

Smart Security Concept in the East Mediterranean: Anti-Asymmetrical Area Denial (A3D)

Serkan Tezgel, Osman Gül, İskender Cahit Şafak

Abstract—This paper proposes the application of the Smart Security Concept in the East Mediterranean. Smart Security aims to secure critical infrastructure, such as hydrocarbon platforms, against asymmetrical threats. The concept is based on Anti Asymmetrical Area Denial (A3D) which necessitates limiting freedom of action of maritime terrorists and piracy by founding safe and secure maritime areas through sea lines of communication using short range capabilities.

Keywords—Partnership, A3D, Maritime Security, Centers

I. INTRODUCTION

THE two qualities of the sea, as a medium of transportation and as a resource, necessitate maritime security for economic stability and good order at sea. The borderless nature of the sea makes it one of the best platforms to contribute to regional peace and international order. For this reason, the establishment of maritime security in East Mediterranean will enhance the security-peace-democracy triangle in the region. [1]

Although the most recent example relating to how energy security and security concept affect the states takes place in the Asia Pacific region, developments in the delimitation of Exclusive Economic Zones (EEZs) and the potential hydrocarbon resources in the East Mediterranean are evaluated to be the convergence point of regional energy security and standard security understanding in the near future. The East Mediterranean connecting Gibraltar, Suez Canal and Babul Mendeb plays a prominent part in the freedom of navigation. However, this sea is burdened with the dissent of East Mediterranean states on maritime jurisdiction areas and macroeconomic uncertainties. The dissent originates from the ignorance of equity principle in determining EEZs; therefore it results in distinct maritime boundaries according to states.

Additionally, the increasing number of terrorist groups in the aftermath of Arab Spring and Syria Crisis reached the point of threat to the region. These assessments render East Mediterranean, indispensable for sea lines of communication and hydrocarbon resources, a crucial narrow sea with respect to maritime security.

According to Geoffrey Till, the importance of good order at sea and maritime security is based on four attributes of sea,

namely, as a resource, and as a means of transportation, information and dominion. [2]

Two attributes of the sea, resource and transportation, will be more vital than ever for the East Mediterranean if potential hydrocarbon resources are found and processed. Assuming these resources will become a part of multinational energy trade in Mediterranean; maritime security is likely to be one of the key factors to the economic stability in this narrow sea. [3] The underlying reason for this lies in freedom of navigation and accessibility of seas which is quite different from use of land confined to strict borders. Thus, establishing regional maritime security in the East Mediterranean can contribute to regional and global peace.

In addition, regional powers are better able to establish a fair and just cooperation. These attempts have a chance to result in collaborative use of energy and power, namely, the realization of the first stage of security-peace-democracy triangle. [4] For this reason, living in peace and democracy necessitates to build and develop multinational cooperation mentality in the East Mediterranean especially in the context of maritime security and economy. In this respect, this region has an opportunity to develop Smart Security Concept that is peculiar to narrow seas [5] and open to volunteer littoral states of the East Mediterranean.

Principally, Smart Security aims to secure critical infrastructure such as hydrocarbon platforms and maritime lines of communication primarily against asymmetrical threats for the sake of economic stability. In addition to protection against asymmetrical threats, the projected security concept is to ensure situational awareness and situational superiority against asymmetrical threats. To achieve these two goals in the context of Smart Security Concept, A3D should be achieved.

In this respect, implementation of A3D is based on establishing secure maritime lines of communication and maritime jurisdiction areas against asymmetrical attacks carried by maritime piracy and maritime terrorism. [6] The capabilities of A3D can be realized in the short/ medium term by mutual cooperation of regional states.

Multinational excellence centers, [7] which will improve mutual cooperation, interoperability and plan/coordinate workshops, trainings and exercises, are essential to the Smart Security concept.

Smart Security is a regional maritime cooperation concept for the narrow seas, both operational and doctrinal. Cooperation and interoperability are essential attributes of this regional security concept. Therefore, multinational excellence centers such as Multinational Maritime Security Center of

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Excellence-Aksaz in Turkey, which will contribute to doctrine integrity, mutual cooperation and capability building. This is the backbone of this concept. In order to provide an enduring approach for operating in the challenging environment of narrow seas and for countering asymmetrical threats, security should be established by Maritime Security Center, Critical Asset Defense Center and Coastal Defense Centers.

