in the game accurately reflect the external conditions in the real-world. A number of potential threats to internal and external validity need to be accounted for and the analysis effort must attempt to minimize the effect of these threats.

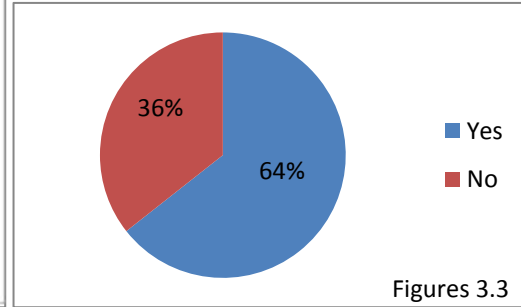
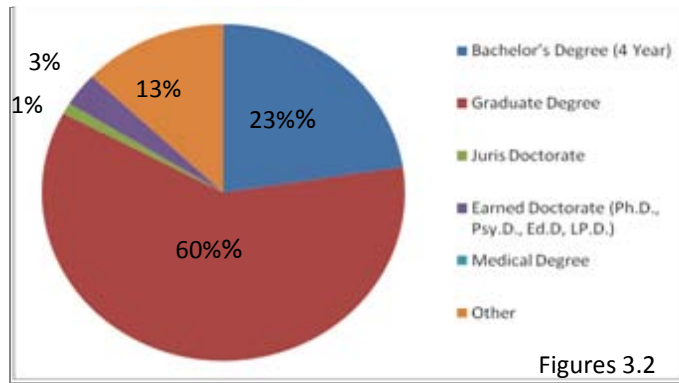
Two threats to internal validity were the quality of the data collected and the accuracy of the analytical technique used to review the data. To ensure quality data collection, the analysis team primarily relied on player presentations. These deliverables were captured via Microsoft PowerPoint and i2 Analyst Notebook during the discussions of the players participating in a collaborative effort. The highly qualitative case study research method uses the participants' own words to provide data for analysis. Insights extracted from ethnographic recordings were then cross-checked (triangulation method of using multiple data sets) with other data sets collected during the game to ensure accuracy and conclusiveness. To ensure the correct analytical technique was used, multiple methods and tools were employed (triangulation method of using multiple techniques) to review the same data. These methods were content analysis, grounded theory, and data visualization. Although internal validity threat mitigation strategies were used, the greatest limitation to developing insights and themes from the data resulted from the limited representation of regions as well as the diversity of the backgrounds of participants. Their different lexicons and perspectives of the same situation, often including the use of English as a second language, add a level of difficulty to interpretation.

To explore the degree of external validity, one must ask whether the data allows generalization to other subjects among the population. To answer this inquiry, one must then look at the demographics data of the participants along with the specific cultural, social, economic and political phenomena tailored at the national and sub-regional levels. The game was designed to inspire innovative thinking given the complex nature of issues encountered in the maritime domain.

4.4. International Participant Demographics

There were 83 international participants from 46 different countries. 73 out of the 83 participants successfully completed the individual player surveys. The average participant was approximately 46 years old and had approximately 25 years of service. The participants were overwhelmingly male (72 out of 73) and were predominantly military (69 out of 73). Moreover, the median (25 years of service) is described as the numeric value separating the higher half of the sample population from the lower half.

The intent of this game was to focus at the operational to strategic level of maritime security cooperation. Therefore, it was desired for senior level participation from civilian and military organizations both in the U.S and internationally. All of the participants were college graduates with 60 percent reporting graduate degrees. 64 percent of participants reported having attended a naval war college as part of their professional education, either in their own country or another nation.



Figures 3.2 and 3.3 depict the highest education level and participation at a war college as part of professional military education respectively.

Functional Area	Number of Participants	Average Years Experience
Surface	27	26
Law Enforcement	5	22.5
Staff	3	25
C4 ISR	2	27
Expeditionary	1	27
Anti-Surface	3	30
Operations	8	27
Aviation	1	19
Maritime Domain Awareness	6	17
Executive/Policy	7	24
Technical	2	35
Academia	1	41

UNCLASSIFIED

Other	7	18
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Table 3.4 depicts a breakdown of the participants relative to functional expertise with average years of experience for each functional area. Although the average years experience for MDA experts were relatively low, players seemed well versed in the range of information sharing partnerships and initiatives that exists within their respective regions.

Country	# of players	Country	# of players
African Union	1	Japan	4
Argentina	1	Kenya	1
Australia	1	Lebanon	1
Azerbaijan	2	Libya	2
Benin	2	Mexico	2
Brazil	3	Morocco	2
Bulgaria	2	Netherlands	1
Cameroon	2	New Zealand	1
Canada	2	Nigeria	1
Chile	3	Oman	2
Colombia	2	Pakistan	2
Ecuador	2	Panama	1
Egypt	1	Peru	1
France	1	Poland	1
Gabon	2	Saudi Arabia	3
Georgia	1	Senegal	2
Germany	2	Singapore	3
Ghana	2	Spain	2
Greece	1	Sweden	3
Guatemala	2	Tanzania	2

India	1	Togo	2
Israel	1	Turkey	2
Italy	1	Ukraine	2
		United Kingdom	2

Figure 3.5 depicts the diversity of countries and subsequent number of players involved in this research project.

4.5. U.S. Participant Demographics

There were 34 U.S. participants from various military services, USG agencies, and civilian organizations in this game. 28 out of the 34 U.S. participants successfully completed the individual player surveys. The average participant was approximately 48 years old and had approximately 26 years of service. The participants were overwhelmingly male (26 out of 28) and were predominantly military (21 out of 28). Moreover, the median (26 years of service) is described as the numeric value separating the higher half of the sample population from the lower half.

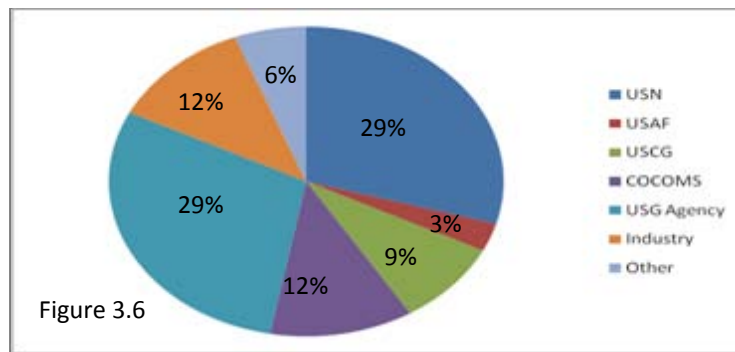
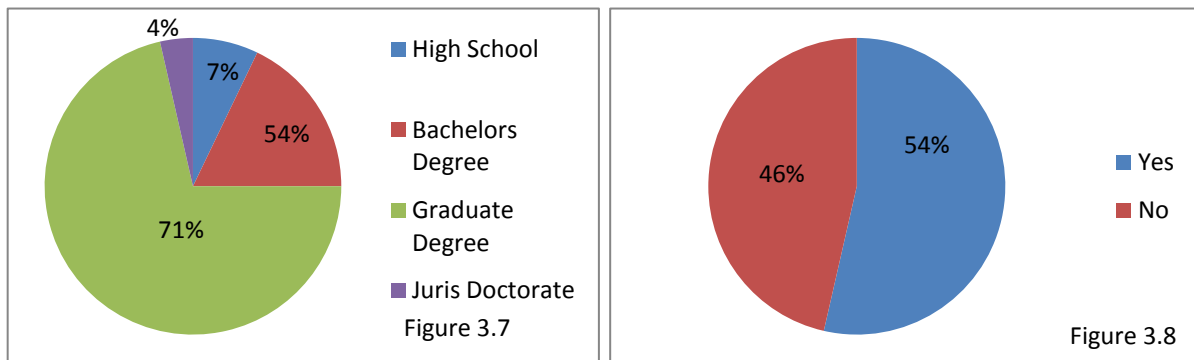


Figure 3.6 depicts the distribution of military service, USG agency, and civilian organizations.

The intent of this game was to focus at the operational to strategic level of maritime security cooperation. Therefore, it was desired for senior level participation from civilian and military organizations both in the U.S and internationally. The majority of the U.S. participants were college graduates with 71 percent reporting graduate degrees. Most, 54 percent, of participants reported having attended a naval war

college as part of their professional education, either in their own country or another nation.



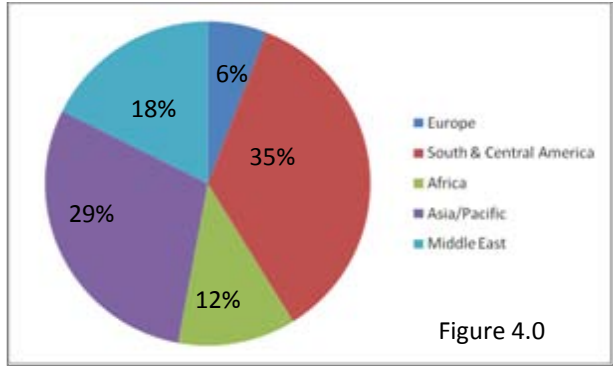
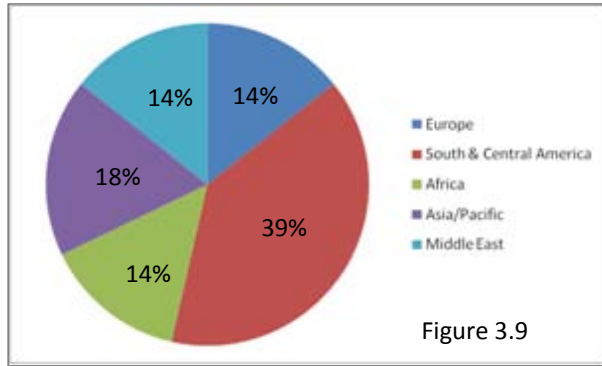
Figures 3.7 and 3.8 depict the highest education level and participation at a war college as part of professional military education respectively.

For the purposes of this game, the following definitions for regional and cultural were provided to the players.

Regional Expertise: Basis of credibility of a person who is perceived to be knowledgeable in an area pertaining to a specific geographical location due to his or her study, training, or experience in the subject matter.

Cultural Expertise: Basis of credibility of a person who is perceived to be knowledgeable in the social heritage of a group (organized community or society) due to his or her study, training, or experience in the subject matter. Specifically, culture is a pattern of responses discovered, developed, or invented during the group's history of handling problems which arise from interactions among its members, and between them and their environment. These responses are considered the correct way to perceive, feel, think, and act, and are passed on to the new members through immersion and teaching. Culture determines what is acceptable or unacceptable, important or unimportant, right or wrong, workable or unworkable. It encompasses all learned and shared, explicit or tacit, assumptions, beliefs, knowledge, norms, and values, as well as attitudes, behavior, dress, and language.

The Majority of the participants (25 out of the 28) reported having regional expertise. However, only 57% of the participants reported having cultural expertise. Players reported having a broad range of regional and cultural expertise. Players reported having more expertise in the South and Central American region.



Figures 3.9 and 4.0 depict the regional and cultural areas expertise of the players.

Players were grouped according to their respective regional and cultural areas of expertise. These cells were designed to mirror the international regional cells employed in the game and operated independently of one another. Each cell examined the observations, themes and recommendations from the international counterparts in their respective regions. To compensate for minimal expertise in the Middle East region (2), players with expertise in either Middle East or African affairs were grouped together. The lack of player expertise across every region with the exception of Latin America was a critical limitation of analysis.

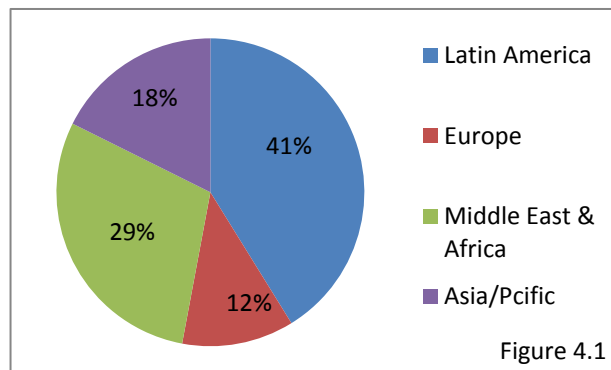


Figure 4.1 depicts the composition of the U.S. player regional sub-cells. Of note, 14 players (41%) of the total population comprised the Latin American cell.

5. War Gaming Department Lessons Learned / Recommendations

5.1. Administration and Logistics

Lessons learned for the conduct of the Administration and Logistics portion of the GMPG is available in Appendix J.

5.2. Future Events.

Background. Research throughout the past five years has indicated that the major impediments to information sharing, both internally within a country or internationally between countries has been the policy, legal and cultural issues vice the technological solutions often discussed.

The realization of the fundamental concept that trust is essential to facilitate information exchange was recognized on a large scale at the International Seapower Symposium XIX held in Newport, Oct 2010. Based on this finding and the results of the events described in Annex B, further study is warranted.

Recommendations. The following recommendations are submitted as a potential research tract to facilitate a greater understanding of the issues/requirements for the establishment of maritime domain awareness through maritime partnerships. The recommended events are presented in two segments; first, a research path to improve U.S. MDA options and second, to capitalize on the regional issues discovered and facilitate greater cooperation between regional maritime forces.

5.2.1. Future Games – U.S. Centric

5.2.1. U.S. Interagency Game. The intent of the event is to focus on the two new core capabilities from a Cooperative Strategy for 21st Century Seapower. The U.S. Maritime Forces need to coordinate and cooperate internally to determine what is known and what can/should be shared. Interagency coordination is necessary for optimal sharing and there are multiple sharing channels requiring coordination. The Navy plays a key role in MDA, but is only one of many participants.

Domestic interagency challenges must be resolved in order to achieve the full potential of global information sharing; additionally, an improved understanding of interagency process is imperative in realizing the full potential of Navy capabilities. The following is an example of U.S. Government agencies that currently operate, at some level, information exchange “systems” with their international counterparts but don’t always coordinate the information or intelligence garnered throughout United States security channels.

Organizations, such as DOS/NTRG (Nuclear Trafficking Response Group), DOS/DS (Diplomatic Security), DOE (Dept. of Energy), DHS/OPSP (Office of Policy and Strategic Planning), DHS/CBP (Customs and Border Protection),

DHS/ICE (Immigration and Customs Enforcement), DHS/USCG(CG-531) (Office of Law Enforcement), DHS/USCG(CG-532) (Office of Counterterrorism & Defense Operations), DHS/USCG(CG-0941) (Office Of Maritime/International Law), DOJ, DOJ/FBI(MSP), DNI, HSC, NSC, DOD/JS/J5 (JAG), DOD/ASD(HD), DOD/JS/J3 (DDAT/HD) (Deputy Director for Anti-Terrorism and Homeland Defense), DOD/OPNAV (N5SP) (Strategy/Policy Division), DOD/USSTRATCOM, DOD/NCIS, DOD/OPNAV (N3OP), DOD/FFC, DOD/JFCOM/J9, DOD/USNORTHCOM, should be considered for participation in the event.

Proposed Objectives:

- Examine the Interagency Intelligence architecture
- Examine the terrorist incident response architecture from law enforcement to Federal response
- Examine DOD and interagency coordination methodologies
- Establish oversight considerations for national level information exchange coordination
- Determine release methodologies for shared awareness programs established with regional partners

5.3. 5.2.2 Future Games – Regionally Centric.

The goal for improving national maritime capacity and to foster relationship building can be achieved by providing regional gatherings for international participants within their respective AOR. Similar to the approach conducted for Eastern Africa with the Maritime Center of Excellence course of study, a one week regional game will provide an opportunity for more senior decision makers than were not available to travel to Newport, to gather, develop regional relationships and reflect on the following objectives:

- Examine and evaluate a coordination structure.
- Define standardized nomenclature/definitions for maritime security and humanitarian assistance mission areas.
- Explore the processes for international cooperation.
- Evaluate the current plans, agreements or procedures.
- Examine legal authorities and jurisdictions.
- Examine collaborative planning procedures to achieve a desired end state.

Based on the interactions during the GMPG, the following regions expressed a desire to continue the research process:

- Gulf of Guinea Region.
- Arabian Gulf Region.
- Indian Ocean Region.
 - Eastern Indian Ocean Region.
 - Western Indian Ocean Region.
- Mediterranean Sea Region.
- Western Pacific Region.

Section 6

Appendices

Appendix A	Attendees
Appendix B	Background Maritime Security Games
Appendix C	Research/ Associated Events
Appendix D	Schedule of Events
Appendix E	Cell Outbriefs
Appendix F	Technology Demonstration
Appendix G	Game Mechanics
Appendix H	Data Collection and Analysis Plan (DCAP)
Appendix I	Administration / Logistics
Appendix J	Glossary

Appendix A (N/A)

Appendix B

GMPG Background Maritime Security Games

The Global Maritime Partnerships Game drew on the broad experiences from other NWC games over the past several years that focused on the maritime security challenges, specifically: Maritime Domain Awareness Connectivity Workshop, Global 2008, International Seapower Symposium (ISS) XIX, Irregular Challenges Game 2010, MDA Operational Game 2010 and Strategic SEALIFT 2010.

1. Maritime Domain Awareness Connectivity Workshop:
 - a. During the period of 28 – 30 August, 2007, the MDA Connectivity Workshop convened to examine the following issues:
 - i. Sharing interests and drivers of other maritime forces
 - ii. Melding capabilities and capacities to maximize mission performance
 - iii. Improving information sharing in a common domain
 - b. The initial concept to develop a technology solution was superseded by issues of policy, legality and trust between the international participants. Conclusions were that it was impossible to “surge” trust and relationships should be developed prior to technological linkages.
2. Global 2008:
 - a. During the period 4-8 August 2008, the Navy’s Title X War Game, Global ’08, was held at the Naval War College (NWC) in Newport, Rhode Island. The game focused on developing insights regarding the capabilities, capacities, and risks associated with implementation of *A Cooperative Strategy for 21st Century Seapower* (CS 21).
 - b. The observations and insights from the game were organized around seven maritime themes which had relevance across all of the cells. Three of the seven themes are briefly discussed below.
 - i. Maritime Security: Game participants unanimously saw maritime security as an important mission, and it was a central focal point of game discussions. International players, in particular, considered maritime security primarily a law-enforcement rather than a counterterrorism function. Many of the participants also preferred U.S. assistance in the form of training and exercises. Finally, most participants perceived the facilitation of maritime security as an activity that could be leveraged to

enhance trust between the U.S. maritime services and their counterparts in other countries.

- ii. Building Partnerships: For game participants, building partnerships meant developing relationships with allies, friends, and stakeholders across the full spectrum of maritime activities in order to create trust and effectively accomplish shared maritime goals. They applied this concept of partnership across all regions, futures, and the full range of maritime activities, indicating that foreign partners wanted the U.S. to be involved with their maritime security in most conceivable futures. From that perspective, the participants noted that the United States will have to make significant investments in maritime resources on a global basis to build partnerships that meet the expectations of existing and potential partners. As participants and others have stated, *“you can’t surge trust.”* Building partnerships will accordingly require tolerance, patience, and some willingness to adapt and conform to partner standards.
 - iii. Shared Awareness: Virtually all of the players viewed information sharing between stakeholders (both governmental and non-governmental agencies and organizations) as vital to the development of improved situational awareness. They came up with five primary insights regarding shared awareness. First, information sharing is a key enabler, particularly for information-related concepts such as maritime domain awareness (MDA) and common operational picture (COP). Second, the barriers to the successful sharing and exchange of information are policy-related as well as technical, such that policy changes – not just technological advances – can lead to improved information sharing. Third, trust, developed through engagement activities such as coalition exercises and operations, would help expand the range and depth of interaction between the United States and partner countries. Fourth, information sharing must be a two-way street. Finally, ISR, particularly persistent ISR provided by maritime forces, is a key maritime requirement.
- 3. International Seapower Symposium XIX – The ISS is a biennial symposium held on even years to promote mutual understanding among the leaders of the world's maritime nations.
 - a. During the period of 6-9 October 2010 ISS was conducted to raise awareness and increase Navies’ participation in Maritime Domain Awareness (MDA). A focus of ISS XIX was the improvement of MDA and the broadening of information sharing between nations and navies in support of it. This was conducted through the following objectives.
 - i. Endorse the importance of maritime domain awareness as a critical enabler in building regional maritime safety and security.

- ii. Increase awareness of regional successes in maritime partnerships.
 - iii. Build mutual trust and cooperation, and highlight best practices to mitigate and solve shared challenges.
 - iv. Positively impact perceptions toward maritime domain awareness and enhance Navies willingness to share information as partners within their regions.
 - b. The desired end state was a recognition of the need to take action on the following:
 - i. To share information better and more widely,
 - ii. To better integrate separate initiatives against various maritime threats (piracy, proliferation, trafficking, terror, illegal resource extraction, etc)
 - iii. To gain better understanding of how different partners plan and operate through more cooperative training, exercises, and operations,
 - iv. To create quicker, better mechanisms for those with capacity and capability resources to assist those who are still building, especially at a basic level, and
 - v. To create or strengthen mechanisms for collective action where common maritime interests exist.
 - c. Conclusions
 - i. Political will must take the lead, technology and implementation will follow.
 - ii. In addressing “sea-blindness” (ignorance of the importance of the sea) and advancing cooperation and MDA, navies/maritime services should be leading the efforts to educate their governments/interagencies/populace on the importance of the maritime domain, the need to understand what is occurring there, and the need to cooperate with others to achieve a secure environment.
 - iii. The path to increased MDA starts at the national level. National efforts are then integrated into regional networks. Substantial progress has been made in several regions of the world over the past 2 years in this effort. Trans-regional and global MDA will be achieved by expanding these existing regional networks and linking them together.
4. Irregular Challenges 2010 Game
- a. During the period 27-30 July 2010, the United States Naval War College in Newport, Rhode Island hosted the Irregular Challenges 2010 Game. The overarching purpose of the Irregular Challenges 2010 Game was to help the Navy

better understand the complexity of the problems that it could face in unstable regions in the maritime environment and to better address how it could respond.

- b. The Irregular Challenges 2010 Game was structured to explore the following four specific objectives:
 - i. Identify possible benefits and unintended consequences of U.S. Navy activities in maritime instability-oriented irregular challenges pre-crisis;
 - ii. Identify possible benefits and unintended consequences of U.S. Navy activities in maritime instability-oriented irregular challenges during a crisis;
 - iii. Identify gaps, seams, and overlaps in U.S. Navy capabilities supporting other nations and organizations in maritime instability-oriented operations;
 - iv. Provide an environment for players to explore and appreciate the complexities of decision-making when faced with maritime instability-oriented irregular challenges.
- c. According to the players, attributes that describe an effective approach to confronting irregular challenges include:
 - i. Being focused on complex and interconnected problems;
 - ii. Having the ability to address problems as a function of proper understanding of the complexity of the environment;
 - iii. Having cultural expertise to help understand the complexity of the environment;
 - iv. Awareness of available capabilities, both military and civilian, to better understand how to address the problems;
 - v. Recognizing that problems are best addressed through pre-crisis activities;
 - vi. Working with interagency, non-government, and international partners in order to address problems; and
 - vii. Conducting unique missions to address problems such as building partnership capacity to conduct operations not normally associated with security (such as humanitarian assistance and civil affairs).

5. MDA Operational Game 2010

- a. In an effort to share ideas and initiatives that have been developed independently across the globe, the U.S. Chief of Naval Operations (CNO), Admiral Roughead, stated during ISS XIX that an international game would be held at the Naval War College to explore the operational implications of MDA. In July 2010, a game to enhance information sharing with international partners for Maritime Domain Awareness was held in McCarty Little Hall at the Naval War College in Newport, Rhode Island.
- b. The purpose of the event was to enhance information sharing with international partners for Maritime Domain Awareness in order to support International Seapower Symposium XX.
- c. Game Objectives.
 - i. Examine regional MDA related relationships and networks in order to identify key elements of success, commonalities, and best practices.
 - ii. Expose impediments to effective information sharing.
 - iii. Identify options for broad based international maritime information sharing.
- d. Commonalities discovered during the game
 - i. Maritime Domain Awareness is an accepted term.
 - ii. Reasons for sharing information are to receive information through reciprocal sharing and improve capacity of sharing partners to take actions which support one's own national objectives (e.g., to interrupt in their own territory smuggling operations which affect both countries).
 - iii. Interoperability within an information sharing coalition must be voluntary in nature. Rules for sharing must be equally applied to all members and information assurance must be resolved to the satisfaction of each member.
- e. Impediments to information sharing.
 - i. Lack of a national interagency process creates internal and external information sharing impediments.
 - ii. Integration of legacy systems and technologies has been a significant internal challenge.
 - iii. Domestic legal and policy restrictions inhibit internal and external sharing.

6. Strategic Sealift 2010

- a. The SEALIFT 2010 Strategic Lift Game was conducted 2 - 6 August 2010 at the Naval War College, Newport, R.I.
- b. The intent for the game was to focus on the processes and procedures required to mobilize and deploy forces, equipment, and sustainment via the Joint Deployment and Distribution Enterprise (JDDE) in support of Commander, United States Africa Command's Foreign Humanitarian Assistance (FHA) efforts in Western Africa as they support United States Agency for International Development (USAID) Office of Foreign Disaster Assistance (OFDA).
- c. Objectives
 - i. Examine "end-to-end" Department of Defense's (DOD) ability to support USAFRICOM's FHA Concept of Operations (CONOPS) and Contingency Plan (CONPLAN) 7200 in Western Africa.
 - ii. Explore supporting relationships with partner nations, Governmental Organizations, Non-Governmental Organizations, and other international agencies as directed, to develop and coordinate non-combat support operations.
- d. Conclusions.
 - i. SEALIFT 2010 provided an excellent opportunity to explore the unique and challenging interagency relationships encountered during an FHA operation. The close coordination with USAID/OFDA throughout the planning and execution of SEALIFT 2010 ensured the game related realistic and believable lessons and real world experiences to all participants. Additionally, the game explored DoD-USAID/OFDA interfaces and how the international relief community responds to DoD involvement in crisis response, providing invaluable experience for all participants.

7. Multilateral War Game 2010

- a. The Multilateral War Game 2010 was conducted 13-17 Sept 2010 at the Naval War College, Newport, R.I.
- b. The game's intent was to increase cooperation and interoperability among the navies of the participating nations and to examine issues of common concern in order to develop compatible doctrine.
- c. Objectives

- i. Examine the interaction between national-level political and military representatives and operational-level military planners, operating within a multinational context
 - ii. Examine the ability of a multinational force (MNF) to effectively perform its assigned duties
 - iii. Examine the impact of differing individual national legal policies, differing interpretations of international legal policies and agreements, and their potential impact on MNF operations
 - iv. Examine military operational-level planning considerations when operating within a multinational force
- d. Conclusions
 - i. Common understanding of MNF planning documents' terminology and phraseology is important for planners with different planning backgrounds.
 - ii. Assigning actual forces to a notional C2 organizational structure requires a mature MNF ROE in order to consciously blend forces with varying nationally-imposed ROE restrictions
 - iii. In addition to clear language translation concerns, an added complication was a differing understanding of a properly translated term

Appendix C

Research / Associated Events

Background. The United States Navy has embarked on an ambitious initiative to implement a new maritime strategy. This is the first new Navy strategy that addresses the post-Cold War and post-9/11 realities of global terrorism. The new strategy is consistent with the National Security Strategy and the National Strategy for Maritime Security, as well as with other national level guidance. As a key part of this strategy, the Global Maritime Partnership (originally titled the 1000-ship Navy) is a key tenet of U.S. naval policy. The Navy must work seamlessly at sea with a wide range of international/coalition partners. An impact to the requirements generation process for the Navy will be to ensure coalition interoperability is considered at the earliest stages of capability development.

Current and future efforts to bring about Global Maritime Partnerships must address the ongoing challenge of information sharing or Maritime Domain Awareness (MDA). Information sharing will not only enhance the Navy's war fighting capabilities but will also help the Navy meet the growing maritime security and humanitarian missions that are an integral part of the new maritime strategy.

Information sharing and maritime partnerships create the environment to provide security and stability against WMD proliferation, piracy, weapons, illegal immigration, slavery, fishery violations and drugs in the maritime domain. That security and stability effects the global economics.

Maritime partnerships are an international association of maritime nations that participate in international commerce, each having a stake in security and freedom of the seas. The partnerships are necessary to confront the complex shared challenges and to maintain stability. Partners assist all countries in using the sea for lawful purposes including commerce.

The purpose of the Global Maritime Partnerships Game (GMPG) was to identify the catalysts to instability at the national, regional and super-regional levels as well as the impediments to forming effective regional and global partnerships in the maritime domain from both U.S. and international perspectives.

Research Tracks. Three perspectives were pursued to determine the regions, issues and participating nations that should be considered for the Global Maritime Partnerships Game. They targeted the Department of Defense, Nation States and US Interagency organizations.

Track 1. Research was conducted within the Department of Defense for the U.S. perspective on the event. OPNAV contacted the Combatant Commanders

(CCDR), Naval Component Commands (NCC) and the Numbered Fleets to explore maritime security issues that existed within the Areas of Responsibility (AOR).

In addition, research trips were conducted to the Office of Naval Intelligence (ONI) to conduct interviews with subject matter experts (SME) on maritime regions and issues (catalysts to instability) to identify impediments to forming effective regional and global partnerships within the maritime domain.

This data along with the OPNAV survey was consolidated and applied to the construct of the Global Maritime Partnerships Game (as described in Appendix G).

Track 2. Several international events were scheduled by the War Gaming Department (WGD) of the Naval War College (NWC) that made possible a research opportunity to examine issues and methodologies for application in the design of the GMPG.

- Baku, Azerbaijan – The purpose was to expose the Azeri Naval forces to the operational planning process and putting into practice selected CONOPS to counter the maritime threat to the critical energy infrastructure.
- Mombasa, Kenya - Provide operational level training that builds Maritime Safety and Security capacity in order to promote a stable and secure Africa and set the conditions for the region to harness the maritime domain's potential.
- Montevideo, Uruguay - The purpose was to expose the Uruguayan Naval forces to the operational planning process and putting into practice selected CONOPS to counter maritime threats.
- Cartagena, Colombia – The purpose was to achieve the goal of making the navies of South America aware of the benefits of and enabling them to participate in regional security initiatives. The additional goals of enhancing understanding of how maritime domain awareness contributes to state and regional maritime safety/security and fostering navies determined to connect with partners and build maritime safety/security were a part of the game design.

In addition, the process of determining linkages between information cells was part of the experimental design of the event.

Track 3. Interagency organizations, though not part of the GMPG itself, were chosen to provide input to the game objectives and context. They were interviewed to determine their perspectives and relevant opinions on their global partnering regions, issues and concerns with a maritime security nexus.

Appendix D

GMPG Schedule of Events

Sunday 3 October

1030 – 1130 Buses drop off participants at Officer's Club
 1030 – 1200 Participant Registration
 1130 – 1300 Lunch
 1130 – 1300 Welcome and Opening Remarks
 1300 – 1400 Game Design Brief
 1330 – 1430 Seminar Tables: Individual Paper Surveys / Break
 1430 – 1500 Seminar Tables: Participant Introductions
 1500 – 1630 Seminar Tables: Group Issue Development
 1600 – 1700 Buses drop off participants at quarters
 1700 – 1800 Game Control Team Meeting
 1800 – 2300 Bus service to downtown Newport and quarters

Monday 4 October

0645 – 0730 Buses drop off participants at NWC McCarty Little Hall
 0700 – 0800 Late Participant Registration
 0700 – 0800 Breakfast
 0800 – 0815 Administrative Remarks
 0815 – 1000 Country Briefings (2) - Auditorium
 1000 – 1030 Break
 1030 – 1200 Country Briefings (2) - Auditorium
 1200 – 1330 Lunch
 1330 – 1500 Country Briefings (2) - Auditorium
 1500 – 1530 Break
 1530 – 1615 Country Briefing (1) – Auditorium
 1615 – 1630 Move to Seminar Gaming Cells
 1630 – 1700 Seminar Participant and Issue Introductions

UNCLASSIFIED

1700 – 1800 Buses drop off participants at quarters
1700 – 1800 Game Control Team Meeting
1800 – 2300 Bus service to downtown Newport and quarters

Tuesday, 5 October

0645 – 0730 Buses drop off participants at NWC McCarty Little Hall
0700 – 0800 Breakfast
0800 – 0815 Administrative Remarks – Game Cells
0815 – 1300 Seminar Working Groups – Game Cells
1000 – 1030 Coffee Service Available
1200 – 1330 Lunch
1100 – 1300 Control Cell Plenary Panel Determinations
1230 – 1330 Seminar Briefing Preparations – Game Cells
1330 – 1500 Plenary Panel Discussion One - Auditorium
1500 – 1530 Break
1530 – 1645 Plenary Panel Discussion Two - Auditorium
1645 – 1700 Administrative Remarks (Wednesday Seminar Assignments)
1700 – 1800 Buses drop off participants at quarters
1700 – 1800 Game Control Team Meeting
1800 – 2300 Bus service to downtown Newport and quarters

Wednesday, 6 October

0645 – 0730 Buses drop off participants at NWC McCarty Little Hall
0700 – 0800 Breakfast
0800 – 0815 Administrative Remarks – Game Cells
0815 – 1300 Seminar Working Groups – Game Cells
1000 – 1030 Coffee Service Available
1200 – 1330 Lunch
1100 – 1300 Control Cell Plenary Panel Determinations
1230 – 1330 Seminar Briefing Preparations – Game Cells
1330 – 1500 Plenary Panel Discussion Three - Auditorium

UNCLASSIFIED

1500 – 1530 Break
1530 – 1645 Plenary Panel Discussion Four - Auditorium
1645 – 1700 Administrative Remarks (Wednesday Seminar Assignments)
1700 – 1800 Buses drop off participants at quarters
1700 – 1800 Game Control Team Meeting
1800 – 2300 Bus service to downtown Newport and quarters

Thursday 7 October

0645 – 0730 Buses drop off participants at NWC McCarty Little Hall
0700 – 0800 Breakfast
0800 – 0815 Administrative Remarks – Game Cells
0815 – 1500 Seminar Working Groups – Game Cells
1000 – 1030 Coffee Service Available
1200 – 1330 Lunch
1300 – 1500 Control Cell Plenary Panel Determinations
1400 – 1530 Seminar Briefing Preparations – Game Cells
1500 – 1530 Break
1530 – 1645 Plenary Panel Discussion Five - Auditorium
1645 – 1700 Administrative Remarks (Wednesday Seminar Assignments)
1700 – 1800 Buses drop off participants at quarters
1700 – 1800 Game Control Team Meeting
1800 – 2300 Bus service to downtown Newport and quarters

Friday 8 October

0645 – 0730 Buses drop off participants at NWC McCarty Little Hall
0700 – 0800 Breakfast
0800 – 0815 US Seminar Presentation - Auditorium
0815 – 0945 Plenary Panel Discussion Six - Auditorium
0945 – 1015 Break / Coffee Service Available
1015 – 1145 Plenary Panel Discussion Seven – Auditorium

UNCLASSIFIED

1200 – 1300	Lunch – Officer’s Club
1245 – 1315	Transition Remarks
1330 – 1630	Technology Symposium – McCarty Little Hall
1330 – 1530	US Seminar Plenary Session – Decision Support Center
1330 – 1530	War Gaming Department Plenary Session – MLH 110
1645 – 1700	Administrative Remarks (Wednesday Seminar Assignments)
1630 – 1730	Buses drop off participants at quarters
1800 – 2300	Bus service to downtown Newport and quarters

Appendix E

GMPG Cell Outbriefs

Cell 1 - Mediterranean



Information Sharing

- Levels of Classification
- Legal Concerns
- Safety of source
- Authority to share
- Exploitation vs. Interdiction
- Power

Technical barriers easier to address than issues of doctrine.

Lack of Perceived Threat

- Relatively secure region
- Level of effort vs. return on investment
 - What is the delta?
 - Public perception
 - Competing priorities
 - Probability vs. severity
- Catalyst for increased effort

Lack of Coordinated Efforts

- Lack of common insight
- Requires sustainable means
 - Not all nations have same capacity to maintain effort
- Areas of coordination that can not be quantified or controlled

Partnership Aspects

- **Establish partnerships both with Mediterranean countries not currently involved, and other countries of interest**
- **Indirect vs. Direct outreach**
 - In many cases indirect outreach is more accepted
 - Public vs. Private
- **Bilateral and Regional approach has greater potential for relationships conducive to information sharing and cooperative action**
 - Union of the Mediterranean lacked this approach

Near Term Approach

- RSS
- VRMTC-TRMN Annual Meeting
- 5 + 5 exercise
- 8 + 6 seminar
- BLACKSEAFOR 10th Anniv.
- Black Sea Harmony Operation

Midterm (~5 to 10 years)

- Continue building current network through existing bilaterals**
 - Regional Coordination Centers
- Continued efforts to federate trans-regional networks**
- Continue to improve regional relationships via military (mil to mil) through common objectives**

Cell 2 – Black Sea

Cell Membership
Azerbaijan / Georgia /
Greece
Saudi Arabia / Ukraine /
Turkey
Bulgaria

Enduring Maritime
Partnerships

Major Impediment #1

- Classification of Intelligence specific to unclassified tracks (AIS)
 - Most nations willing to share open source track data
 - No common standard for classification markings
 - Classification of supporting intelligence limits the ability to share
 - Regionally within 10 years
 - Globally within 25 years

Major Impediment #2

- Interagency cooperation within nations

- Restrictions within countries limits Quality / Quantity of information to be shared with international partners

- Within 5 years

Major Impediment #3

- No international framework or standard for information sharing

- It is difficult to combine information sharing networks built to different standards

- Within 25 years

Next Implementation Steps for Maritime Partnerships

- Black Sea Countries want to Utilize previously established Regional Centers
 - VRMTC
 - UNITED NATIONS / IMO
- Within 1 year

Next Implementation Steps for Maritime Partnerships

- Recently established Coordination Center for Gulf Cooperation Council countries

(SA / Bahrain / UAE / Qatar / Oman / Kuwait)

- Establish Regional SOPs

- Within 1 year

- GCC expand links to VRMTC

- Within 5 years

Next Implementation Steps for Maritime Partnerships

- Azerbaijan establish information sharing links to other countries within the framework of the Black Sea Economic Forum

- Within 5 years

Cell 3 – Baltic Sea

**Move 3 Brief
Cell Membership
Germany, Netherlands,
Poland, Sweden, United
Kingdom**

**Enduring Maritime
Partnerships**

**Major Impediments to Maritime
Partnership**

- 1 - Information/intelligence not adequately shared
- 2 - Incomplete understanding of how other countries & organizations operate/approach maritime issues
- 3 - No common policy for legal aspects of conducting maritime security operations

Major Impediment #1

- Information/intelligence not adequately shared
 - International
 - Intra-national (between agencies within country)
 - Over-classification, cultural differences, legal challenges
- Timeline
 - Technical solution (establish systems): 1-3 years
 - Will/desire to share information: 2-5+ years
 - Information sharing policy
- Next step 1: tangible output, with agreements objective, for next year's International Seapower Symposium (ISS)
 - Attendees come prepared to discuss w/ view to mandate
- Next Step 2: establish system/portal for info sharing

Major Impediment #2

- Incomplete understanding of how other countries & organisations operate/approach maritime issues
 - E.g. what are the policies of Russia, China, N. Korea regarding piracy, smuggling, MDA/MSA, etc.?
- Timeline
 - 2-5 years
- Next Step: Expand representation
 - Follow-on events expand invitees to include:
 - Countries (Russia, China, Norway, Iceland, Finland, etc.)
 - Trade corporations (Maersk, COSCO, HAPAG, Lloyds, etc.)
 - Port Authorities (largest/most active global ports- Rotterdam, Singapore, Hong Kong, Hamburg...)
 - International organisations
 - UN (IMO), EU (MARSUNO, MARSUR, BlueMassMed), AU, GCC, NATO
 - Invite international organisation representatives to ISS

Major Impediment #3

- No common policy for legal aspects of conducting maritime security operations
 - Liabilities
 - Jurisdiction
 - Prosecution
 - Standards of evidence
 - Standards of consequence (e.g. no standard for what to do with pirates apprehended at sea, repercussions of environmental disasters which cross international maritime boundaries)
- Timeline
 - Long Term (5+ years)
- Next Step: Continue development of common (international) legal standards
 - Common policies & SOPs
 - UNCLOS / review role of International Tribunal for the Law of the Sea

Way ahead

- 1 - Maintain/increase US ties to Europe
- 2 - Increase international involvement in NATO Centers of Excellence (COEs)
- 3 - Enhance coordination between regional MDA systems (SUCBAS, VRMTC, MSIS, OASIS, etc.)