II. MULTINATIONAL AND REGIONAL MARITIME COOPERATION

According to the theory of regional peace and war, introduced by Benjamin Miller, regional states/regional developments result in hot wars or warm peace while global developments/external powers give rise to cold war or cold peace. [8] This theory claims that regional states' relations are built on balance of motivations/interests, however, the contribution or intervention of external powers are related with balance of capabilities.

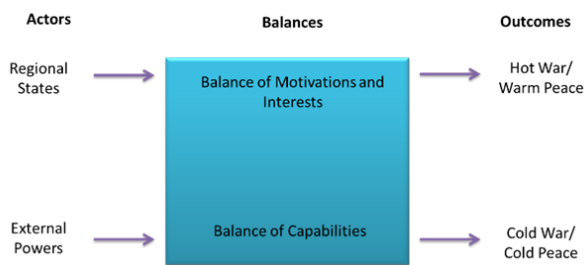


Fig. 1 Actors, Balances and Outcomes of Regional Peace and War

In addition, another premise of this theory indicates that in the absence of the nation-state equilibrium, regions are more prone to conflicts and wars. [9] In the scope of these two points, East Mediterranean can be considered a narrow sea, in which high state-to-nation imbalance exists and regional/global interests intersect. Regarding Miller's theory, another premise can be added to prevent hot conflicts and establish international order and peace in the context of maritime transportation and maritime trade safety. This premise is multinational and regional maritime cooperation. Based on this understanding, multinational cooperation should aim to focus on regional common interests instead of states' interests and carry out joint projects to improve capabilities. Founding the fundamentals of smart security, this approach will contribute to the establishment of peace and to the expansion of democracy which may render East Mediterranean gradually a symbol of stability.

In Baltic Sea, eight countries have been cooperating in maritime safety, maritime environment, maritime security and maritime law enforcement for about 9 years. In Malacca Strait, patrols have been conducted under three tiers: Sea Patrol, Eyes in the Sky (Air Patrols), and Intelligence Exchange since 2006 by the four littoral states - Indonesia, Malaysia, Singapore and Thailand since 2008. But, there is no multinational cooperation to handle maritime security in East Mediterranean.

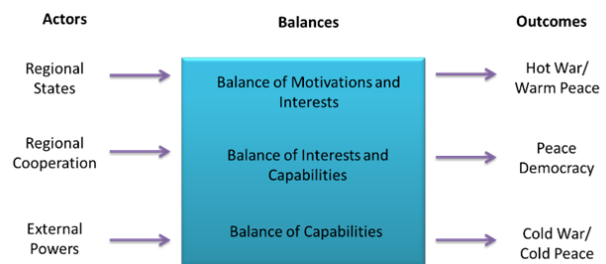


Fig. 2 Expected Contribution of Multinational Regional Cooperation

III. SECURITY CONCEPTS

A. Anti-Access/Area Denial (A2/AD) Concept in High Seas, Anti Asymmetrical Area Denial (A3D) Concept in Narrow Seas

Since beginning of the 20th century, naval warfare has experienced three periods, the Classic, Modern and Postmodern. Postmodern period, experienced currently, is following a course on development of new concepts to protect states' interests and on regional/global cooperation to manage distinct capabilities at expeditionary operations. To meet the demands of either joined or combined operations in this environment, navies and maritime forces need capable and adaptive partners both in high seas and in narrow seas.

Capabilities of postmodern period are currently developed in Asia Pacific region. From this perspective, as long as the competition between China (developing the maritime strategy) and the advocating country of freedom of seas, United States (developing containment strategy to be able to conduct any operation when needed) can be controlled, it is evaluated that the efforts of both countries in improving naval capabilities and defense / containment concepts of postmodern period will lead to new developments. In the short term, the rival resulted with the concept of A2/AD [10], which is claimed to be developed by China, named and defined by U.S. authorities. Although this concept has been developed for defense purposes, it indicates long range attack capabilities.

Developed as a result of two states' struggle over the high seas, A2/AD concept is not considered applicable for narrow seas similar to East Mediterranean, in which the littoral states' boundaries were close together and maritime jurisdiction areas are not defined clearly.

In this sense, the presence of asymmetrical threats in the Eastern Mediterranean dictates the development of Smart Security Concept, which can simultaneously provide energy security and defend mainland/ maritime jurisdiction areas. To achieve this successfully, A3D concept is to provide solutions against asymmetrical threats.

A2/AD and A3D/A2 concept also differs in threat priority due to distinct type of seas and geography. As a result of threat priority, A2/AD uses long range capabilities to prevent an opposing force from entering an operational area. However, taking into account the geopolitical position of the East Mediterranean, top priority should be to limit the freedom of action of asymmetrical threats in the context of Smart Security Concept (A3D). In summary, A3D maintains maritime

security against asymmetric threats.

TABLE I
EVALUATION OF NAVAL WARFARE

1900	1940	1950	1960	1980	2000-	
					High Seas	Narrow Seas
Capabilities in Platforms and Weapons			Situational Awareness Modern Weapons		Development of Concepts and Capabilities Smart Power Smart Defense A2/AD	Regional Smart Security Concepts A3D
Dreadnought Battleships, Submarines, Aircrafts, Aircraft Carriers	Submarines Aircraft Carriers Nuclear Weapons Cruise Missiles Ballistic Missiles	Modern Guided Missiles Nuclear Submarines Aircraft Carriers (CVN)	Surveillance, Reconnaissance Systems Identification Systems	Precision Guidance	-Electronic Warfare -Cyber War -Long Range Precision Guidance -Modern Missile Defense Systems -Unmanned Vehicles -Network Centric Warfare -Space Warfare	-Unmanned Air Systems -Near Space Air Ships -Surface, Air, Coastal Defense Systems -Precision Guided Missiles -Ballistic Missile Defense Systems -Functional Platforms -Offshore Patrol Boats -Coast Guard Ships -Excellence Centers -Maritime Security Centers
Classic Period			Modern Period		Postmodern Period	

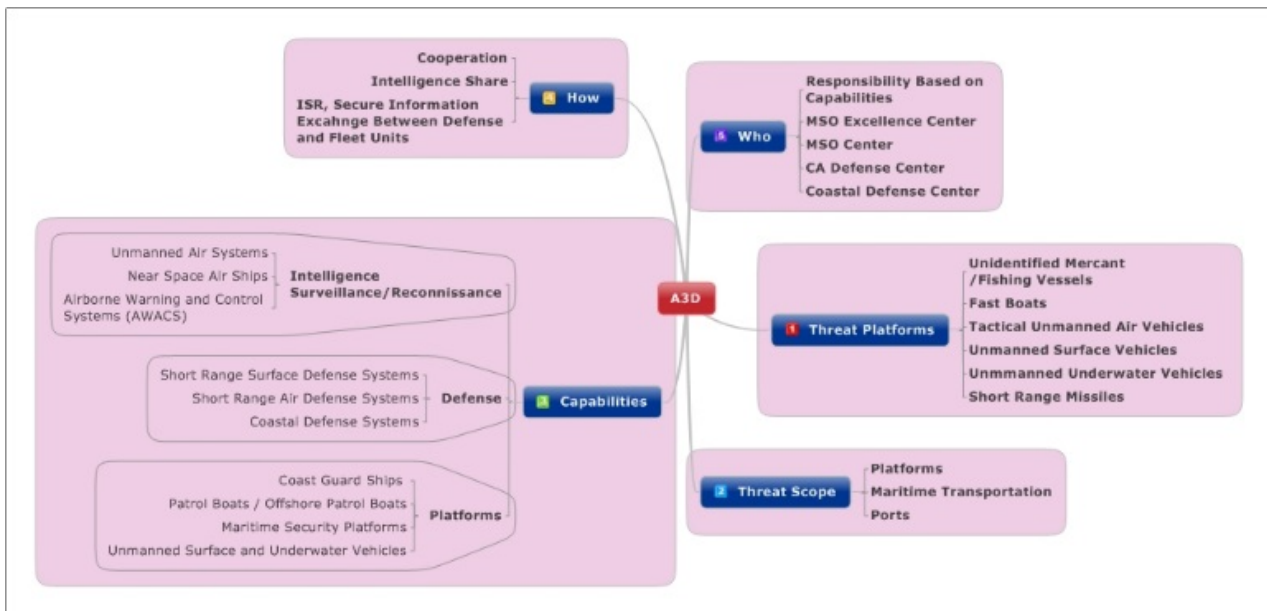


Fig. 3 A3D = Maritime Security Operation + Maritime Situational Awareness + Maritime Capability Building

Regarding the ultimate goal of both concepts (A2/AD and A3D), while A2/AD Concept may result in economic instability; A3D Smart Security Concept, foreseen to maintain freedom of seas and control of maritime lines of communications as the desired end state, offers a multinational solution for littoral states of East Mediterranean.