Implementation Step 1

- Maintain/increase US ties to Europe
 - Maintain/increase involvement (USN and USCG) in confined shallow-water exercises
 - BALTOPS
 - NORTHERN COAST
 - Combined exercises and operations enhance mutual understanding, build peer networks
- Timeframe: continuing

Implementation Step 2

- Increase international involvement in NATO Centers of Excellence (COEs)
 - COE for operations in Confined and Shallow Waters (COE CSW) - Germany
 - COE for Maritime Interdiction Operations (COE MIO) - Greece
 - COE for Defense Against Terrorism (COE DAT) - Turkey
- Timeframe: continuing

Implementation Step 3

- Enhance coordination between regional MDA systems (SUCBAS, VRMTC, MSIS, OASIS, etc.)
 - Would improve continuity of coverage as vessels transit from one region to another
 - Push/pull principle for numerous separate databases
 - Streamline process for bilateral country-to-country requests for sharing of information
- Timeframe: continuing

Cell 4 – Pacific

Cell Membership

Australia, Japan, New Zealand, Saudi Arabia, Singapore

Impediments to Enduring Maritime Partnerships

Impediments & Challenges

- Trust and Confidence
- Territorial Sovereignty
- Capacity and Capability
- Information Sharing and MDA Challenges

Trust and Confidence Challenges

- Suspiciousness regarding initiatives and motives for engagement
 - Example: MDA are seen by some as guise to track
 - Some initiatives are seen by some as an attempt at external influence
- Specific examples:
 - Taiwan-China
 - ROK-DPRK
 - Indonesia-Singapore-Malaysia
 - South China Sea
- Timeframe
 - Involves highest level of government
 - Most solutions are long term, some may be short term

Enduring problem requiring constant attention
and management

Territorial Sovereignty Challenges

- Territorial disputes
 - Different countries have different interpretations of UNCLOS
 - Indonesia “internal waters” definition
 - China’s EEZ definition
 - Countries have different interpretations on jurisdiction leading to questions of responsibility and authorities
 - Why share information if it is seen as domestic issue?
 - South China Sea/Spratly Islands/Paracel Islands
- Unresolved conflicts
 - Periodic disagreements and disputes lead to breakdowns in cooperation (stop-go, stop-go)

Timeframe: Long-Term 5-25+ yrs

Capacity and Capability Challenges

- Asia/Pacific region encompasses large geographic region with a great degree of variability in capabilities and capacities of nations located within the region. This lack of capacity and capability in some sub-regions leads to challenges in developing partnerships and information sharing relationships.
 - Coastal surveillance capabilities
 - Information fusion
 - Technology- radar, C4I, thermal sensing
 - Ships and aircraft
 - Training
 - AIS receiving sites

Timeframe: Near to Mid-term 1-5+ yrs
Enduring issue, constant technology change

Information Sharing/MDA Challenges

- Sharing of information across classified and unclassified domains and between military, interagency, commercial entities remains a problem within the Asia Pacific region because of a variety of reasons including trust and confidence, territorial sovereignty, and capacity and capability, which have been discussed in previous slides. Additional challenges include:

- National/policy/legal restrictions
- Technical/equipment compatibility
- Commercial/economic sensitivities
- Privacy restrictions

Timeframe: Near to Mid-term 1-5+ yrs
Enduring issue, constant policy change

Trust and Confidence Way Ahead

- Create dialogue with “hotspot” countries where relationships can be established/enhanced
 - Can be mil-to-mil or non-military agencies, such as customs, fisheries, civilian
- Ensure partnerships are still relevant- constantly monitor initiatives before they become outdated
- Identify countries in the Asia/Pacific region where “Track 2” framework is diminished or underdeveloped
 - Enhance interagency “Track 2” engagement
- Identify countries in the Asia/Pacific region where sharing of doctrinal publications, best practices, and other documentation to promote transparency of actions
- Build upon the model of IFC (Information Fusion Center)
 - Create open space where everyone is included in participation
 - Encourage more nations to participate
- Be open and transparent
 - Demonstrate MDA is for mutual benefit- conferences, workshops, open access to information
 - Regional leader led, U.S. involved
- Identify countries in Asia/Pacific region where personnel exchanges/LNOs would lead to greater/enhanced trust and confidence

Timeframe: Near-Term 1+ yrs
Enduring problem requiring constant attention
and management

Territorial Sovereignty Way Ahead

- U.S. role as global leader should influence international organizations (IMO, UN) to resolve territorial disputes
 - Guarantee freedom of the seas
 - Some countries desire U.S. presence and influence in region
- Continue to work within constraints while looking for other opportunities
 - Example: Vietnam new partner for MDA
 - Potential for others as strategic situation changes
 - Once precedent is set, new partners may follow
- Leverage areas where we have common issues/existing agreements
 - Example: Piracy in Gulf of Aden
- Work through diplomatic issues (stop-go's)

Timeframe: Mid-Term 5+ yrs

Capacity and Capability Way Ahead

- Broad areas of open ocean particularly in South Pacific are “black holes” because of the difficulty in carrying out surveillance
- Continue providing equipment and education/training
 - U.S. should continue 1206 program (USN capacity building/funding to Philippines, Indonesia, Thailand)
 - Regional leading countries (e.g. Japan, New Zealand, Australia, Singapore, others) continue to provide equipment and training
 - USN role could be to support regional leaders’ assistance programs, e.g. bandwidth, strategic lift, specialist/subject matter experts
- Continue and enhance education efforts by leading countries
- Exercises, workshops, conferences
 - Full spectrum of operations, but tailored to focus by sub-region
- Continue focused infrastructure/social civic capacity building
 - Tailored to focus by sub-region
 - Enhance sustainability
- **Recommendation: USN and other regional leaders develop apparatus to synergize efforts to coordinate, reduce duplication/redundancy, and maximize benefit of resources allocated**

Timeframe: Near to Mid-Term 1 - 5+ yrs
Enduring issue, constant technology change

Information Sharing/MDA Way Ahead

- National/policy restrictions
 - Specifically relate to national legal, military security regulations
 - U.S., other regional leaders use influence to develop standardized policies relating to compatible regulations and standards
- Technical/equipment
 - U.S., regional leaders engage with IMO to work to establish standardized data/equipment protocols for information sharing
- Commercial/economic sensitivities
 - Information that is commercially sensitive- U.S. and other regional leaders work with commercial organizations to ensure they understand the relevance of sharing and what incentives are available
 - U.S. and regional leaders continue encourage IMO leadership, leading to wider integration of International Shipping and Port Security (ISPS) requirements into international maritime commerce
- Build on successful models. Examples include ReCAAP (Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia), IFC (Information Fusion Centre), PRC (Piracy Reporting Center), ISPS

Timeframe: Near-Term 1+ yrs

Cell 5 – Indian Ocean

Cell 5
India, Kenya, Oman, Pakistan,
Saudi Arabia, Tanzania

Enduring Maritime
Partnerships
Impediments

Major Impediment #1

- **Political Will**
 - lack of interest, commitment and competing interests result in half measures, mixed messages, and intermittent commitment of resources
- **Time frame - variable**

Major Impediment #2

- **Lack of Trust**
 - Lack of trust stems from unresolved bi-lateral issues, negative or no historical relationships, external intervention in internal affairs, hidden agendas, perceptual differences, differing levels of commitment to the issue, lack of transparency, limited engagement opportunities, differing Naval competencies, double standards.
- **Time frame - variable**

Major Impediment #3

- Competing Interests
 - Differing national interests and priorities between nations
- Time frame - variable

Major Impediment #4

- Lack of Capacity / ability to contribute
 - Military and economic limitations and competing national tasking cause member nations to be unable to participate in the coalition
- Time frame - variable

Major Impediment #5

- Inequality in treatment of multinational partners
 - Unwillingness to share information and intelligence equally
 - Unequal Training/Exercise opportunities
- Time frame - variable

Major Impediment #6

- Lack of unity of effort
 - Fractured command Structures
 - Unwillingness to fully cooperate
 - National rules and regulations
 - ROE
- Time frame - variable

Major Impediment #7

- Incompatible systems
 - Communications and networks
 - Sensors
 - SOP
 - Doctrine
 - ROE
 - Logistics, etc
- Time frame - variable

Major Impediment #8

- Language and Cultural barriers
 - Hinders effective communication between partners, contributes to differing perceptions, lack of trust and others
- Time frame - ongoing

Way ahead

- Promote Maritime partnerships by improving regional relationships through:
 - Strengthening regional forums and build coalitions to tackle regional issues (mid – long term)
 - Promoting information sharing environment (s-m term)
 - Enhancing intra-regional economic activities (s-m t)
 - Encouraging more bilateral engagements and resolve outstanding bilateral issues (m-l term)
 - Promoting cultural exchanges within the region (s-m t)

Way ahead

- Enhance regional capability by capacity building through
 - Increasing frequency of intraregional exercises with a focus to enhance interoperability (s-m)
 - Encouraging technology sharing within the region (m-l)
 - Strengthening regional institutions to enhance training opportunities (m-l)
- Align domestic legislation through ratification of international regulations (s-m)

Political Way ahead

- Promote political dialogues on regional issues (s - l term)
- Encourage participation in international protocols/agreements/agendas by regional countries (s- l term)

Cell 6 – Did Not Exist

Cell 7 – South America

Argentina, Brazil, Chile, Ecuador, Peru

Information Sharing and Securing the Maritime Domain

Regional Desired End State

- Shared, tailored maritime picture
- Safe and secure seas and ports for maritime traffic, sustainable resource (oil, gas) exploitation, and sustainable fishing

Major Impediment (Road Blocks to Sharing Information)

- Technical incompatibility among maritime information systems
- Financial investment required to develop and improve maritime systems (lack of budget)
- Gap between land organizations (i.e., customs and police) and maritime organizations (i.e., navy, coast guard, environmental police)

Steps to Improving

Maritime Information Sharing

- Consolidate and improve existing information sharing networks
 - Time Frame: Medium term (2-5 years)
- Explore the possibility of creating new systems
 - Time Frame: Long term (> 5 years)
- Make current systems technically compatible (able to share maritime information)
 - Time Frame: Medium term (2-5 years)
- Improve information sharing focus in existing war games and exercises (i.e., NCAGS, PANAMAX)
 - Time Frame: Short term (< 2 years)

What can the CNO do to help?

- Countries now have unique maritime awareness systems
- Technical compatibility of maritime domain information would enable countries and/or regions to transmit and receive world-wide-available information for display of regionally-tailored information (COP).
- Recommend CNO propose development of a common information sharing protocol to international maritime organizations: such as Regional Cooperation Among Maritime Authorities of the Americas (ROCRAM), IMO & Inter-American Naval Conference
 - Establish standardized data protocols (for example: refresh periodicities)
- Provide additional maritime data to South American parties (i.e., AIS, MSSIS, VRMTC, LRIT, Satellite imagery)

Major Impediment (Road Blocks to Secure Seas and Ports)

- Need for the development of a common MDA strategy
- Incomplete maritime picture
- Limited resources to obtain the maritime picture (military, maritime authorities)
- Limited resources/assets to counter illegal activities over extended area
- Lack of full implementation of ISPS Code in regional ports (currently partial implementation in some ports)

Steps to Improve Security of the Seas and Ports

- Create a regional strategy for the maritime picture
 - Time Frame: Medium term (2-5 years)
- Share information to close awareness gaps between sea and land organizations
 - Time Frame: Medium term (2-5 years)
- Increase interagency cooperation at national level
 - Time Frame: Short term (< 2 years)
- Increase trans-regional/regional interagency cooperation
 - Time Frame: Medium term (2-5 years)
- Encourage and comply with highest-level of ISPS Code port security guidelines
 - Time Frame: Medium term (2-5 years)

What can the CNO do to help?

- Provide additional maritime data to South American parties (i.e., AIS, MSSIS, VRMTC, LRIT, Satellite imagery)
- When requested provide assets

Cell 8 – Pacific East

Cell Membership

**Colombia
Canada
Guatemala
Mexico
Panama
USA**

**Enduring Maritime
Partnerships**

Desired End State

- Unity of effort in order to deter, disrupt, and diminish narco-trafficking in the maritime environment
- Positively encourage political and diplomatic support

Major Impediment # 1

- Diplomatic/political will does not match the military resources required to fight narco-trafficking
 - Military willing to work together in support of counternarcotics operations
 - Diplomatic/political trust does not match the trust that the regional militaries have for each other
 - Diplomatic argument can be made based on irrefutable conditions that affect all countries in the region and their population
- Solution time frame: Generational

Major Impediment # 2

- Lack of sustained maritime operations
 - Countries do not have the resources/assets/platforms to conduct continuous counternarcotics missions
 - Lack of funding/fuel/logistics/national and political will
- Solution time frame: Millennium

Major Impediment # 3

- The principal of surprise
 - Lack of **real time** Intel and Information sharing between nations
 - Lack of common operational picture and information sharing tool
- Solution Time Frame: 3 -6 years

Major Impediment # 4

- Corruption precludes the momentum of moving forward against narco-trafficking
 - Well entrenched in every country, including US
 - Sensitive information is shared with narco-traffickers derailing enforcement efforts in the maritime
- Solution time frame: Must be addressed continually

Major Impediment # 5

- Legal framework is inconsistent across region
 - Rules are different for prosecuting and extraditing suspects by nation
- Solution time frame: 3- 6 years

Cell 9 – Gulf of Guinea

**Gabon, Senegal, Benin, Togo,
Ghana**

**Enduring Maritime
Partnerships**

Major Impediment #1

- Illegal activity/movement in maritime environment: Cooperation and information sharing between regional states, ECCAS, and ECOWAS is needed
- Impediment: Resourcing
- Solution time frame: 5-10 years because interaction has already begun

Major Impediment #2

- Local enforcement of oil/oily water/pollution discharge from oil tankers during tank cleaning is weak – information sharing (training, procedures etc) with countries with effective pollution enforcement programs as well as resource support from those countries could be useful
- Impediment: Resources, training, expertise to initiate this program
- Solution time frame: 5-10 years

Major Impediment #3

- Oil Pollution in the Gulf of Guinea – Coordinated Regional Response Plan for spills is needed
 - Impediments:
 - Awareness of threat is very low creating a lack of political will
 - Competing interests outweigh need to address potential oil spill
 - Solution time frame: 5 years minimum (10-15 years likely)
-

Major Impediment #4

- Oil Pollution in the Gulf of Guinea – Coordinated Regional Response Plan for spills is needed
- Impediments:
 - ECCAS (Economic Community of Central African States) and ECOWAS (...Western African States) do not have authority or funding to tackle oil spill and pollution events
- Solution time frame: 5 years minimum (10-15 years likely)

Major Impediment #5

- Local enforcement of oil/oily water/pollution discharge from oil tankers during tank cleaning is weak – information sharing (identification of vessels with a history as a polluter) with countries with effective pollution enforcement programs could be useful
- Impediment:
 - Identification of sharing methodology
 - Will to improve sharing agreements
- Solution time frame: 5-10 years

Partnership Aspects

- Establish or reinforce the capability to address illegal activities occurring in central and western Africa's maritime environment

Next Implementation Steps for Maritime Partnerships #1

- Illegal activities in the maritime domain -
Impediment: Resources
- National and International Sources of Funding
 - International: UN, NGO, other countries
- Additional units (air and naval), training, centralized databases
- Time frame: 5-7 years

Next Implementation Steps for Maritime Partnerships #2

- Oil Pollution Response - Impediment: Awareness of threat is very low creating a lack of political will and competing interests outweigh need to address potential oil spill
- Political Authorities must understand importance
 - Sensitization of political authorities through education etc
 - Awareness campaign from bottom up (from ports)
- Time frame: 5 years

Next Implementation Steps for Maritime Partnerships #3

- Pollution Enforcement - Impediment: Resources, training, expertise to initiate this program
- In addition to the resources listed in #1:
 - Communications systems
 - Port facilities
 - Laboratory facilities, fixed and portable equipment, and associated training
 - Internalize international law into national law in order to prosecute offenders
- Time frame: 7-9 years

Next Implementation Steps for Maritime Partnerships #4

- Oil Pollution Response - Impediment: ECCAS (Economic Community of Central African States) and ECOWAS (...Western African States) do not have authority or funding to tackle oil spill and pollution events
- ECOWAS and ECCAS must develop oil spill response plan
- ECOWAS and ECCAS must establish budget items to support plan
- Time frame: 3-5 years

Next Implementation Steps for Maritime Partnerships #5

- Pollution Enforcement - Impediment: Identification of sharing methodology and the will to improve sharing agreements
- Agreements in place between ECCAS and ECOWAS states (Abuja MOU and MOWCA) and EU
- Follow and implement whatever international conventions exist
- Improve compliance
- Time frame: 2 years

Way ahead

- Develop a plan of action that identifies resources and establishes priorities to implement the proposed solutions to the listed impediments in order to effectively combat illegal activities, enforce pollution controls, and prepare for pollution spills

Cell 10 – Gulf Of Guinea

**Cell Membership
Nigeria, Senegal, Ghana,
Togo,
Benin, Cameroon, Gabon**

**Enduring Maritime
Partnerships**

Lack of Coastal Monitoring System along the Gulf of Guinea

- Countries are unable to effectively monitor maritime activities throughout the region
- Will allow the establishment and sharing of common operational picture
- Solution time frame: 5-10 years

Absence of desired level of cooperation between regional maritime communities

- ECOWAS and ECCAS are separate entities and do not cooperate enough with regard to sub-regional maritime security
- Increased cooperation will promote Navy-to-Navy interaction
- Solution time frame: 2-5 years

Insufficient operational platforms

- Inability to effectively police the maritime domain leads to increased illegal activities
- Solution time frame: 6-10 years

Lack of logistics

- Some platform remain non-operational due to lack of spares, petroleum, etc...
- At sea refueling capabilities are limited
- Solution time frame: 2-5 years

No dedicated fund for regional maritime security

- Multi-national maritime security budget would alleviate platform and logistical problems
- MOWCA funds do not currently support naval operations
- Solution time frame: 2-5 years

Insufficient maritime OPS/awareness centers

- Multinational maritime coordination and exercises are difficult to manage without a common OPS center
- Will allow centralized command and control
- Solution time frame: 2-5 years

Ineffectiveness of regional body in coordinating maritime affairs; poor liaison between MOWCA and navies

- Overarching body for policy and sub-regional maritime affairs
 - Formulation, promulgation and supervision
- Naval representatives are not involved in the role that Maritime Organization of West and Central Africa (MOWCA) plays for maritime security
- Navies do not receive resources from MOWCA for maritime security
- Solution time frame: 2-5 Years

Lack of standardized regional procedures for maritime operations

- Countries have different operating procedures
- Solution time frame: 6-10 years

Lack of cross-regional economic legislation implementation

- Customs laws vary by country creating different taxation on goods
- Maritime crime prosecution is not standard across the region making criminal activities focused in certain areas
- Solution time frame: 5-7 years

Insufficient economic incentives for population to deter crime as an alternative

- Maritime crime is predicated by the lack of favorable economic opportunities
- Solution time frame: 11+ years

1. Lack of Coastal Monitoring System along the Gulf of Guinea
2. Absence of desired level of cooperation between regional maritime communities
3. Insufficient operational platforms
4. Lack of logistics
5. No dedicated fund for regional maritime security
6. Insufficient maritime OPS/awareness centers
7. Ineffectiveness of regional body in coordinating maritime affairs; poor liaison between MOWCA and navies
8. Lack of standardized regional procedures for maritime operations
9. Lack of cross-regional economic legislation implementation
10. Insufficient economic incentives for population to deter crime as an alternative

Desired End State: Keep SLOC Open

- **Diplomatic**
 - Bilateral and Multilateral agreements for the purpose of conducting maritime operations
 - Regional communities working together
 - Must do more
 - Interregional cooperation needed
 - e.g. Central and West African states
 - Common punishment for Illegal Activity
(ECOWAS created protocol need to expedite implementation, ECCAS already in effect)
- **Informational**
 - Establish network for collection, analysis and dissemination
 - Coordination and improvement of common network systems
 - Network ECCAS (MARAC) with ECOWAS (ERIES)
- **Military**
 - Joint and combined exercises are being conducted every 2 years through ECCAS
 - Need for exercises between ECOWAS and ECCAS
 - Create a multinational planning group
 - Establish an effective communication system across national AOR's
- **Economic**
 - Establish common customs policies to prevent smuggling of goods
 - Pool additional resources by participating countries

Desired End State: Keep SLOC Open

- **Diplomatic**

- Bilateral and Multilateral agreements for the purpose of conducting maritime operations
 - Impediment: Absence of regional body to coordinate maritime affairs
- Regional communities working together
 - Impediment: Absence of desired level of cooperation
- Interregional cooperation needed
 - Impediment: Insufficient dialogue on maritime issues between sub-regions

Desired End State: Keep SLOC Open

- **Informational**

- Establish network for collection, analysis and dissemination
 - Impediment: Lack of Coastal Radars along the Gulf of Guinea
 - Impediment: Insufficient maritime OPS/awareness centers
 - Impediment: Do not have shared Common Operational Picture
 - Impediment: Absence of maritime information sharing policy
 - Impediment: Poor liason between MOWCA and regional navies

Desired End State: Keep SLOC Open

- **Military**

- Need for exercises between ECOWAS and ECCAS
 - Impediment: Insufficient operational platforms
 - Impediment: Lack of logistics
 - Impediment: Insufficient navy to navy relationships
- Establish an effective communication system across national AOR's
 - Impediment: Lack of a unified command structure across Gulf of Guinea region

Desired End State: Keep SLOC Open

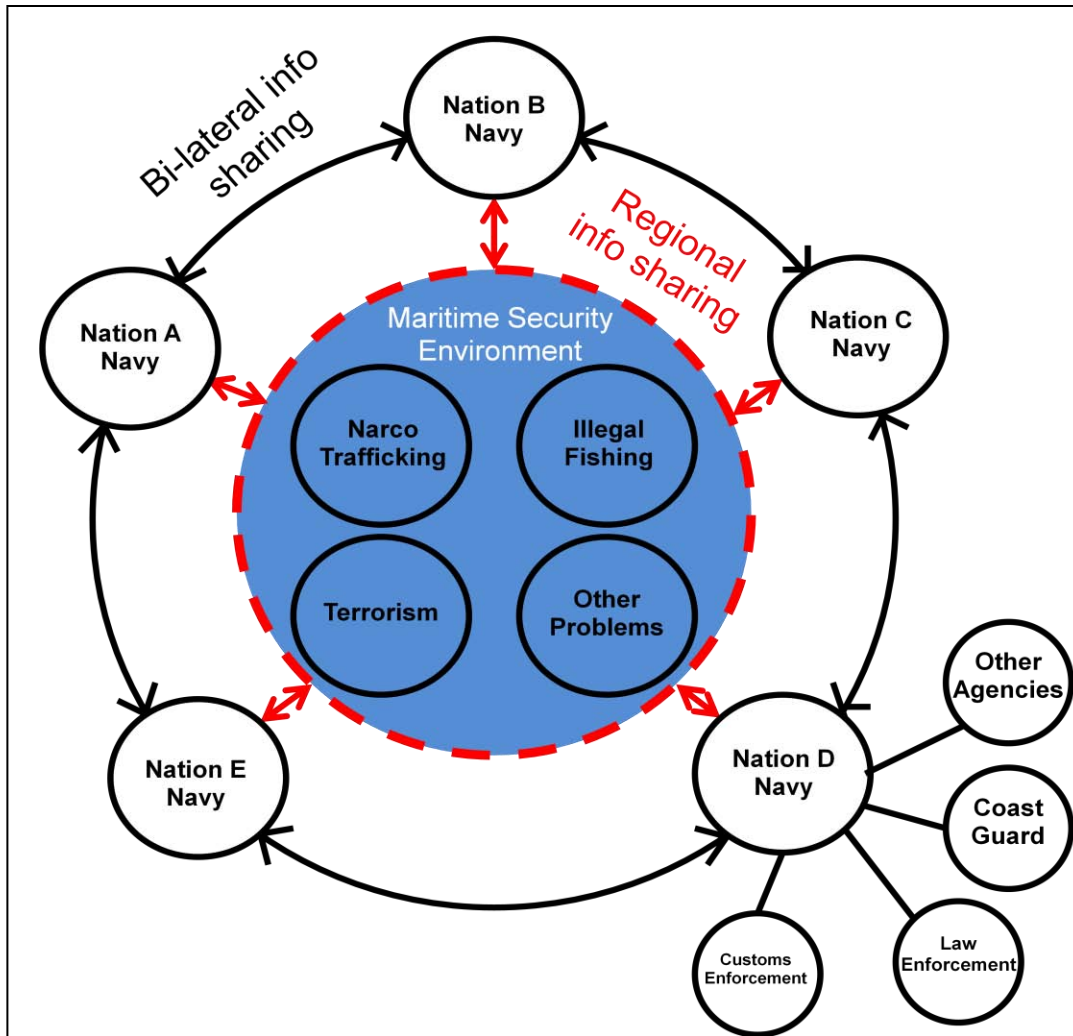
- **Economic**

- Impediment: No dedicated fund for regional maritime security
- Impediment: Insufficient economic incentives for population to deter crime as an alternative
- Impediment: Lack of cross-regional economic legislations

Cell 11 – Central America

**Cell Membership
Mexico, Ecuador, Chile, USA,
Colombia, Canada**

**Enduring Maritime
Partnerships**



Major Impediment #1

- Difficult to quantify the benefits of information sharing, versus other priorities, within a resource constrained environment
- Solution time frame would be one year

Major Impediment #2

- Mismatch of national interests among regional countries lead to differences in political will
- Solution time frame could be within a year (build consensus around common issue of maritime security)

Major Impediment #3

Legal and Policy Restrictions limit sharing of information required for maritime security

- Solution time frame 5 years

Major Impediment #4

Over-classification of information due to many causes has an adverse impact on information sharing from both a procedural as well as technical perspective

- Solution time frame 5 years

Way ahead

- Recognizing the common linkages that exist in the maritime environment, leverage the existing bilateral relationships to develop a navy facilitated regional information sharing network to enhance maritime security as the first step in achieving global information sharing.

Next Implementation Steps for Maritime Partnerships

- Inform/Educate other government agencies regarding the approach including benefits/ utilities.
- Time frame: 1 year

Next Implementation Steps for Maritime Partnerships

- Develop initial data set requirement for sharing.
- Time frame: Within 1 year

Next Implementation Steps for Maritime Partnerships

- Review existing navy-held information for releasability to multilateral network.
- Time frame: 5 years

Next Implementation Steps for Maritime Partnerships

- Develop national interagency information sharing processes to support regional multilateral information sharing.
- Time frame: 5 years

US Cell Observations

GLOBAL 10

Global Maritime Partnerships

OVERARCHING THEMES &
UNIQUE REGIONAL OBSERVATIONS

WHAT WE HEARD (1 of 2)

There was a Commonality across all Cells to...

- Improve and enhance information sharing
 - Develop policies and procedures
 - Both internal and external development
 - No common definitions on information to share
 - Differences between definitions of intelligence and information
 - Request for political will/desire
 - Recognize internal and external barriers impede sharing
- Emphasize regional solutions – leverage better
 - Leverage regional organizations
 - Recognize a cooperation progression: Port->National->Bi-lateral->Regional->Multi-lateral->Trans-regional->Global
- Make trust the foundation for enhancing and developing relationships

WHAT WE HEARD (2 of 2)

There was a Commonality across all cells to...

- Recognize there are many diverse problems; however, no single solution
 - No single agency or nation can ensure maritime security
 - Many discussions on the need to work together to resolve problems
 - Foster better relationships through exercises.
 - Apply a holistic approach to solve broad problems (e.g. NGOs, International Organizations, etc.)
 - Engagement: military-military; civilian-military; and military-commercial maritime sector can improve relationships
-

UNIQUE REGIONAL OBSERVATIONS

Pacific

- Recognize the willingness of countries to work together to solve asymmetrical threats/challenges
 - Both bi-lateral and multi-lateral agreements are appropriate
 - Regional variations between scope of activity, governance structures, communications
- Focus on the source of the problem
 - Hold country of origin responsible for threats emanating from within their borders

Europe

- Recognize the willingness of participants to work within cooperative frameworks in order to improve MDA.
- Investment in relationship building should have a higher priority than investment in new systems and technology
- Formalize MDA procedure to counter various types of problems (terrorism, trafficking, immigration etc).
- Focus MDA international cooperation and coalition around maritime (body of water) commonalities vice land based commonalities.

North-South America

- Build capacity through regional partnerships

Africa/Middle East

- Share data and analysis in a timely and non-classified manner

Appendix F

Technology Symposium

Background. Throughout the development of the Global Maritime Partnerships Game, the desire to investigate technological systems to facilitate information sharing was prevalent in every discussion. As a result of the planning process, the design of the game was conducted as a technologically agnostic event to allow the participants to investigate the legal, policy and cultural implications to Maritime Domain Awareness (MDA) as a precursor to actively determining the preferred information exchange system.

The objective of the Technology Symposium was to expose GMPG participants to a variety of international MDA technologies, and showcase selected regional MDA information sharing initiatives. The technology initiatives that the War Gaming Department (WGD) selected were to show the participants how they could rapidly deploy low cost sharing systems using existing AIS data sources. The two sources of data that are currently available on line, for little and no cost are the Maritime Safety & Security Information System (MSSIS) and the U.S. Department of Transportation Maritime Administration's MarView. The national "cost of admission" to receive this data is simply to agree to share its own data into the system. Other systems presented ideas on how to share data from commercial satellites.

Symposium. NWC did not want to endorse nor support any one system over another; therefore, the symposium format provided organizations the opportunity to demonstrate their systems to those interested. In short group presentations in the auditorium, presenters demonstrated their technology to participants. Additionally, some technology solutions were presented in more intimate room settings. The systems demonstrated during the Symposium were as follows (for a brief description of each system see Annex 1 to Appendix H):

System	Cty	Organization
SUCBAS	SWE	Swedish Navy
C-SIGMA	US	USCG
VRMTC-A	US	Naval Science Officer USSouthCom
SISTRAM	BZ	Brazilian Navy
Marview	US	MARAD
CAMTES	US	GreenLineSystems
CAMTES	US	GreenLineSystems
MSSIS	US	DOT Volpe Center

Annex 1 to Appendix F

Technology Symposium - Systems

CAMTES (iBench – Greenline Systems) – Computer Assisted Maritime Threat Evaluation System

GreenLine iBench™ helps analysts and decision-makers make better and more efficient risk assessments and interdiction decisions. Complementing existing Command and Control Systems (C2) with operational analysis, iBench is a comprehensive decision-support platform that leverages the different sub-sets of illicit, natural, and normal maritime activities to provide a clearer understanding of the actors, assets and actions occurring daily. By providing an unclassified and open-source backbone for information sharing, iBench enhances MDA and MSA operations and assists in inter-agency and coalition collaboration.

A computer-based threat evaluation system, together with any other complementary, associated, supporting, or bundled programs, that will analyze ocean-going cargo vessels for security implications in support of a comprehensive maritime domain awareness effort. The system will utilize business rules developed in collaboration with coalition/alliance partners, and approved by the US Navy, and access external data in order to produce accurate, in-depth, and reliable threat evaluation and analysis as well as realistic and practical recommendations for interdiction, boarding, or other appropriate action.

C-SIGMA – Collaboration in Space for International Global Maritime Awareness

All maritime nations of the world, working together, can make the seas much safer and more secure from wrong-doers, be they smugglers, polluters or pirates. One of the primary steps the nations could take would be to create a global space partnership (GSP) initially focused on the maritime domain using commercial and civil satellites.

This system intends to add significant situational awareness data to a common operational picture on a global scale by combining terrestrial maritime surveillance systems with commercial and civilian space systems having significant earth and ocean observation capabilities. This capability would be distinct and totally separate from any classified undertakings either now underway or planned and would have the huge benefit of being able to be shared with all seafaring nations of the world.

MarView – Maritime View

The U.S. Department of Transportation Maritime Administration is the owner of MarView, an integrated data-driven environment providing essential information to support the strategic requirement of the U.S. Marine Transportation System (MTS) and its contribution to the economic viability of the Nation. MarView provides the ability to

fuse data together to create models and simulations for capacity planning, economic impact analysis, on-demand forecasting, and plans for mitigating/reacting to emergency situations.

MSSIS - The Maritime Safety and Security Information System

The Maritime Safety and Security Information System (MSSIS) is a freely-shared, unclassified, near real-time data collection and distribution network. Its member countries share data from Automatic Identification Systems, coastal radar, and other maritime-related systems. MSSIS is intended to promote multilateral collaboration and data-sharing among international participants, with a primary goal of increasing maritime security and safety. Data sources may range from a single sensor to an entire national vessel tracking network. MSSIS is perfectly suitable as a one-stop source for streaming global maritime data. Because the data distributed by MSSIS maintains its original, internationally recognized format and is delivered to users in near real time, member organizations are able to utilize the data feed to meet their specific mission requirements.

SISTRAM – The Maritime Information Traffic System

The purpose of **SISTRAM** is to improve SAR efforts within the Brazilian maritime area. This is accomplished by gathering navigational information from participating vessels. This information is then used during an SAR effort to route nearby vessels to the scene. The ability to quickly divert nearby vessels to the scene provides faster response than can be provided from shore and increases the safety of life at sea. Its interlink with the AIS project has improved the quality of information and increased the precision of follow-ups, making them an important Command, Control and Intelligence (C²I) tool, as several sources of information are integrated into the system in its constant evolution.

SUCBAS – Sea Surveillance Cooperation Baltic Sea

The target for SUCBAS is to improve MSA in the heterogeneous environment of the Baltic Sea. This presentation deals with the technology and how the cooperating countries (without a common funding source) design, develop and implement new functionality using agile principles and specifications from TIDE (Technology for Information, Decision and Execution superiority).

SUCBAS is not a physical system or a machine. SUCBAS is a Maritime Domain Awareness co-operation framework/process between countries in the Baltic Sea Area. SUCBAS was aimed to develop a concept with a technical solution, in order to enhance the Maritime Domain Awareness in the following areas: territorial integrity, safety, environment and maritime economy, through sharing information between the agencies and countries with an interest in the maritime domain.

VRMTC-A – Virtual Regional Maritime Traffic Center – Americas

VRMTC-A is an interagency, multi-national project to integrate partner nation efforts that address maritime threats in the Americas. This mission is accomplished through information sharing using a regional network and fused COP, analysis through analytical tools, anomaly detection and event monitoring, and collaboration through a suite of web-based tools.

Appendix G

Game Methodology

1. The GMPG was a six day, international collegial event. The overall tenor and tone of the event were designed to both showcase international perspectives and efforts in focus areas, and present them in an atmosphere that encouraged friendship development and collaboration at individual, group, country and regional levels. For the GMPG participants, this event was an educational and collaborative event focused on maritime partnerships, information sharing and Maritime Domain Awareness (MDA). MDA, while important, was primarily a focus area that enabled a necessary narrowing of focus from the much broader possibilities of maritime partnerships and information sharing that the participants might have otherwise reasonably considered.
2. For the Naval War College, War Gaming Department, this event was analytical, with post-event analysis providing insight into the current status of maritime partnerships and information sharing for the purpose of developing MDA that can better enable the CNO to execute his Title X responsibilities in support of MDA as an enabler of critical naval missions.
3. The GMPG took place 3 – 8 October 2010 at the Naval War College in Newport, RI and the event week was divided into three general phases.
 - a. The first phase entailed establishing a collegial, collaborative atmosphere amongst the participants and conducting dialogue to determine the primary maritime issues that are of concern to participants. Additionally, various participants briefed the status of MDA efforts that their country and region are pursuing. Team-building dialogue occurred on Sunday and country MDA briefings were given on Monday. See Appendix A for a listing of participants.
 - 1) The second phase was an examination of the policies, processes and procedures required to establish the information sharing and partnerships required to successfully counter the maritime issues that had been developed in Phase 1. Phase 2 employed the developed issues with additional scene-setting background information as catalysts, enabling participants to work together in small-group seminars to mitigate the identified issues and problems.
 - (a) On Tuesday, seminars individually developed operational-strategic level solutions (i.e. policies, processes and procedures) to the specific issue/scene-setter and presented those solutions in large-group plenary (selected seminars in moderated panel discussions). Tuesday issues were focused at the sub-regional level (e.g. Horn of Africa, Gulf of Guinea, and Strait of Malacca).

- (b) On Wednesday, seminars individually developed operational-strategic level solutions (i.e. policies, processes and procedures) to the specific issue/scene-setter and presented those solutions in large-group plenary (moderated panel discussions). Wednesday issues were focused at the super-regional or functional level (e.g. narcotics trafficking from South America via Africa to Europe; narcotics trafficking from Makran Coast via Africa or Middle East to Europe; piracy; Illegal, Unreported, Unregulated (IUU) fishing; pollution; Safety of Life at Sea (SOLAS)).
- (c) On Thursday, seminars individually developed operational-strategic level solutions to enable MDA on an ongoing, enduring basis across a range of uncertain or changing issues and presented these solutions in large-group plenary, moderated panel discussions on Thursday afternoon and Friday morning. Thursday seminars were sized, grouped and focused on the near-term potential way ahead for the participants. Additional key seminar deliverables included the major impediments or problems that must be overcome and a recommended way ahead including next steps and early success enablers. Thursday's plenary session focused on major impediments and Friday morning plenary sessions focused on the way ahead.
- (d) A U.S. Government seminar with representation that is heavily Department of Defense, but broadly inclusive of MDA stakeholders convened Tuesday through Thursday in similar fashion to the international seminars. The responsibilities of the US seminar were to:
 - (a) Listen to and interpret international participant's products and presentations to gain additional understanding of international perspectives on various issues.
 - (b) Demonstrate an understanding of international perspectives through a plenary presentation on Friday morning as a precursor to the way-ahead panel discussions.
 - (c) Develop broad USG implications, based on the international presentations; with a specific focus on the Title X implications for the US maritime services (USN, USMC, USCG).
 - (d) On Friday afternoon, the USG seminar concluded in a separate plenary session in the DSC in order to:
 - (i) Examine the international feedback to the US presentation that morning.

- (ii) Identify and capture additional understanding and insight based on the international ways-ahead that were prepared in seminars on Thursday and presented in panel discussion Friday morning.
 - (iii) Identify the Title X (USN/USMC/USCG) and broad USG implications of the international way ahead.
 - (e) Upon completion of the USG plenary WebIQ session in the McCarty Little Hall Decision Support Center, US participants adjourned to participate in the Technology Symposium.
 - (e) On Friday afternoon, the NWC faculty and staff supporting the event seminars and plenary sessions convened in plenary session to capture the impressions of the moderators and facilitators of the event.
 - (a) Key insights on international perspectives.
 - (b) Broad USG implications.
 - (c) Title X implications for maritime services (USN/USMC/USCG).
 - (d) Recommendations for future areas of study and pathway events.
 - 2) The third phase was an associated symposium. Following a GMPG concluding luncheon on Friday, participants were encouraged in Phase 3 to participate in an MDA Technology Symposium in McCarty Little Hall. The symposium consisted of both auditorium presentations and trade-show type 'booths' in the game cells around the auditorium. The completion of the symposium concluded all events associated with the GMPG.
 - b. On Monday morning, 11 October, War Gaming Department convened to hot-wash the conduct of the GMPG and capture lessons for incorporation in future efforts.
4. Game Design
- a. GPMG 2010 was conducted as a single-sided seminar-style analytical game with a control cell.
 - 1) International seminars consisted of small groups (ideally 8-10, maximum 14) of international participants with an NWC moderator, facilitator and environmental recorder. Two US participants were country players in the international seminars.

- 2) The USG seminar was a larger group (30-45 planned personnel) of all other US participants. They were moderated and facilitated by multiple NWC personnel to develop required deliverables and capture necessary data for post-game analysis.
 - 3) The Control Cell monitored the activities of the individual seminars in order to modify the schedule as required, assist individual cells where needed, and determine from the work being conducted in the cells the topics for, moderator(s) of, and panelists for the various plenary sessions.
- b. A simplified organizational structure overview is provided in figures 1 and 2.