B. A3D Smart Security Concept

Anti Asymmetrical Area Denial (A3D), utilizes Network Centric Command and Control coordinate short range surface and air defense systems, coast guard ships, offshore patrol boats, surface ships and submarines to safe sea lines of communication and maritime areas.

A3D aims to provide security to maritime transportation, commercial ports and hydrocarbon platforms considered critical infrastructure against unidentified commercial/fishing

vessels, fast boats, tactical unmanned air, surface and underwater vessels and short ranged guided missiles in the context of asymmetrical threats.

To achieve A3D in the context of this goal and network centric management, the required capabilities can be examined under intelligence, surveillance and reconnaissance (ISR), defense and platforms headings.

Smart Security is both an operational and a doctrinal concept. In this regard, maritime situational awareness will be established by Critical Asset Defense Center and Coastal Defense Centers. In executing maritime security operation, maritime security center will be the coordinator and indicate fusion center for information exchange. And the multinational excellence center will contribute to doctrine integrity, mutual cooperation and capability building.

The effective execution of ISR necessitates the deployment of unmanned air systems, near space airships and airborne early warning aircraft. The other step is to support these critical infrastructures with short range anti-surface, air and coastal defense systems. A good example for this is the Underwater and Surface Surveillance and Detection System, namely Yunus (Dolphin), which protects the Aksaz Naval Base. Furthermore, critical asset defense centers to protect oil & gas infrastructures and vessels and maritime security center to protect shipping lanes against maritime terrorism and piracy is essential for close defense of energy security. In this context, deployment of tactical surface and air unmanned vehicles on such centers rather than tasking manned platforms far from critical infrastructures will benefit in terms of cost-effectiveness. The next phase is to support these critical infrastructures with short range anti-surface, air and coastal defense systems. A good example for this is the Underwater and Surface Surveillance and Detection System, namely Yunus (Dolphin), which protects the Aksaz Naval Base.

Aside from maintaining maritime security by ISR systems and unmanned surface/air/underwater vessels, it is vital that volunteer littoral states execute multinational maritime patrols in maritime jurisdiction areas with coast guard ships and offshore patrol vessels against maritime terrorism and piracy. A similar application of joint patrol is carried out against piracy with the participation of Malaysia, Singapore and Indonesia navies in Southeast Asia since 2004. [11]

Along with Coast Guard ships and offshore patrol vessels, purpose-built ships and submarines, designed specifically for maritime security operations, can provide a cost effective solution for the short term. Another advantage of using Coast Guard capabilities concerns the ability to leverage legal authorities that those forces have. Likewise, recently designed SMX-26 and Datum-X1 submarines can be developed in order to be used in maritime security operations. It is significant that these future maritime security platforms have capability to exchange information to unmanned platforms, to deploy tactical air/surface/underwater vehicles and to enable short range defense of surface, air and underwater environment which will strengthen the effect of maritime security operations. Building and developing such new platforms unique to East Mediterranean for such reasons may serve as an opportunity to develop defense industry and reinforce cooperation which may result with ship building and design to support A3D with the partnership of East Mediterranean littoral states.

Fig. 3 indicated above depicts the roadmap of A3D in the short term, namely helps to achieve the formula of maritime security laid down by Multinational Maritime Security Center of Excellence (Maritime Security (MARSEC) = Maritime Situational Awareness (MSA) + Maritime Security Operation (MSO) + Maritime Capability Building (MCB)). [12]

As described in Fig. 3, A3D aims to contribute to information sharing in the context of intelligence with the aid of ISR systems, maritime security operation with the capabilities indicated under defense and platform subheadings, and maritime capability building of East Mediterranean littoral

states by answering Who will be responsible and How maritime security will be implemented on a broader scope.

In sum, A3D Smart Security Concept is an initiative meant to be built on maritime security operation/defense warfare, maritime situational awareness and capability building capabilities of East Mediterranean littoral states. Such a smart security concept can be realized in cooperation and collaboration of littoral states and under the leadership of excellence centers. For this reason, it is evaluated that the essential steps to bring this concept into practice can be handled with the coordination of Multinational Maritime Security Center of Excellence (MARSEC COE) founded in Aksaz in 2012. In the implementation of this concept the most crucial role of MARSEC COE is to provide mutual cooperation and interoperability. Therefore, the coordination and critical capability building activities of A3D will be managed in a cost-effective manner.