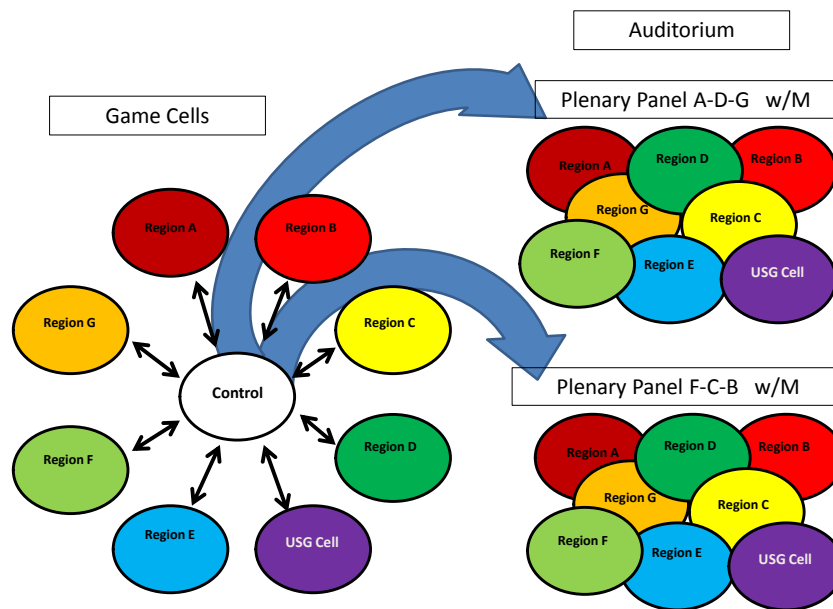


Fig 1. Tuesday / Thursday Organization

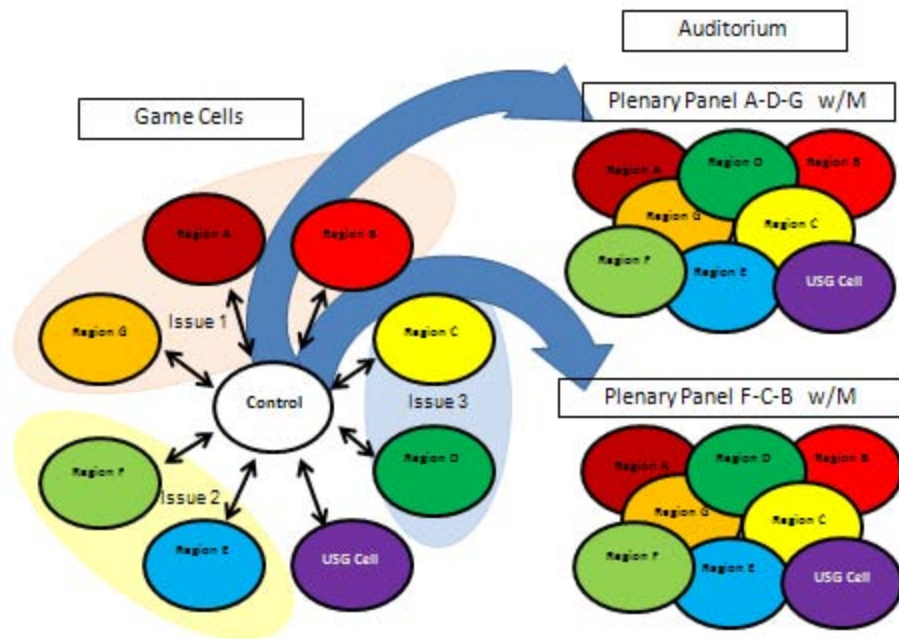


Fig 2. Wednesday / Thursday Organization

5. Game Mechanics: The game broadly functioned to enable a collegial and collaborative atmosphere for international participants. US participants were afforded the best opportunity to observe collegially the work of their international colleagues. Seminars produced templated briefing products for viewing by all participants. Individuals were asked individual survey questions to gain additional or analytic insight into their perspective.

- a. Phase 1

- 1) On Sunday, as designed, participants were to be grouped at tables with their seminar moderator. Each participant was to complete a paper survey and the seminar moderator would then complete an initial survey for the entire seminar. The moderator would take additional notes to record key points and insights where possible. A change in the schedule at the Officer's Club resulted in changes to the design. Players were divided into their gaming seminars on Sunday and they were able to take their initial surveys via computer web-based means vice paper surveys as planned.
- 2) On Monday, environmental recorders participated in plenary session for the country MDA presentations to capture additional discussion and insights. All NWC personnel were encouraged to capture key items for data analysis.

- b. Phase 2

- 1) On Tuesday, Wednesday and Thursday, seminars were led by an NWC moderator and assisted by an NWC facilitator to produce a template briefing product for plenary panel discussion. The plenary output product constituted the primary analytical output for the cell. Additionally, moderator, facilitator and data collector notes captured additional information about the process of producing the cell output (where possible). Toward the end of the seminar session, players took individual player surveys via computer (most players). The Control Cell viewed intermediate or working products as they were developed to assist in determining topics for plenary panel presentation.
- 2) The Control Cell designated the plenary panel topic and the NWC panel moderator. Designated participants (briefers), chosen by their seminar, participated as panelists in the plenary panels and presented the seminar's work to the plenary audience of all participants.

- c. Phase 3

- 1) On Friday afternoon, the USG seminar was led by a moderator through a WebIQ facilitated plenary session in the DSC to develop the necessary game material for analysis (key insights on international feedback to the US presentation, insight on

international ways-ahead, Title X implications for maritime services (USN/USMC/USCG), and recommendations for future areas of study and pathway events).

- 2) On Friday afternoon, the NWC faculty and staff supporting the event seminars and plenary sessions convened in plenary session to capture the impressions of the moderators and facilitators of the event (key insights on international perspectives, broad USG implications, Title X implications for maritime services (USN/USMC/USCG), and recommendations for future areas of study and pathway events). The faculty impressions were used in the analytical process to perhaps point to an insight from a player or seminar that might otherwise be missed. NWC impressions were not analyzed as a data stream from the event.

6. Game Considerations.

- a. GMPG was fundamentally structured and designed to enable the US participants to listen to and learn from the international participants.
- b. International participants embodied a broad range of cultural and social norms and many spoke English as a second language. In previous events, some international players have shown deference to their American hosts when in Newport and let the host country (US) 'take the lead' in developing plans and stating opinions.
- c. US participants, specifically USN/DOD, are seldom reserved and often attempt to take the lead in games and events, a characteristic that may be accentuated by the 'home turf' of Newport.
- d. All countries invited to ISS XIX were invited to GMPG and may choose to attend.

7. Game Assumptions.

- a. The game was unclassified and executed as a self-contained event in McCarty-Little Hall, US Naval War College, Newport, RI.
- b. The GMPG was conducted in the English language.

8. Game Design Concept

- a. Tasks that needed to be performed during the game to meet the game objectives:
 - 1) Seminar-forming task must be immediately accomplished.
 - 2) International seminars must surface and focus on key maritime issues to inform creation of deliverable products.

- 3) International seminars must present their work products to the assembled audience.
 - 4) Individual player perspectives must be obtained to understand the full range of viewpoints.
 - 5) Group seminar products must be captured by the Control Cell.
 - 6) USG seminar must be enabled to listen and understand international perspectives.
 - 7) USG seminar must present their work product to the assembled audience.
 - 8) USG seminar must determine the Title X implications for the maritime services of the international way-ahead as developed by the participants.
 - 9) Control Cell must determine themes, briefing seminars and moderator for each plenary panel discussion.
- b. Gaming procedures/mechanisms used to perform these tasks:
- 1) These tasks were accomplished through moderator lead seminar style discussions drawing on individual player expertise.
 - 2) Game products were in the form of plenary briefings using electronic, formatted templates, electronic spreadsheet/database compilation of individual participant surveys, WebIQ groupware, and paper format surveys/templates when necessary or as required as a back-up format. These were used to compile intermediate work products and final presentations in such a way as to preserve the deliberate and linked nature of issue (problem to solve) to mission (solve identified problems) to capability (inherent to the solutions).
- c. The specific steps required to outline the game's structure:
- 1) This was a one-sided, moderator-led multi-seminar event. Participants consisted of multi-national players from military and government organizations, primarily naval, and US participants representing governmental departments and organizations that are Maritime Domain Awareness (MDA) stakeholders, optimally.
 - 2) Participants in small-group seminars developed a collaborative response to the focus issue presented to the group. Individual perspectives, dissenting opinions, and other insights not captured through the seminar brief were captured through individual surveys in the seminar cells.

- 3) The Control Cell monitored the creation of all seminar products and determined themes, panel moderators, and seminar cell panelists for each plenary panel discussion.
- 4) Topical plenary panels focused on specific themes and led by a moderator presented the work of each of the selected seminars in turn. Once all the panelists briefed the work done by their seminar, the moderator asked questions to broaden or focus the discussion and recognized participants from the audience to ask further questions or provide additional comment on the chosen panel topic.

Appendix H

Data Collection and Analysis

I. Introduction

One of the most important functions of the U.S. Naval War College, War Gaming Department (WGD) is to answer timely research questions posed by game sponsors. In order to do so, capturing data that is germane to the sponsor's specific area of interest is critical, because successful data capture enables useful analysis and ensures a symbiotic relationship between game design and subsequent findings. In order to ensure that data collection methods and analytic techniques are relevant to the game objectives for the 2010 Global Maritime Partnerships Game (GMPG or Global '10), a Data Collection and Analysis Plan (DCAP) was developed and is presented here as executed. The U.S. Chief of Naval Operations (CNO), through his staff element OPNAV N2/N6, is the sponsor for this project.

It is important to note that the GMPG was a highly inductive, qualitative activity using mixed methods (i.e., triangulationⁱ) and employing decidedly phenomenological analytical techniques. As a phenomenological research project, post-game analysis for GMPG sought to "describe and interpret the experience of people in order to understand the essence of the experience as perceived by those studied"ⁱⁱ. Specifically, phenomenological research focuses on participant perspectives. These participant (i.e., game player) perspectives are garnered through "extensive, in-depth, unstructured interviews"ⁱⁱⁱ. Accordingly, the GMPG differs from other recent WGD projects in that the analytic process employed herein relied far more on ethnographic^{iv} (i.e., observed) data captured by ethnographers and technographers in the game seminar cells, as well as self-declared player insights observed during game play, rather than analysis conducted by subject matter experts after the game concluded. In essence, both U.S. and international participants provided their own cell-based analysis of the national, regional and cross-regional catalysts to instability, and the impediments to forming effective regional and cross-regional partnerships within the maritime domain, as well as proposed solutions to mitigate those issues.

At the conclusion of the game, the Data Collection and Analysis Team (DCAT) applied a variety of qualitative content and context tools and techniques to aggregate data and identify key themes that may prove of interest to the sponsor for future research, policy making, and resourcing.

II. Game Purpose

Today's world presents many opportunities and challenges for humankind. Globalization, man-led change around the entire planet, has led to more robust access to raw materials, human capital resources, the methods and means of production, and established and emerging markets. However, a negative impact of globalization has been the relative advantage that empowered nations, organizations and groups with means have employed to exploit the weaknesses in governance (will, capabilities and capacities) where found globally; impacts acutely felt by

disempowered nations. While maritime theft, piracy, illegal fishing, and pollution are examples of overt exploitive acts occurring in the littorals, additional complex issues such as human smuggling, illicit drug trafficking, and gun running are also connected to the seascape. In addition to these direct, immediate human-interactive problems are long-term environmental changes and episodic natural and man-caused disasters. Prolonged drought, tsunamis, earthquakes, oil spills, and epidemics and pandemics on national, regional, and cross-regional levels are examples of these types of problems.

Whether man-made, led, influenced or natural, these problems severely stress the social fabric of human interaction and are catalysts to instability that must be mitigated or resolved. Navies, Coast Guards, maritime organizations, and the broader community of stakeholders that interact directly with the sea form the solutions to these catalysts in the maritime domain. The purpose of the GMPG was to identify the catalysts to instability at the national, regional and cross-regional levels as well as the impediments to forming effective regional and global partnerships in the maritime domain from both U.S. and international perspectives. For the purposes of this game, catalyst to instability is defined as anything that initiates, accelerates, or causes an event or series of events to adversely impact the safety, security, economy, or environment of a nation, region, or super-region.

Understanding these impediments is important to U.S. Navy Title X (organize, train, equip) responsibilities because these catalysts to instability, including, but not limited to, resource scarcity, epidemics and pandemics, and regional and transnational criminality, foster broad challenges to U.S. national security policy. The U.S. Navy plays a critical role in confronting such challenges through forward presence, deterrence, sea control, power projection and humanitarian assistance and disaster response. However, as identified in the Global '08 Title X game, such efforts cannot be sustained without effective international engagement and cooperative partnerships in maritime security (i.e., Maritime Domain Awareness).

III. Game Objectives

The Global Maritime Partnerships Game was designed to qualitatively and descriptively^v explore the following five specific objectives:

- Identify national, regional and cross-regional catalysts to instability (e.g., resource scarcity, epidemics and pandemics, and regional and transnational criminality) from both international and U.S. perspectives
- Discern what relationships, if any, exist between these catalysts and the maritime domain
- Identify broad-based partnership requirements (e.g., policy, legal, technological, etc.) that will enable Maritime Domain Awareness in order to counter catalysts to instability

- Provide an environment for participants to explore and appreciate the complexities of establishing and maintaining effective maritime partnerships through domestic and international perspectives
- Provide participants with an opportunity to familiarize themselves with a sampling of current technological research and innovations in Maritime Domain Awareness

This year's event built on the Global '08 and other NWC games, academic research, and the International Seapower Symposium XIX hosted in October 2009 at the U.S. Naval War College in Newport, Rhode Island.

By applying an inductive^{vi} game design and corresponding phenomenological analytic framework, the Naval War College War Gaming Department was able to identify catalysts to instability at the national, regional and cross-regional levels as well as the impediments to forming effective regional and global partnerships in the maritime domain. This game also employed data visualization in order to summarize and conceptualize those catalysts, impediments and proposed solutions at the national, regional and cross-regional levels.

Research Questions

In order to address the mutually agreed upon objectives established by OPNAV N2/N6 and the Naval War College, the following overarching research question was proffered in this game:

- Based on the catalysts to instability derived from the international participants, what are the impediments to forming effective regional and global partnerships in the maritime domain?

At a more structured level, this game sought to inductively examine the following research questions:

- What do the international participants in this game consider to be the present-day catalysts to instability in their respective region of the world?
- What do the U.S. participants in this game consider to be the present-day catalysts to instability?
- What is the relationship of these regional catalysts to the maritime domain?
- What do the international participants consider to be the present-day catalysts to instability on a global scale?
- What is the relationship of these international catalysts to the maritime domain?
- Based on the regional catalysts to instability provided by the participants in this game, what are the impediments to building effective regional maritime partnerships?
- Based on the cross-regional catalysts to instability provided by the participants in this game, what are the impediments to building effective cross-regional maritime partnerships?

The independent variable in this game was the impediments to forming partnerships at the regional and cross-regional levels, while the primary dependent variable was the cell's ability to mitigate these catalysts based upon regional and cross-regional partnerships in the maritime environment. In order to focus each cell at the high-operational-to-low-strategic level, specific capabilities were aggregated to the greatest extent possible.

The GMPG strove to answer these questions through direct observation (i.e., ethnographic data capture), facilitator-guided sessions within each of the seminar player cells and direct observation of large group plenary sessions. Because these recorded observations, discussions, and plenary sessions were "scrutinized...in search of patterns that the data reflect," the overarching data collection process is inductive^{vii}. Analysis of the overarching research question is also considered descriptive because it "revealed the nature of certain situations, settings, processes, relationships... [and] systems..."^{viii} Importantly, there is no predictive value inherent in this data, because this game, like most, lacks sufficient reliability and consistency as a research instrument. Unlike experiments and other types of empirical social research, games are rarely repeated to create a statistically valid sample using the same general population.^{ix} Accordingly, this game data is not inferential and findings cannot be generalized.^x

IV. Game Design as a Catalyst for Inductively-Generated Knowledge^{xi}

This game was designed to enhance players' understanding of the catalysts to instability and the impediments to fostering national, regional and cross-regional partnerships in the maritime environment, as well as to inductively generate knowledge that can form the basis for future deductive hypothesis testing. To foster a setting favorable to phenomenological research, a one sided, seminar style game was developed in which up to 15 independent international player cells and one U.S. government cell employed strategies focused on mitigating the greatest regional and cross-regional catalysts to instability identified within individual game cells.

The international game seminar cells consisted of approximately 10-12 players per cell, ideally, with one or two representatives from each regional nation that attended, based on the focus of the cell. Each cell was staffed with a Naval War College facilitator, technographers, and ethnographer (DCAP Section XI provides for a more complete description of each position's responsibility). Two U.S. players took part in the international cells. A separate U.S. Government cell was comprised of 34 players representing various entities including the Navy, Department of Defense, Department of State, non-governmental organizations, and academic institutions. This cell focused on addressing regional partnerships from a U.S. Navy/U.S. Government-oriented perspective, while the international cells explored these same issues through collective consensus built from the point of view of a cooperative regional or international entity through the lenses of each stakeholder as represented in the process. The international and U.S. cells strove to build partnerships to address complex problems. In order to do so, all cells engaged in the following activities:

- Define the catalyst to instability at the regional and super regional levels

- Identify the major impediments to forming partnerships at the regional and cross-regional levels
- Propose collaborative solutions to forming partnerships at the regional and cross-regional levels
- Identify existing partnerships at the regional and cross-regional level and ways to improve the activities and actions employed by nations to address these issues

The week was divided into three broad phases. In the first phase the players focused on the current state of the maritime environment, both issues and implemented solutions. In the second phase players built from the current set of maritime partnerships, information sharing regimes and MDA to develop better solutions to maritime problems and near-term recommendations for solution implementation. Immediately following the conclusion of the game, players had the opportunity in the third phase to attend an MDA technology symposium.

Phase 1 began on Sunday for the international players. Players were welcomed at a luncheon and received overview briefings about the week ahead. Following the briefings, players were grouped into their prospective game cells with moderators to conduct initial introductions and complete initial individual baseline surveys. Additionally, the moderator introduced the expected focus issue for initial cell work in Phase 2 and determined if all players had an affinity for participation. Phase 1 continued on Monday with regionally focused briefings on current implementations of maritime partnerships, information sharing regimes and MDA presented by current regional participants in those activities.

Phase 2 consisted of small cell seminar work by the player teams and large group plenary panel presentations to present cell results to all participants. On Tuesday, Wednesday and Thursday, seminars were led by an NWC moderator and assisted by an NWC facilitator to produce briefing products using standardized templates for plenary panel discussions. The plenary presentation product constituted the primary analytical output for the cell. At the conclusion of the seminar session, players took individual web-based surveys covering their seminar's work.

Phase 2 plenary panel discussions were included to enable broad sharing of the work done in individual seminars. Game Control focused plenary panel sessions on specific areas of interest from across the player cells. These sessions not only enabled broad dissemination of the recommendations from the seminars, but also enabled constructive criticism and inclusion of additional ideas from the broader audience. The Friday morning plenary panel was attended by VADM Dorsett, USN, OPNAV N2/N6, and he made concluding remarks at the end of the game to wrap-up the event and provide thanks to the players for their work. Player out briefs are available in Appendix E.

Phase 3 introduced various MDA technologies to the participants on Friday afternoon. In short, group presentations in the auditorium, presenters demonstrated their technology to

participants. Additionally, some technology solutions were presented in smaller room settings. The technologies presented and the detailed descriptions of the overall game design are found in Appendix F and Appendix G.

The U.S. cell players, separate from all U.S. and international players in the international player cells, broadly employed the technique of ‘active listening’ to deeply understand the international players and the perspectives they brought to the game. This understanding was developed through Phase 1 and Phase 2 of the game. In support of the slightly different focus that the U.S. cell had from the international cells, game activities were tailored for this cell:

Phase 1 began on Sunday for the U.S. cell players. Players were welcomed at a luncheon and received overview briefings about the week ahead. Following the briefings, players were grouped into their prospective game cells with moderators to conduct initial introductions and complete initial individual baseline surveys. Additionally, the moderator introduced the cell focus and processes for Phase 2. Phase 1 continued on Monday with all players, from both U.S. and international cells, receiving regionally focused briefings on current implementations of maritime partnerships, information sharing regimes and MDA presented by current regional participants in those activities.

Phase 2 consisted of small cell seminar work by the player teams and large group plenary panel presentations to present cell results to all participants. On Tuesday, Wednesday and Thursday, the U.S. cell was divided into sub-groups for some of its work processes based on player regional expertise. On Tuesday, led by NWC moderators and assisted by facilitators, sub-groups evaluated the international cells’ regional foci and considered the expected themes, trends and issues that might emerge across the regions, as well as the expected implications for the U.S. Government, broadly. At the conclusion of the seminar session, players took individual web-based surveys covering their seminar’s work. During the Tuesday moderated plenary panel discussion, the U.S. Cell participated as audience members only.

Phase 2 continued on Wednesday and Thursday for the U.S. cell. On both days, players examined the products produced by the regional international cells, using their cultural expertise and other expert knowledge. U.S. players ‘listened for meaning’, actively understanding, interpreting and evaluating what they had observed/reviewed. Additionally, the U.S. cell produced a briefing on Thursday summarizing the perspectives of the international seminars. During the Wednesday and Thursday moderated plenary panel discussions, the U.S. cell participated as audience members only.

Phase 2 concluded on Friday morning with moderated plenary panel discussions. The U.S. cell began the first Friday plenary session by briefing their understanding of the perspectives and recommendations from the international player cells. Following the U.S. cell presentation, each of the international cells presented their recommendations for developing maritime partnerships, information sharing and MDA moving forward.

Phase 3 for the U.S. cell was conducted on Friday afternoon. Using WebIQ groupware software, NWC moderators led the U.S. participants through a session to consider the broad implications of the proposed way ahead to the U.S. Government (broadly), maritime services (USN/USMC/USCG specifically), and U.S. Navy (Title X responsibilities to organize, train and equip). Upon the completion of the moderated session, U.S. participants participated in the technology symposium.

During the analytical process, the DCAT conducted analysis of each game cell's output in series from Phase 1 and Phase 2 of the game. By employing this serial approach as opposed to an aggregated approach, analysts had the opportunity to explore the overarching research questions with more consistency through triangulation of findings than if all the data was analyzed in aggregate. Incorporating triangulation into the overall analytical approach yielded a more robust final product than what would have resulted from a more rudimentary aggregated game.^{xiii}

DCAT members were assigned as required to best capture player input during the game. A minimum of four ethnographers and three technographers were assigned to the U.S. cell during the week. During the auditorium plenary sessions, ethnographers were assigned to capture player comments and insights. For the U.S. Cell Friday afternoon session, one DCAT member was posted at the front of the room to support the facilitator with a real time analysis feed from the control room of the Decision Support Center, where additional DCAT members were identifying common themes and providing a feedback channel to the moderator of content provided into WebIQ.

V. Cell Deliverables

For each game day, players in each of the international cells and the U.S cell developed the following three core products:

- Links & Nodes Chart. Captured via i2 Analyst Notebook software.
- Microsoft PowerPoint slides (template provided) describing the catalysts to instability, impediments and solutions. Although players will directly contribute to the final template, its production will be facilitated by a technographer in each cell, thus allowing the players to stay engaged in seminar discussion rather than stepping out-of-role to complete a template. The U.S. cell will develop a separate template for each region and one brief that will discuss the common themes that emerged amongst all regions.
- Individual Player Surveys. All players assigned to the international cells and the U.S. cell will complete these surveys three times (i.e., once after each cell seminar). Surveys will include open-ended and fixed choice questions. See Appendix H, Annex 1 for survey details.

VI. Construct Validity for Survey Instruments

Prior to game execution, each international and U.S. cell participant completed a background survey comprised of questions designed to “gather data about the subject’s background and experience.”^{xiii} This survey assisted the Control Cell in identification of the international participant’s regional and cross-regional catalysts to instability in order to assign them to their respective regional, issue-based cells. This survey also afforded players the opportunity to familiarize themselves with the survey web-based software application prior to conducting their first seminar session the next day. Survey questions featured a variety of open-ended questions (see Annex 1 to Appendix H for additional information):

GAME OVERVIEW:

Today’s world presents many opportunities and challenges for humankind. Globalization has led to more robust access to raw materials, human capital resources, and established and emerging markets. However, this has also yielded unintended consequences by emphasizing inequities between nations in terms of their assets and capabilities. Perhaps nowhere has this disparity been more profound than in the maritime domain. While maritime theft, piracy, illegal fishing, and pollution are examples of overt acts occurring in the littorals, broader, more complex issues such as human smuggling, illicit drug trafficking, and gun running are also connected to the seascape. Such issues are not linked exclusively to the socioeconomic impacts of globalization; but rather, are also associated with climate change and natural and human caused disasters such as prolonged drought, tsunamis, earthquakes, oil spills, and epidemics and pandemics on national, regional, and cross-regional levels.

The purpose of the 2010 Global Maritime Partnerships Game (GMPG) is to identify catalysts to instability from national, regional and cross-regional perspectives in order to form effective regional and global partnerships in the maritime domain.

Definition: Catalyst to Instability: Defined as anything that initiates, accelerates, or causes an event or series of events to adversely impact the safety, security, economy, or environment of a nation, region, or super-region. The following catalysts to instability were provided to the players.

- 1) State Actor
- 2) WMD Proliferation
- 3) Piracy
- 4) Environmental Group(s)
- 5) Environmental Crimes
- 6) Environmental Disasters
- 7) Narcotics Trafficking
- 8) Illegal Fishing
- 9) Terrorism
- 10) Weapons Trafficking
- 11) Port Vulnerability

- 12) Oil Smuggling
- 13) Human Trafficking
- 14) Illegal Immigration
- 15) Competition for Natural Resources (e.g., Diamonds, etc)
- 16) Competition for Energy Resources (e.g., Oil, Gas, etc)
- 17) Territorial Dispute (e.g., EEZ, TTW and Borders)
- 18) Government Corruption
- 19) Threats to Critical Infrastructure
- 20) White Collar Crime (money Laundering, fraud, etc.)
- 21) Other: _____

REGIONAL

- 1) For your specific geographic region, which of the threats listed below do you consider to be the greatest catalyst to instability that has regional maritime security implications?
- 2) For the catalyst identified in Question #1, describe how it affects the maritime security environment for your specific geographic region?

CROSS-REGIONAL

- 3) Thinking beyond your region, which of the threats listed below do you consider to be your greatest catalyst to instability that has cross-regional maritime security implications?
- 4) For the catalyst identified in Question #3, describe how it affects the maritime security environment for your specific geographic region?

Surveys will also be conducted in both the international cells and the U.S. cell at the conclusion of each seminar within the game (i.e., three times over three days). Much of the emphasis of these surveys will be placed upon gathering players' "perceptions of the systems and processes they are employing, their knowledge of and attitudes towards...subjects...perceptions and insights...and their ideas about how...systems and work processes might be improved^{xiv}." The three surveys developed and administered to the players gather individual player perspectives on impediments, regional, and cross-partnerships. These survey questions feature a variety of open-ended questions, including the following:

- 1) From the list below, please select the regional maritime issue discussed in your cell.
- 2) From the list below, please select the regional maritime issue or issues of concern that should have received more attention.

- 3) What other impediments at the regional level, should your cell have taken into consideration, but were not adequately addressed?
- 4) What other solutions at the regional level should your cell have taken into consideration, but were not adequately addressed?
- 5) Identify other countries (that your group discounted or overlooked) in your region that you would recommend partnering with to develop a collaborative solution? Please discuss the reasons for these partnerships?

All of the questions included in the baseline and post-move surveys were pre-tested (along with assessing overall instrument efficacy) during the Alpha and Beta tests with a “small sample of individuals from the population [being studied]...or one very similar to it.”^{xv} Great care was placed to ensure survey questions did not presuppose a desired outcome on the part of the researchers or “skew the agenda...”^{xvi} Moreover, post-move survey questions focus on what players will do in the game (and, more importantly, why), as opposed to relying heavily on their past experiences for justification of their actions.^{xvii}

VII. Data Collection Protocol

The DCAP for the Global Maritime Partnerships 2010 game ensured six specific areas were considered for post-game analysis. These are as follows:

- Identify regional and cross-regional catalysts to instability (e.g., resource scarcity, epidemics and pandemics, and regional and transnational criminality) that have maritime security implications from both international and U.S. perspectives.
- Based on the regional and cross-regional catalysts to instability provided by the participants in this game, what are the impediments to building effective regional and cross-regional maritime partnerships?
- Based on the regional and cross-regional impediments provided by the participants in this game, what are the international community’s solutions to building effective regional and cross-regional levels maritime partnerships?
- Identify broad-based partnership requirements (e.g., policy, legal, technological, etc.) that will enable Maritime Domain Awareness in order to counter the catalysts to instability identified in each move during the game.
- What regional and cross-regional partnerships currently exist that enable Maritime Domain Awareness in order to counter catalysts to instability?
- Based upon the international community’s perceptions of the catalyst to instability and regional partnerships, what are the implications to the United States government, Department of Defense and U.S. Navy Title X?

The DCAP identified thirteen data streams, twelve of which were collected during the game. All DCAT members involved in these collection efforts received instruction in proper data capture techniques during a pre-game bootstrap session, held on 03 October 2010 at 1100 hours.

The datasets that were analyzed in this game are considered descriptive because they “reveal the nature of certain situations, settings, processes, relationships...[and] systems...”^{xxviii} Because they are descriptive, the focus of the DCAT prior to compiling and writing the game report is to aggregate and “assess the data and clarify the information that has been gathered”^{xxix}.

DCAT members are also responsible for ensuring quality assurance/quality control of the datasets submitted by the international cells and the U.S. cell during game play. Specifically, DCAT members ensured the following parameters were implemented for the nine data streams that were used for post-game analysis, and development of the final game report:

- Formatting and standardization: Move templates submitted to the Control cell must adhere to the structure provided by the control team. Should any issues with any of the player cell’s inputs be identified during the game, the DCAT will immediately report their concerns to the Control cell for possible corrective action. It is the responsibility of the technographers in each cell to ensure that templates are properly populated and saved.
- Internal validity: Collection instruments must be designed correctly to ensure that accurate conclusions can be drawn from the data. To ensure their proper use during game play, specific internal validity issues with these instruments and the information they are designed to collect were identified during the Alpha and Beta tests, and have been corrected prior to the start of player move number one, which will occur in the morning session on 03 October 2010.
- External validity: Due to the inherent challenges posed by ensuring consistent, accurate measurement in games^{xx}, criterion validity is used to “see if the results from an item or set of measures (a scale) are similar to some external standards or criteria.”^{xxi} External validity applies predominately to the survey questions that will be asked in the individual international cells and U.S. cell player surveys that will be captured. In order to “provide...quality controls on data collection”^{xxii} these questions were evaluated by an internal focus group as part of the Alpha and Beta testing process, prior to being deployed in the game.

VIII. Analytic Methodology

Current thinking in the field of social research suggests that a variety of analytic tools should be employed in behaviorally based activities such as war games, thus maximizing the credibility of the work^{xxiii}. One widely accepted methodology that takes advantage of multiple techniques is “triangulation.”^{xxiv} This approach allows us to derive the same or very similar conclusions using different datasets or methods.^{xxv} Much of the strength of triangulation stems from its ability to

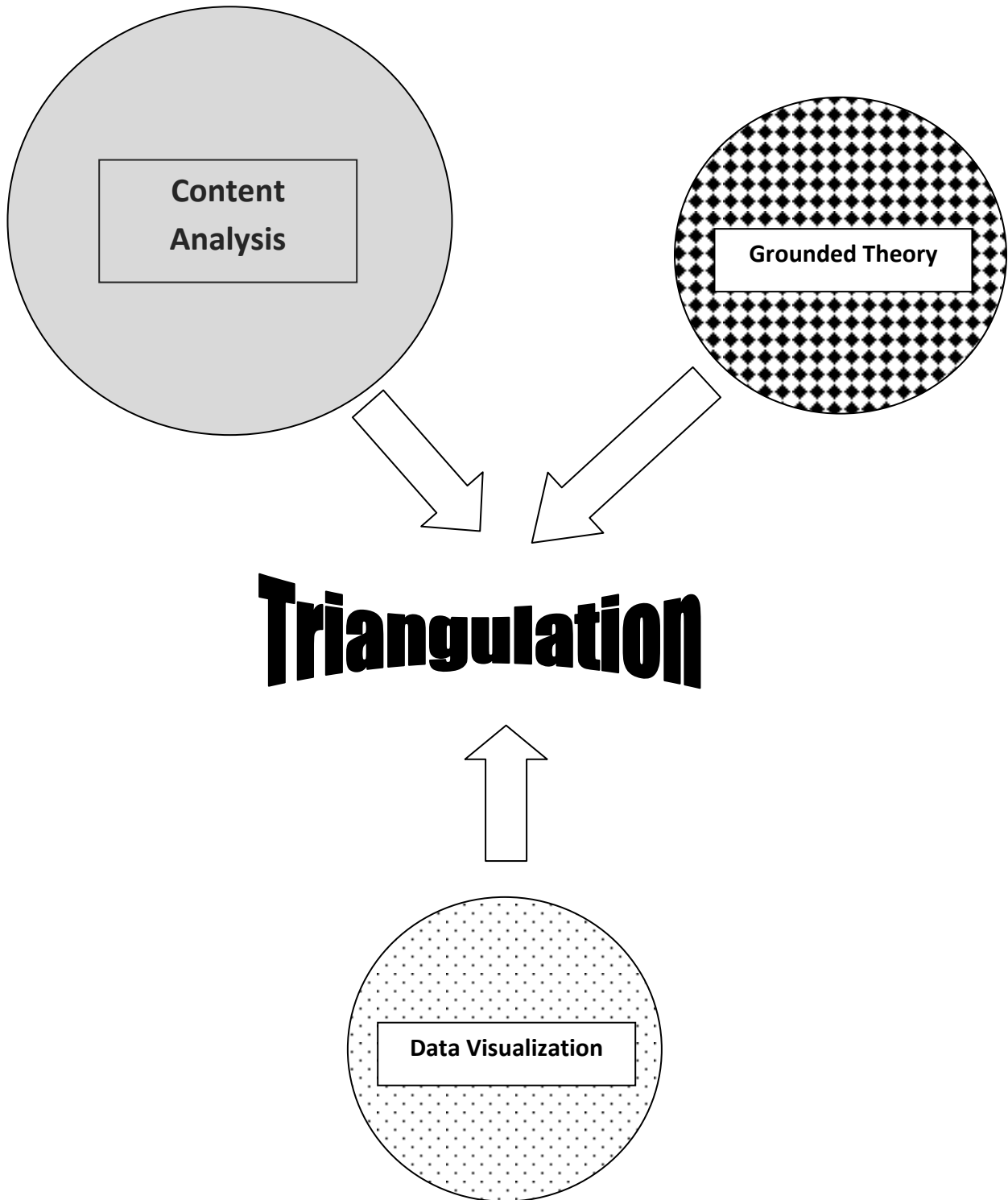
“distinguish between the idiosyncratic...and the representative.”^{xxvi} This method also allows the researcher to “...base inquiry in the assumptions being used...[and] evaluat[e] questions...with the appropriate methodology rather than the methodology driving the evaluation.”^{xxvii} Consistent with this approach, the eight data streams collected during this game will incorporate a variety of research procedures into analysis. A brief description of each analytic tool follows. This information is also summarized in the table found on the next page. The overarching triangulation approach is also depicted in the figure found in Section X of the DCAP.

- Content Analysis:** Described as “a...method whereby a researcher seeks objectively to describe the content of communication messages that people have previously produced”^{xxviii}. “Content analysis involves identifying coherent and important examples...and patterns in the data... [and subdividing]...data into coherent categories, patterns, and themes.”^{xxix} For the purposes of this game, content will be “binned” to determine which, if any, of the six focus areas presented in part VIII of this DCAP are supported by player actions, comments, or White cell assessment.
- Grounded Theory:** A more detailed, methodologically sound approach to analysis than the initial step of content analysis, grounded theory employs systematic, hierarchical procedures to develop inductively derived theory grounded in data. Grounded theory “directs researchers to look for patterns in data so that they can make general statements about the phenomena they examined”^{xxx}. For the purposes of this game’s analysis, the DCAT will be using “an inductive, theory discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data”^{xxxi}
- Data Visualization:** By comparing and contrasting the players’ activities in the areas of maritime security, stability operations, and building partnerships within the context of capabilities, benefits, and intended consequences, overlapping Venn diagrams can be produced that will allow the DCAT to identify gaps, seams, and overlaps in U.S. Navy actions supporting other nations and organizations.^{xxxii}

Dataset Name ^{xxxiii}	Inherent Value of Data	Primary Analytic Technique
Pre-Game Player Survey	Background About Players	Content Analysis
Catalyst to Instability	Player Cell Assignments	Content Analysis
Cell Links & Nodes Chart using i2 Analyst Notebook	What Players did in Game	Content Analysis

UNCLASSIFIED

Cell Briefing Template via PowerPoint	What Players did in Game	Content Analysis
Environmental Notes during Cell Discussions via Excel Spreadsheet	Why Players did in Game	Grounded Theory
Environmental Notes during Group Plenary Discussions	Why Players did in Game	Grounded Theory
Post-Move Cell Player Surveys via In-Relief	Why Players did in Game	Grounded Theory
White Cell Assessment/Environmental Notes	What Players did in Game	Content Analysis
White Cell Subject Matter Expert Insights	International Engagement Policy Implications	Content Analysis
Environmental Notes during Final Plenary Session	International Engagement Policy Implications	Content Analysis
Player thoughts via WebIQ (U.S. Cell Only)	Why Players did in Game	Content Analysis
Cell Final Session Outbrief (Player derived)	What & Why Players did → Game/ Policy Implications	Content Analysis
Cell Links & Nodes Chart using i2 Text Chart & Analyst's Notebook	International Engagement Policy Implications	Data Visualization



IX. Data Collection and Analysis Team Roles

Members of the Data Collection and Analysis Team (DCAT) were assigned to specific roles based upon their experience, education, and interests. The five specific functions assigned to the DCAT are as follows:

DCAT Team Leader/Assistant Team Leader: Serves as Incident Commander and Assistant Incident Commander, respectively and is responsible for all aspects of data management, collection, analysis, and report writing. Any issues involving collection strategies, information technology challenges, concerns with methodologies or analytic procedures, or DCAT personnel should be brought to the attention of the Team Leader/Assistant Team Leader.

Collection Leader: Responsible for data management during the game as well as post-execution organization of files. Questions regarding file structure, data import/export, and information release should be referred to the Collection Leader.

Report Leader/Assistant Report Leader: Primary author for the Game Report, responsible for organizing, writing, and editing much of its four primary areas (i.e., Introduction, Game Design & Research Methodology, Analysis & Results, and Conclusions/Recommendations for Further Study). Tasks other members of the DCAT with preparation of report sections and ensures compliance with requisite deadlines.

Technographers(s)/Real-Time Analyst(s): Populates links and nodes charts based on participant discussions and ensures that data are properly saved on the Unclassified GAMENET for subsequent analysis. Performs on-going analysis through the course of game play including review of incoming data streams for common themes and ideas, content analysis, grounded theory, and data visualization. Reports emerging patterns throughout the course of game play to DCAT Team Leader for use by Game Director, Designer, and Plenary Panel Moderators. At the conclusion of the game, develops links and nodes charts, cell PowerPoint slides/Word Documents, and serves as primary author(s) of the data visualization portion of the Game Report. He supports the Ethnographer in collecting player comments through environmental recording.

Ethnographer (Environmental Recorder(s)): Employs a variety of ethnographic techniques to capture player insights and White cell/subject matter expert ideas during the game play. He records observations in Microsoft Word and Excel for use by Real-Time Analyst(s) both during and after game play.

Additional information and training regarding specific DCAT members' roles was provided during a "bootstrap" session, held on 03 October 2010 at 1000 hours. A recall bill/manning

spreadsheet was provided. The entire NWC WGD GMPG team participated in Control Cell meetings daily during the game at the end of the player game day.

X. Summary of Products, Draft Game Report Outline, and Schedule for Deliverables

In order to ensure that data are collected to support the stated objectives, specific products were developed subsequent to game analysis, all of which are unclassified. These are as follows:

- Global Maritime Partnerships 2010 Post-Game Game Executive Summary
- Executive PowerPoint Brief
- Game Report
- Game Information Summary Sheet

The game report will be comprised of six major sections, plus a table of contents. The six main sections are as follows:

1. EXECUTIVE SUMMARY
2. OVERVIEW
 - a. Overview
 - b. *Background*
 - c. *Purpose of GMPG*
 - d. *GMPG Objectives*
 - e. *Research questions*
3. GAME DESIGN
 - a. *Game Design Introduction*
 - b. *Game Design*
 - c. *Analytical Framing*
 - d. *Collection Approach*
 - e. *Identification of Independent and Dependent Variables*
 - f. *Definition of Key Terms*
4. ANALYSIS & RESULTS
 - a. *Themes, Observations and Insights*
 - b. *Title 10 Implications*
 - c. *Limitations of Game Design and Analysis*

- d. *International Participant Demographics*
- e. *U.S. Participant Demographics*

5. WGD LESSONS LEARNED / RECOMMENDATIONS

- a. *Administration and Logistics*
- b. *Future Events*
- c. *Future Game – U.S. Centric*
- d. *Future Games – Regionally Centric*

6. Appendices

- a. *Attendees*
- b. *Background Maritime Security Games*
- c. *Research/ Associated Events*
- d. *Schedule of Events*
- e. *Cell Outbriefs*
- f. *Technology Symposium*
- g. *Game Mechanics*
- h. *Data Collection and Analysis Plan (DCAP)*
- i. *Regional Cell Analysis*
- j. *Administration / Logistics*
- k. *Glossary*

Specific remaining benchmarks for the Data Collection and Analysis Team are follows:

- ✓ Alpha/Beta Tests for Global Maritime Partnerships 2010 Game.....23/24 Sep 2010
- ✓ Survey Pre-Test/Questions Focus Group.....27/28 Sep 2010
- ✓ Data Collection Loop/Analytic Tools Test.....30 Sep 2010
- ✓ Global Maritime Partnerships Game Execution..... 03/08 Oct 2010
- ✓ Analysis/Game Report Preparation.....11Oct/1 Dec 2010
- ✓ Executive PowerPoint Brief Due.....29 Oct 2010
- ✓ Final Game Report/Remaining Deliverables Due..... 17 Dec 2010

ⁱ The use of different sources of data and varied analytical techniques for the same research question in order to determine to “verify the consistency of findings.” McMillan, J.H. & Wergin, J.F. (2010). *Understanding and Evaluating Educational Research* (Fourth Edition). (p. 12) . Upper Saddle River, NJ: Pearson

ⁱⁱ *ibid* (p. 90) .