IV. COUNTER ARGUMENT

One may argue that current delimitation problems can be solved through bilateral EEZ treaties. However, the activities in the disputed maritime jurisdiction areas after the recent suspension of ongoing negotiations under the auspices of the United Nations between Turkish Republic of Northern Cyprus and Southern Greek Cypriot Administration have raised concerns about the safety of energy. In other words, every step toward energy independence in the region poses a risk to energy security. Meanwhile, with the discovery of new hydrocarbon resources, an obstacle is likely to emerge in the context of economy to implement the Smart Security Concept. For instance, detection of new potential resources in other parts of the East Mediterranean can result in an increased barrier to regional cooperation if nations tend to compete economically with each other. Thus, the conversion of the current instability of the region to a permanent peace may be impossible.

Considering the current situation, it is seen that a permanent solution in the region can be achieved through cooperation and mutual understanding the Smart Security Concept offers. The opportunity for littoral states of the East Mediterranean to leverage cooperation is more preferable to relying on military competition. In addition, the potential terrorism taking advantage of the region's instability can threaten the energy security of the states using East Mediterranean.

Finally, the defense budget of littoral states must be considered. Can they allocate enough funds to carry on the implementation of the Smart Concept? The outlook is doubtful. But given the importance of maritime security in the East Mediterranean, with almost 20-25 percent of maritime trade passing through it as well as the emergence of nations developing hydrocarbon platforms in the region, the Smart Security Concept provides a potential return on investment.

V. CONCLUSION

Problems in determining the maritime jurisdiction areas in the East Mediterranean have not been solved because security

parameters aren't correctly perceived and therefore do not conform to currently experienced paradigm shift. Over time, disputed areas in East Mediterranean have become thoroughly complex and uncertain with the effects of recent changes in the countries of the region and the observed sensitivity about nation-state entity. In this respect, regional/non-regional actors have preferred deterrent and coercive measures in naval diplomacy rather than cooperative steps, in other words states/others' interests have taken over common interests. This situation has complicated the establishment of peace in the East Mediterranean. However, bringing littoral states together on a common benefit with a contemporary security understanding, based on international cooperation, is a perceivable solution.

For this reason, in the near future, systems/mechanisms which form security in the maritime environment on the basis of cooperation can play a key role in East Mediterranean. Thus, an atmosphere of peace is likely to contribute positively to cooperation in security by strengthening the nation-state relations and democracy. In the end, instilling smart security understanding in the region will set an example and affect positively other discussed regions.

Considering new developments are bound to happen about the delimitation of EEZs and the sharing of hydrocarbon resources, a proactive solution is desired for the economic stability of the region. This proactive solution is the multinational A3D Smart Security Concept which can provide freedom of the seas and control of sea lines of communication to the region.

Smart Security Concept is contingent on information sharing, operational execution and capabilities development. ISR and multinational excellence centers will take part in information sharing. For executing any operation in narrow seas predicted naval force structure and for capability building multinational excellence centers, maritime security center and the participating littoral states' capabilities will serve.

SMASEC Concept, regarding A3D, aims to provide maritime security in East Mediterranean in the short term by limiting the freedom of action of asymmetrical threats with a narrow sea naval force structure which indicates short range surface and air defense systems, coast guard ships, offshore patrol boats and also surface ships and submarines designed for maritime security with network centric command and control.

In SMASEC, Multinational Maritime Security Center of Excellence-Aksaz is the multinational construct which is far beyond a military forum that only includes tactical and operational commanders. Instead, MARSEC COE is an institution which will facilitate the coordination of international maritime security organizations and institutions whether civil or military not only for East Mediterranean also for other regions of the world, such as Somalia and Asia Pacific. Moreover, it is a candidate to be an institute which will focus on maritime security, defense issues, training and operational planning of such actions. For now, MARSEC COE, a voluntary multinational construct, has the potential to convene and improve capabilities of East Mediterranean

littoral states regarding Smart Security A3D Concept. In this respect, MARSEC COE will ensure the sustainability of SMASEC by providing mutual cooperation and interoperability and by managing the coordination of actions and the acquisition of critical capabilities in a cost-effective manner, thereby will contribute to reach the desired end state, global maritime cooperation especially for narrow seas.

Abbreviations and Acronyms

A3D:	Anti Asymmetrical Area Denial
EEZ:	Exclusive Economic Zone
A2/AD:	Anti-Access/Area Denial
ISR:	Intelligence, Surveillance and Reconnaissance
MARSEC:	Maritime Security
MSA:	Maritime Situational Awareness
MSO:	Maritime Security Operation
MCB:	Maritime Capability Building
MARSEC COE:	Multinational Maritime Security Center of Excellence
SMASEC:	Smart Security

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