ⁱⁱⁱ *Ibid* (p. 90).

^{iv} Berg, B.L., (2007). *Qualitative Research Methods for the Social Sciences* (Sixth Edition), pp. 172-174. Upper Saddle River, NJ: Pearson.

^v Because this game is exploring phenomena, its emphasis is on the player experiences, which will be detailed at length in predominately unstructured interviews and plenary sessions. Accordingly these data are descriptive because they discuss what the players did during the game and why they said they made specific actions; however, neither predictability nor inferentiality should be assumed.

^{vi} Induction strives to connect seemingly unrelated or disparate events using pattern analysis in order to form a basis for developing hypotheses or conclusions (in Brightman, *Today's White Collar Crime* (p. 354), Routledge, 2009).

^{vii} Leedy, P.D, & Ormrod, J.E. (2005). *Practical Research: Planning and Design* (Eighth Edition) (p. 96). Pearson.

^{viii} *ibid* (p. 134).

^{ix} Dunnigan, J.F. (2000) *Wargames Handbook, Third Edition* (p. 325).

^x The ability of research based on a sample to be generalized to an overall population (in Salkind, N.J., (2004). *Statistics for People Who Think They Hate Statistics* (p. 104). Sage).

^{xi} See Patton, M.Q. (1997). *Utilization-Focused Evaluation: The New Century Text (Third Edition)*, pp. 219-222. SAGE: Thousand Oaks, CA.

^{xii} Dunnigan, J.F. (2000) *Wargames Handbook, Third Edition* (pp. 325-328) Writers Club Press.

^{xiii} Alberts, D.S. & Hayes, R.E. (Eds.) (2002). *Code of Best Practice Experimentation*. (p. 246). Command and Control Research Program.

^{xiv} *Ibid*, pp. 246-247.

^{xv} Bachman, R. & Schutt, R.K. (2003). *The Practice of Research In Criminology and Criminal Justice (Second Edition)*. (p. 193). Sage.

^{xvi} Alberts, D.S. & Hayes, R.E. (Eds.) (2002). *Code of Best Practice Experimentation*. (p. 247). Command and Control Research Program

^{xvii} Empirical research has clearly shown that decision-makers frequently err, through their failure to “use established psychological theories and practices to guide them in their choices,” and “being overly reliant on their personal experiences...” Goldstein, N.J., Martin, S.J. & Cialdini (2008). *Yes! 50 Scientifically Proven Ways to Be Persuasive*. (pp. 4-5). Free Press.

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- ^{xviii} *ibid* (p. 134).
- ^{xix} Berg, B. L. (2007). *Qualitative Research Methods for the Social Sciences* (Sixth Edition). (p. 228). Allyn & Bacon.
- ^{xx} Gilad, B. (2009). *Business War Games* (Chap. 2). Career Press.
- ^{xxi} Nardi, P.M. (2003). *Doing Survey Research* (p. 50). Allyn & Bacon.
- ^{xxii} Patton, M.Q. (1987). *How to Use Qualitative Methods in Evaluation* (p. 135). Sage
- ^{xxiii} Myers, M.D. (Ed.) (1999). *Qualitative Research in Information Systems* in Martin, P.Y. and B.A. Turner. "Grounded Theory and Organizational Research," *The Journal of Applied Behavioral Science*, (22:2), 1986, pp. 141-157.
- ^{xxiv} Williams, F., Rice, R.E. & Rogers, E. M. (1988). *Research Methods and the New Media*. (pp. 13-14). The Free Press.
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- ^{xxviii} Levin, J. & Fox, J.A. (1991). *Elementary Statistics in Social Research*. (p. 6). HarperCollins.
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- ^{xxx} Potter, W.J. (1996). *An Analysis of Thinking and Research About Qualitative Methods*. (p. 151).
- ^{xxxi} Myers, M.D. (Ed.) (1999). *Qualitative Research in Information Systems* in Martin, P.Y. and B.A. Turner. "Grounded Theory and Organizational Research
- ^{xxxii} Westphal C. & Blaxton, T. (1998). *Data Mining Solutions: Methods and tools for Solving Real-World Problems*. Wiley.
- ^{xxxiii} All of these datasets are considered qualitative and descriptive

Appendix I – Regional Cell Analysis

1.1. Observations, Insights, & Player Recommendations

This section is an aggregated synopsis of all the cell products and individual player surveys collected during the game. Specifically, cell presentations, link and node charts, ethnography notes, and individual post-move survey results were aggregated, analyzed and presented according to the geographic groupings and individual player and country assertions made during the game. Each of the cells identified the following observations, insights and recommendations to forming maritime partnerships in order to effectively address the stressors and demands encountered in the maritime environment.

- 1.2. Discussion: The 83 players from 46 countries identified the following impediments and proposed solutions in individual player surveys, discussions and game play.

Sub Region: Mediterranean Sea

Countries: France, Morocco, Lebanon, Israel, Italy, Spain, Turkey, Egypt

Catalyst to Instability: Drug trafficking, illegal immigration, critical infrastructure protection, piracy, energy competition, resources and associated sea lanes, EEZ and border issues, weapons trafficking and Illegal fishing

Observations

- Players identified that in order to improve and build partnerships, a commonly agreed upon definition and understanding of global maritime partnerships was required. Players also agreed that Global Maritime Partnerships serves as a collective effort among nations to reduce the realm of illegal activity and threats at sea in support of national goals. Furthermore, an agreed upon end state will allow nations to effectively generate a common approach.
- Players agreed that the Mediterranean Sea was a relatively secure region with a lack of perceived threat. Based on this lack of perceived threat, an increase in level of effort yields insufficient return on investment. Players also noted that this lack of perceived threat influences public perception and competing national priorities.
- Player identified a number of impediments to information sharing to include security classification, cultural, legal, interagency, technological, and coordination.

Insights

- Players derived that the diversity of data classification levels by each country poses a significant problem to sharing information regionally. Particularly, one

player noted that an attempt to declassify information in order to maintain confidentiality of sources will allow for an increase in information sharing and build trust. The players attributed this assertion primarily to the diverse definitions of information and intelligence and national strategies to achieving efficacy in MDA.

- Players cited that national authorities and major legal issues restricted countries from sharing. Specifically the legal and diplomatic issues were due to significant resistance from North African countries to initiate agreements with the European Union.
- Players derived that technical barriers to information sharing are the easiest to address. Some players noted that a single national point such as the UK's NMIC or Italy's SIEMS were ideal models for sharing information regionally.
- Players briefly discussed a multilateral maritime partnership or coalition aimed at promoting stability and prosperity throughout the region. One proposal was to leverage the existing Union for the Mediterranean. However, players noted that this partnership has yet to prosper due to a lack of leadership, robust threat and coordination among neighboring countries.

Player Recommendations

- Players noted that information sharing and partnership building would best be achieved through a multi-layered regional approach through agreements, either bilaterally or through coalitions.
- Players suggested continuing the initiation and improvement of regional partnerships through military engagement which could evolve into more robust diplomatic relationships. Diplomatic relations were noted as an essential component to enduring long term solutions in the region.
- Players collectively postulated the need to continue efforts to federate regional and trans-regional networks (i.e., VRMTC and TRMN).
- The use of existing venues (RSS, VRMTC-TRMN Annual Meeting, 5 + 5 exercise, EU/Non-EU forums & CHEN) was noted as an essential next step to advancing regional partnership efforts.
- Players collectively agreed that regional standardization for classification levels was an essential element of sharing information.
- The establishment of partnerships both with Mediterranean countries not currently involved, and other countries of interest was noted as an important next implementation step.

Sub Region: Pacific Ocean

Countries: Japan, Australia, Singapore, New Zealand, Saudi Arabia

Catalyst to Instability: Maritime Terrorism and Piracy threats to Sea Lines of Communication

Observations

- Players noted trust as an enduring problem within the Asia/Pacific region requiring constant attention and management at the highest level of government. Furthermore, it was highlighted that while most of the solutions are long term, continuing naval engagement can mitigate certain short term impediments.
- Many nations in the region have suspicions regarding certain initiatives and motives for engagement and some of these initiatives are seen as an attempt at external influence on domestic issues. Additionally, players noted that some view MDA as a disguise to track vessels and people.
- Territorial Sovereignty issues were recognized by the players as enduring problems requiring constant attention and management. Players noted that periodic disagreements and disputes among nations lead to breakdowns in bilateral and multilateral cooperation in the region.
- Players noted various capacity and capability challenges as enduring issues that requires constant changes in technology.
- Players derived that there were many impediments encountered to sharing data, unclassified and classified, at the sub-regional, regional and cross-regional levels.

Insights

- Players derived that territorial disputes are a major issue in the region. This was discussed mainly because there is not a universal ratification of UNCLOS combined with the fact that portions of it (UNCLOS) are outdated. This is holding back countries from fully integrating into partnerships and information sharing arrangements. Additionally, a poor understanding of UNCLOS and different interpretations on jurisdiction leads to questions of responsibility and authorities. Specifically, some players noted concern over China's influence in the region, while others noted they would adopt a "standby" position until they get a better feel for their role in the region. A few disputed territories noted by the players include: Korean Peninsula (DPRK vs. ROK), Dokdo Island (ROK vs. Japan), South China Sea & Spratly Islands (PRC, Taiwan, Philippines, Vietnam, Malaysia, etc.), East China Sea & Senkaku Islands (PRC vs. Japan), Indonesia archipelagic sea lanes passage, Northern Territories Dispute (Japan vs. Russia)

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- While there are a number of information sharing structures in place in the Asia Pacific region, there remains room for other initiatives to supplement and augment, specifically in South China Sea and South Pacific. The South Pacific was described as “a Black hole, unmonitored and ripe for exploitation by folks with nefarious intentions.”
 - Players cited that the Asia/Pacific region as a large geographic region with a great degree of variability in capabilities and capacities of nations located within the region. This lack of capacity and capability in some sub-regions leads to challenges in developing partnerships and information sharing relationships. These capacity shortfalls include: Coastal surveillance capabilities, information fusion software, radar, C4I, thermal sensing, ships and aircraft, training and AIS receiving sites.
 - Sharing of information across classified and unclassified domains and between military, interagency, commercial entities remains a problem within the Asia Pacific region because of a variety of reasons including trust and confidence, territorial sovereignty, and capacity and capability. Specific MDA-like impediments include: national/policy/legal restrictions, technical/equipment compatibility, commercial/economic sensitivities, and privacy restrictions.

Player Recommendations

- Players suggested that in order to increase transparency and foster greater trust in the region, there should be an increase in personnel/ LNO exchange programs and sharing of doctrinal publications, best practices, and other maritime security documentation.
- Players recommended that the U.S. should continue 1206 program. Specifically, the U.S. Navy should continue capacity building and funding to Philippines, Indonesia, and Thailand (support via bandwidth, strategic lift, and specialist/subject matter experts).
- Regional leaders and U.S. should work with the International Maritime Organization (IMO) to resolve territorial disputes. U.S. presence in region was highly desired by the players. Specifically, players noted that consistent U.S. presence in the region helps “guarantee” freedom of navigation.
- U.S. and other regional leaders work with commercial organizations to ensure they understand the relevance of sharing and what incentives are available.
- U.S. and regional leaders should work with the IMO to standardize data and equipment protocols as well as encourage wider integration of International Shipping and Port Security (ISPS) requirements for international maritime commerce.

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- Players suggested the development of an apparatus by USN and other regional leaders to synergize MDA & partnership efforts to coordinate, reduce duplication, and maximize benefit of resources allocated at the regional and cross-regional levels.
 - Build upon the model of IFC (Information Fusion Center) by creating an open space where everyone is included in participation and encourage the participation of more countries. Players suggested leveraging or building upon existing models (ReCAAP, IFC, PRC, and ISPS), specifically in the South China Sea and the South Pacific.
 - Regional leaders and U.S should demonstrate the mutual benefit of MDA by employing tailored sub-regional focused conferences, workshops and seminars.

Sub Region: Indian Ocean

Countries: India, Kenya, Oman, Pakistan, Saudi Arabia, Tanzania

Catalyst to Instability: Piracy

Observations

- Although geographically grouped around the Indian Ocean, cell members identified three sub-regions with unique issues: India and Pakistan – regional maritime security is overshadowed by strategic concerns; Oman and Saudi Arabia - Unable to secure their own maritime borders but satisfied with the status quo and strongly prefer to work through Gulf Cooperation Council (GCC); Kenya and Tanzania – Resource-poor and open to any types of assistance and/or partnership to increase capacity
- Players cited the following themes as reasons that inhibit partnerships within the region: political will, lack of trust, competing national interest, lack of capacity and capability, unequal treatment of multinational partners, language and cultural barriers, and technology incompatibilities.

Insights

- Players suggested that the lack of trust in the region stems from unresolved bi-lateral issues, negative or lack of any historical relationships, external intervention in internal affairs, hidden agendas, perceptual differences, and differing levels of commitment to the issue, lack of transparency, limited engagement opportunities, differing naval competencies, and double standards.
- Players derived that lack of political will is often due to lack of interest, commitment and competing interests, which in turn results in “half measures, mixed messages, and intermittent commitment of resources.”

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- Players postulated that enduring partnerships in the region should be of common interest, equal, and voluntary in nature. While no “one size fits all solution” exists in this region, players were largely influenced by cell members’ failure to perceive a community of interest between their nations. Although geographically grouped around the Indian Ocean, cell members did not view their respective nations as regional partners and seemed less willing to enhance partnerships due to a lack of common interest or shared threat.
 - Players discussed intelligence sharing in the region as being primarily bilateral in nature; multilateral or unilateral sharing appeared somewhat problematic. Moreover, limitations to intelligence sharing stemmed from technology, classification, and fusion and analysis, as well as trust issues.
 - Due to the composition of this cell, it seemed that there were difficulties in identifying a common maritime security issue that unites these disparate nations. Kenya and Tanzania perceived piracy as a regional issue that has severely impacted their economies due to the reluctance of merchant ships to enter their waters. Other countries in the cell viewed piracy as a global issue, much like climate change or illegal fishing.

Player Recommendations

- Players preferred to leverage existing organizations such as the Indian Ocean Naval Symposium, Gulf Cooperation Council, United Nations, and African Union to enhance regional partnerships.
- Players suggested the need to increase bilateral relations among nations and improve sharing between existing organizations (e.g., GCC, UN, AU, etc.) and maritime coalitions and commercial entities.
- Promote maritime partnerships by improving regional relationships through strengthening regional forums, promoting information sharing, and building coalitions to tackle regional issues.
- Players recommended that regional countries develop international protocols and agreements.
- Aligning domestic legislation through ratification of international regulation was noted by the players as a necessary step to improving maritime security cooperation.
- Enhance regional capability and capacity building by increasing the frequency of intraregional exercises with a focus on enhancing interoperability, encouraging

technology sharing within the region, and strengthening regional institutions to enhance training opportunities.

Sub Region: Baltic Sea

Countries: Sweden, Poland, Germany, Netherlands, United Kingdom

Catalyst to Instability: Lack of Understanding/Geopolitical Balance of Power

Observations

- Throughout game play, players asserted that information and intelligence were not adequately shared nationally, regionally, or cross-regionally due to various impediments including over-classification of information, cultural differences and legal challenges.
- Players derived that there was an incomplete understanding of how other countries and organizations both operate and approach maritime issues. This was noted as “one of the major challenges faced in the region”.
- Players indicated significant improvements made in the region to enhance partnerships and Maritime Security Awareness. However, players also identified the lack of a common legal interpretation and policy for conducting maritime security operations in the region.

Insights

- Players collaboratively cited that the region could improve upon information sharing by leveraging existing MDA/MSA systems. The production of new systems and technology investments should be a low priority over non-technological aspects of partnerships. Specifically, players agreed that it was essential to enhance funding in “training, coalition conferences, seminars, and travel.”
- Players conceded that maritime situational awareness was limited by the non-participation of Russia in the international information sharing systems (SUCBAS, MARSUNO). SUCBAS was identified as a promising way forward for further regional integration due to user controls of inputs. While most states in the region regard SUCBAS as a MDA tool, the Swedes, in no uncertain terms, use it to contribute to national maritime defense. Players also noted that understanding the policies of Russia, China and North Korea regarding piracy, smuggling, and MDA was essential in striving towards a commonly understood global maritime picture.
- The proposed global MDA solution was a combination of present regional MDA/MSA networks; moreover, leveraging existing systems is likely to be “easier, cheaper, and would garner greater acceptance among participants.”

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- It was identified by the cell that there were no common regional policy interpretations (including legal aspects) for conducting maritime security operations. Specific aspects noted by the players included: “Liabilities, Jurisdiction, and Prosecution”, standards of evidence, standards of consequence (e.g., no standard for what to do with pirates apprehended at sea) and repercussions of environmental disasters which cross international maritime boundaries.

Player Recommendations

- Developing an information sharing policy for the Baltic region with tangible output for ISS XX (October 2011) was touted as one of the most actionable and short term recommendations made by the players.
- The establishment of an unclassified information sharing system and portal for the Baltic region was noted as an essential “next implementation step” in working towards better information sharing in the region.
- In an effort to better understand the intentions and capabilities of both countries and organizations, players discussed the desire to expand ISS XX invitations to other countries, trade corporations, port authorities & international organizations.
- With respect to specific partnership aspects between the U.S. Navy and regional navies and coast guards, participating countries recommended to continue and enhance confined shallow-water exercises (e.g., BALTOPS & NORTHERN COAST).
- Players derived that the international community should increase their involvement in NATO Center’s of Excellence (COE’s) in support of regional and cross-regional partnership building.
- Collectively, players touted the continuing development of common international legal standards, policies and procedures for information sharing, particularly the interactions between regional MDA systems (e.g., VRMTC, SUCBAS, MSSIS, OASIS).
- Use existing national, regional and cross-regional models to develop international best practices and “courses of instruction” for inter-agency cooperation and information sharing (e.g., NMIC, SUCBAS, VRMTC, and TRMN).

Sub Region: Black Sea

Countries: France, Morocco, Greece, Lebanon, Israel, Italy, Spain, Georgia, Bulgaria, Turkey, Azerbaijan, Saudi Arabia, Ukraine

Catalyst to Instability: Illegal Activities related to Terrorism

Observations

- The cell identified areas of improvement among interagency and international partners particularly in the area of information and intelligence sharing. Players noted that competing interpretations of intelligence classification levels presented significant challenges to sharing unclassified data.
- Players derived that trust factors among interagency organizations, specifically within each of their countries represented during the game, were a common obstacle. Other restriction such as national policies, classification, cultural and technologies were identified as common impediments to sharing unclassified and classified data both nationally and internationally.
- Players agreed that in order to contribute the full spectrum of data to a global MDA network, a common international framework or standard for information sharing is needed. One player noted that “it is difficult to combine information sharing networks built to different standards without a commonly agreed upon set of technology standard(s).”

Insights

- Most players during game play expressed the willingness and ability to share unclassified, AIS-like information with international partners. However, the cell collectively identified the need to establish a common regional strategy or approach to sharing all types of data, particularly more sensitive operational data. It was evident that players’ definition of information and intelligence and the sensitivities associated with each were drastically different, causing difficulties within the cell to focus the issue down to a common root cause.
- Interagency issues were noted by the cell as one of the major impediments to sharing data both internally and externally. Specifically, players identified the need for a “common global maritime picture through identical software that can link the Black Sea to the Mediterranean regions.” Specifically, one player noted, “many countries in the region are willing to share, but lack the requisite capabilities; and many of these countries still need to establish links to the U.S. CNO to request assets and support.”
- Players acknowledged the need to expand Black Sea cooperation to other countries in the region. Specifically, players noted Azerbaijan as a country with which they would like to establish and enhance a maritime partnership. Several players identified the existence of regional centers within their own respective nations and around the world that were presently willing to accept other countries.

Player Recommendations

- Utilize the IMO to develop common information sharing framework, standards and procedures for black sea region. Specifically, players offered the establishment of a regional initiative, with the support of the IMO, aimed at developing common classification standards.
- Establish regional information sharing exercises among nations in either the Black Sea Region or between the Black Sea and Mediterranean regions.
- Players postulated that the GCC should expand information sharing links to VRMTC as well as establish specific links with the respective participating nations involved.
- An increase in training, education and personnel in support of GCC coordination centers was noted as an essential solution to advancing partnership efforts in the region.
- Collectively, players specifically noted that Azerbaijan should establish information sharing links to other countries in the Black Sea within the framework of the Black Sea Economic Forum.
- Utilize existing regional operation and coordination centers and organizations to advance regional MDA initiatives (e.g., VRMTC, GCC, etc).

Sub Region: Central & Western Africa

Countries: Nigeria, Senegal, Ghana, Togo, Benin, Cameroon and Gabon

Catalyst to Instability: Illegal Fisheries

Observations

- The overarching theme identified by each of the sub-regional African cells centered on a ***significant lack of general resources*** (e.g., operational assets, dedicated funding, and economic activity) within each of their respective countries.
- Players derived that at the national, sub-regional and regional levels, “Sea-blindness” as defined by the players, was a considerable impediment to addressing the many demands and stressors encountered in the maritime environment. This sub theme discussed was touted as a major contributing factor and root cause to the general lack of resources.
- Players generally agreed to the major demands and stressors encountered in the maritime environment at the sub-regional and regional levels. However, prioritization of these issues differed among many of the countries in attendance,

mainly due to the game grouping of players within a seminar cell, which was developed primarily from a U.S. perspective.

- Regional communication and coordination between sub-regional organizations (ECCAS and ECOWAS) were highly desired and discussed as essential next steps to establishing situational awareness in the region. Communication and coordination through development of regional protocols, policies and procedures for information sharing and maritime security operations.

Insights

- Players cited “a lack of dedicated funding” at the national, sub-regional and regional levels, in support of the various operational assets needed to effectively detect, deter and defeat the maritime security issues of concern. The specific inadequate platforms and logistics discussed by the players include a Coastal Monitoring System along the Gulf of Guinea, patrol vessels, helicopters, and MDA systems at the national, sub-regional and regional levels, as well as spare parts, maintenance facilities and fuel.
- In general, “Sea blindness” was discussed as a major impediment to enhancing maritime security partnerships. As defined by these players, “Sea blindness” is a lack of political focus and public awareness on maritime security and subsequent investment. There was a consensus among the players that the collective lack of recognition of maritime issues in the region is mainly due to “political leadership’s focus on land-based issues.” One player noted, “Political leadership has no appreciation for the consequences (of) neglecting the maritime domain”.
- While players generally agreed to the variety of maritime issues encountered in the region, there were competing national prioritizations. However, illegal migration to other African sub-regions and Europe was noted as a major security problem due to “the unsafe methods used and criminal elements that were involved in the business.” While the players did not identify their cell as an official sub-region, mainly due to its composition, player cohesiveness and willingness to work together was noted by the majority as a significant milestone in achieving peace and prosperity through the region.
- The need to enhance effective communication between West Africa (ECOWAS) and East Africa (ECCAS) was noted throughout game play as an underlying requirement to enhancing partnerships in the region. Specifically, players leveraged the use of existing sub-regional organizations (e.g., ECCAS, ECOWAS), coupled with the development of a “higher level mechanism” (e.g., an operations center), to harmonize sub regional efforts. These organizations coupled with the African Union were cited by the players as having the power and

authority to enhance MDA and broader maritime partnerships; “but they do not have the will or awareness to take the next steps.”

- In order to effectively form partnerships at the sub-regional and regional levels, players overwhelmingly desired “common procedures (doctrine, communications, ROE), common legal penalties for criminal activity; and needed persistent surveillance capability for basic situational awareness, and sufficient economic incentives for population to deter maritime crime (and creating) an alternative means of survival.”

Player Recommendations

- Players derived that for the development of a Coastal Monitoring System along the Gulf of Guinea, training was needed, along with subsequent policies. International support was highly desired to facilitate the development of this initiative.
- Create an overarching regional operations center over the ECOWAS & ECCAS operations centers and conduct regular exercises between these centers. Develop a grass-roots awareness campaign to educate political leadership on maritime security threats.
- Develop a multilateral governing body or coalition focused on Maritime Security (cross-functional members, funding controls, policy setting, etc).
- Develop a common regional information sharing methodology.
- Invest in regional repair facilities/personnel/equipment, training and purchase operational platforms (to combat maritime pollution).

Sub Region: Central & South America

Countries: Ecuador, Peru, Chile, Argentina, Brazil, Mexico, Panama, Guatemala, Colombia

Catalyst to Instability: Drug Trafficking and Corruption

Observations

- Drug trafficking was identified as the major catalyst to instability or maritime security issue of concern within the Central and South American regional player cells. The lack of a unified regional strategy to detect, deter, disrupt, and prosecute narcotics traffickers in the maritime environment was viewed by all participants as an overarching theme throughout the game.
- Generally, the common impediments identified across these cells included trust issues, classification standardization, technical incompatibilities, government

corruption, and inadequate resources, funds and assets at the national, sub-regional and regional levels.

- Players concluded a common disconnect exists between political and military leadership, specifically within the context of competing national security strategies, defense funding, and prioritization and allocation of defense resources.

Insights

- Players derived that a more holistic approach should be taken in exploring drug trafficking, particularly the “spill-over” or regional implications exacerbated by this phenomenon. Specifically, players drew correlations between drug trafficking and weapons trafficking, money laundering, and government corruption.
- Trust was viewed by the players as a long-term systemic barrier to cooperation both within and outside their respective countries. However, international naval cooperation at the unit and individual member level (e.g., liaisons) was identified as a significant “foot in the door” and way to enhance or initiate partnerships across all levels of government. Long-term investment in cooperative events (e.g., conferences, exercises, games, etc) at the sub-regional and regional levels was deemed as a highly effective and desired way of enhancing trust and partnerships over time.
- Players identified technical compatibility gaps among interagency and international partners related to diverse technical and classification standards and competing maritime operating pictures. Technology integration solutions (feasibility studies, coordination groups, international support) were viewed as primary sources for future interoperability at the national and regional levels.
- Government corruption (e.g., political leadership, law enforcement, etc.) was identified by the players as a root cause for the significant levels of drug trafficking in the region. Moreover, players concluded a strong disparity between political and military desired end state and competing national security strategies. Specifically, there was a theoretical and practical divergence in addressing drug trafficking as a land vs. maritime issue of concern. Most notably, a majority of the players recognized the strong correlation between drug trafficking and corruption, submitting that “it’s much more effective to interdict narco-traffickers at sea, than it is to cut it off at its root cause.” Conversely, “because corruption is influential within higher levels of political leadership, it’s often difficult to obtain the assets, resources and funding needed.”
- Players concluded that while the number of bi-lateral partnerships in the region is viewed as somewhat sufficient, an increased multilateral approach leveraging

existing cooperative models (e.g., JIATF-South, UNASUL, etc.) is needed. Specifically, players noted that JIATF-South serves as an effective and central mechanism for sharing information regionally. However, several players noted improvements are needed in the timeliness of actionable data dissemination and that they desire to adopt a common operating picture rather than using a chat function to identify specific operational positional data.

Player Recommendations

- It was highly welcomed and desired by 90% of the Central/South American participants of the participants that the International Chiefs of Navies within the Central and South American regions should propose the development of a regional information sharing strategy aimed at establishing common data and technical protocols, standards, procedures. Several players noted the use of existing international organizations (e.g., ROCRAM, IMO, and the Inter-American Naval Conference) as a means to advance this initiative. Moreover, several players noted the integration of national counter narcotics strategies and applicable laws into a commonly defined and agreed upon regional strategy would allow for shared responsibility and governance.
- Cell members collectively encouraged CFAC to request section 1206 funds from SOUTHCOM to establish a regional maritime operations center that can serve as a training and maintenance facility and logistical hub in support of counter narcotics operations.
- A regional effort aimed at integrating sub-regional efforts and best practices was highly desired by the players. Players discussed this effort within the context of leveraging existing conferences, exercises and games as a means to effectively coordinate MDA and maritime security efforts.

Appendix J

Administration / Logistics

Background. Lessons learned follow below for the conduct of the Administration and Logistics portion of the game. The team was made up of numerous personnel from various NWC offices, instrumental in ensuring the foreign participants were properly hosted:

NWC Events: handled all coordination for billeting and also liaised with the NEX/Commissary and the base MWR department to ensure foreign officers had full access to all amenities while staying aboard NS Newport.

NWC Travel Office: handled all travel reservations and orders for foreign participants who hailed from countries that were officially funded by the US Navy to attend the game.

NWC War Gaming Department Comptroller: assisted by providing funding advice not only for foreign travel arrangements, but also hosting events (Officers Club, Viking Bus for transportation, etc.).

Lessons learned listed here are broken down into two groups: Internal to NWC and/or the War Gaming Department and external to the same.

Internal Lessons Learned:

1. The timing of the game during the FY changeover created numerous issues both internally and externally. Reserve manning support played a huge role in the success of the logistical support of the game. As it was, orders were slow to be issued due to the changeover and therefore quite a few Reservists cancelled their plans to drill with the NWC for the game due to a lack of timely issued orders. This in turn led to the WGD planners having to scramble in the last few days leading up to the game IOT secure enough drivers to cover the airport/train station requirements without sacrificing safety (for abnormally long driving shifts). Had the game been scheduled two weeks earlier or later, more “solid” funding and orders for Reservists could have been identified. Worst case, the need for supplemental help could have been dealt with much sooner and therefore would not have been an eleventh-hour call for assistance.
2. For an event this big, a full-time “Game Knowledge Management Officer (GKMO)” should be assigned to attend to the registration website. Relative to the GMP website management, normal primary duties for the NWC IT personnel detracted from being able to effectively keep the website up to date and easy to use.
 - a. Additionally, the log-in view for the website needs to be more clear and concise. Finding information should be a one or two step process – a prospective attendee should not have to dig down three to five web pages to find information germane to his/her attendance.

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- b. Game Net accounts were not set up and ready for users at the beginning of the game. If assigned, the GKMO should be able to easily coordinate this in advance.
3. The lead for the reservists' transportation team needs to be an officer at the paygrade of O-4 or at least a very senior and experienced O-3. Originally, an O-4 was identified, but when orders could not be secured in a timely manner this LCDR was unable to commit to supporting the game. There were times when the assigned LTJG was overwhelmed with requests from very senior officers from the participating countries and one of the WGD O-5s had to step in and speak for him. Additionally, this LTJG's maturity and follow-up skills were at times lacking. Though not a guarantee with a more senior officer assigned, a game of this magnitude needs constant focus and attention to detail.
 4. Logistics/Admin was not able to fully support eight early-arrival personnel on Friday (i.e. hosting and shuttles into downtown Newport). While Visitor Handbooks with dining information and "Cab Cards" with taxi phone numbers were handed out to arrivals on Friday night, dedicated van runs did not pick up until Sunday. Those who arrived on Saturday did not require full transportation support until Sunday (most participants chose to retire to their quarters after a full day of travelling). The Logistics team was able to assign a van to make some limited runs during a lull in airport shuttling during the early part of Saturday's schedule IOT secure dining options for some of the attendees that specifically requested it. More specific direction should be provided to early arrivals in future games.
 5. Check-in procedures were complicated by the billeting of personnel at both the Navy Chalet and the CBQ requiring drivers to drop off personnel at two different locations and then bringing the CBQ billeted personnel back across the bridge to their respective buildings. If at all possible, raise the possibility of registering all personnel on Coasters Harbor Island to eliminate the need to shuttle back and forth across the bridge to and from BLDG 1312 (CBQ Front Desk).
 6. One source of information and point of contact for all hosting issues is absolutely necessary. Many times misinformation was passed by other offices outside the NWC. Sponsors and other stakeholders should be fully aware of the capabilities and limitations of the NWC WGD staff in order to prevent duplication of efforts to maximum extent possible.
 7. "End of the Week" hosting feedback forms, which have been used in the past, were erroneously omitted from this game. This would have allowed a more thorough review of lessons learned and enabled a more easily referenced set of notes to look back on.
 8. Food delivery through the 1st deck loading dock (north/rear side) of MLH was easily accomplished throughout the week. Additionally, food was staged in the back passageway of the 2nd deck near the Game Tech offices (vice the patios adjacent to the Café) in order to replenish the serving lines quickly. This minimized the impact of

moving food carts and associated equipment through the halls and distracting the seminar cells during the game day.

External Lessons Learned:

1. The number one outside issue experienced by the staff for this game was the lack of clear situational awareness on who was actually attending. Bottom line up front – the NWC WGD can easily send invitations and thoroughly tracking them.
 - a. Positive confirmation (much like “read receipts” with emails) would have been extremely valuable in helping to focus the attention of the OPNAV N52 desk officers and the various Embassy Naval Attaches on those countries most eagerly desired to participate in the game. These factors also served to take the teams’ focus off the final planning of details that normally would have been addressed during the final days leading up to the game. Proper placement of countries into appropriate game cells was not accomplished until two days prior to the game due to many “pending” participants. Other issues included final headcounts in order to release overbooked rooms back to the Navy Chalet/CBQ and even the internal issue concerning early arrivals hosting mentioned above.
 - b. Invitations should be tracked and attacked in a 3-prong approach: First, engagement of the OPNAV N52 Desk Officers when the invitations are first delivered; Second, contact with specific country U.S. naval attaches; and Third, as a last measure, the foreign country attaches assigned to embassies in Washington, D.C. Reliance upon the OPNAV N52 desk officers (combined with weak follow-up procedures) proved to be an almost single point of catastrophic failure in obtaining attendance to this game.
 - c. In order to achieve critical game requirement of obtaining the most knowledgeable, expert players, , invitations should be sent to be received a minimum of 120 days prior to game start. This would help minimize the effects of summer vacation and other various “out of office” responses and therefore give sufficient time to track desired attendance (provided positive feedback of invitation requests is initiated and pursued from the time the invites are sent out). For major international engagement efforts such as this game, an even earlier game announcement and invitation are beneficial. Other countries operate on different fiscal and operational cycles than the United States; identifying an opportunity for participation a year or more in advance can enable a partner nation to optimally plan for and facilitate event attendance: the right person, funded by his government in the most cost-effective manner.
2. The specific “funded” countries needed to be more apparent to the NWC team. The list of "funded countries" provided at the Final Planning Conference proved to be largely inaccurate and not subsequently adequately or clearly updated, which ultimately led to

several instances of unnecessary funding decisions due to inadequate communications. This presented confusion (about which participants were and were not partially or fully funded) throughout the ticketing and the subsequent travel periods for participants, and particularly for the CBQ/Newport Chalet bills. An accurate list was provided toward the end of the game execution week that was extremely helpful when participants began to check out of CBQ/Newport Chalet accommodations. It is understood that as OPNAV N2/N6—N3/N5 (N52) determined that all the funds allotted towards certain country attendance were not going to be utilized, these funds were offered and thus they went to countries that either had initially declined or had not made a solid decision to attend, in an effort to increase attendance at the game. This process of reallocation of funding underscores the necessity of a very early invitation process with aggressive follow-up.

3. In addition to (1) and (2) above, recommend that future games requesting a large number of international participants obtain from OPNAV N2/N6—N3/N5 (N52), or other sponsor as appropriate, a desired attendance list by country, organization or individual as appropriate. This list, amplified by the reasons for the priorities and the decision process for additional invitations well enable the Naval War College, OPNAV Country Officers, Combatant Commander or their Naval Component Commander Staffs, U.S. Embassy Naval Attaches, and other invitation conduit organizations, such as U.S. Government Departments, appraised on the status and process of inviting participants.

Appendix K
Glossary

<u>Term</u>	Definition
AIS	Automatic Identification System
Analysis	The abstract separation of a whole into its constituent parts in order to study the parts and their relations
Analytic Framing	A detailed sketch or outline of some social phenomenon
AU	African Union
CAMTES	Computer Assisted Maritime Threat Evaluation System
Catalyst to Instability	Anything that initiates, accelerates, or causes an event or series of events to adversely impact the safety, security, economy, or environment of a nation, region, or super-region.
CCDR	Combatant Commander
Content Analysis	A method whereby a researcher seeks objectively to describe the content of communication messages that people have previously produced
Cross-regional	Relating to issues that go beyond a specific geographic area
CS-21	A Cooperative Strategy for 21 st Century Seapower
C-SIGMA	Collaboration in Space for International Global Maritime Awareness
Data Visualization	By comparing and contrasting the players' activities provides the ability to identify gaps, seams, and overlaps in U.S. Navy actions supporting other nations and organizations. Data Visualization: the process of representing abstract business or scientific data as images that can aid in understanding the meaning of the data. – or -- Data visualization is a general term used to describe any technology that lets corporate executives and other end users “see” data in order to help them better understand the information and put it in (a business) context.
DCAP	Data Collection and Analysis Plan
DCAT	Data Collection and Analysis Team
Deductive	That which is deduced or drawn from premises by a process of reasoning; an inference; a conclusion
Dependent Variable	A variable in a logical or mathematical expression whose value depends on the independent variable
ECCAS	Economic Union of Central African States
ECOWAS	Economic Community of Western African States

Ethnographic	Data collection that is done through participant observation, interviews, questionnaires, etc.
EU	European Union
Game Sponsor	Organization providing the objective and funding for the game
GCC	Gulf Cooperation Council
GMPG	Global Maritime Partnerships Game
Grounded Theory	Directs researchers to look for patterns in data so that they can make general statements about the phenomena they examined
Idiosyncratic	An individualizing quality or characteristic of a person or group
IFC	Information Fusion Center
IMO	International Maritime Organization
Impediment	An object, thing, action or situation that causes an obstruction, forms a barrier, creates a difficulty, a nuisance or a disorder that prevents achievement of concrete goals
Independent Variable	Distinguish between two types of quantities being considered, separating them into those available at the start of a process and those being created by it, where the latter (dependent variables) are dependent on the former (independent variables) (in research) a variable that is manipulated (controlled) by the researcher and evaluated by its measurable effect on the dependent variable or variables.
Inductive	A kind of reasoning that draws generalized conclusions from a finite collection of specific observations
Interagency	Of or pertaining collectively to the departments and agencies of the U.S. Government or the processes and interaction between those departments and agencies. The coordination that occurs between elements of Department of Defense, and engaged US Government agencies, nongovernmental organizations, and regional and international organizations for the purpose of accomplishing an objective. See also international organization; nongovernmental organizations
IONS	Indian Ocean Naval Symposium
ISPS	International Ship and Port Facility Security
ISR	Intelligence, Surveillance and Reconnaissance
ISS	International Seapower Symposium
Maritime Domain	All areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or other navigable waterway, including all maritime-related activities, infrastructure, people, cargo, and vessels and other conveyances

Maritime Domain Awareness	The effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of a nation
MarView	Maritime View
MSSIS	Maritime Safety and Security Information System
NATO	North Atlantic Treaty Organization
NETSAFA	Naval Education and Training Security Assistance Field Activity
NMIC	National Maritime Intelligence Center
Phenomenological	A body of knowledge which relates empirical observations of phenomena to each other; based upon a philosophical approach and method of qualitative research in which the essence of an experience is sought.
PRC	A Marine, Super Yacht and Defense consultancy offering maritime subject matter expertise to the general marine world (This was used?)
Qualitative	Descriptions or distinctions based on some quality or characteristic rather than on some quantity or measured value
ReCAAP	Regional Cooperation Agreement on Combating Piracy and Armed Robbery
Regional	Relating to a specific geographic area
REMIX	Regional Maritime Information Exchange
Sea-blindness	1. No infrastructure available to establish Lack of MDA 2. Lack of appreciation of the importance of the sea; A lack of political and public focus and understanding of important maritime issues, resulting in the maritime domain receiving low priority without appreciation for the consequences of neglect
SIEMS	Represents vessels at various ports and harbors in the Philippine where it loads and discharges cargo and other goods
SISTRAM	Maritime Information Traffic System
SUCBAS	Sea Surveillance Cooperation Baltic Sea
Title X	A series of major service-sponsored war games that address future capabilities in the context of Title X responsibilities to organize, train, and equip its forces to carry out its roles and functions as a component of national military capability

Triangulation	Methodology that takes advantage of multiple techniques to derive the same or very similar conclusions using different datasets or methods
VRMTC-A	Virtual Regional Maritime Traffic Center – Americas
WMD	Weapons of Mass Destruction