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## **THE PRESENT CHANGES IN THE SUBJECT OF MARITIME SURVEILLANCE AND MARITIME INFORMATION MANAGEMENT IN THE EUROPEAN UNION**

### **ABSTRACT**

In this paper, an attempt has been made to present and discuss the changes in maritime surveillance and management of maritime information in the European Union. These changes are just now under way. The main reasons of these changes constitute mainly the economic and political factors. The main objectives of these changes is ensuring for the European Union the very high position in the world's economic and political competition in the today's world, as well as ensuring the sustainable development of the whole maritime economy of the European Union.

### **INTRODUCTION**

The European Union does the best to become one of the some economic, social and political power of the today's world. The European Union fulfils all the requirements to become such power as well as the maintain this position also in the foreseeable future. The EU is also in wider and wider degree the maritime power, in order to keep and preserve the position as the one of the world economic and political power, besides the USA, China, India, etc. EU must ensure the conditions of the sustainable development of the EU's economy. Here, must be stressed that the EU undertakes such challenge.

The European Union (European Commission) has prepared the proposals on the Integrated Maritime Policy for the European Union and presented these proposals in the end of 2007. In the nearest future (2008–2009) The European Union will prepare also the Action Plan of realization of the Integrated Maritime Policy of the European Union [2, 4].

The proclaimed Integrated Maritime Policy provides the realization of 10 projects. The most important of them are the following:

1. An European Maritime Transport Space without barriers;
2. An European Strategy for Maritime Research;
3. National Integrated Maritime Policy to be development by the Member States;
4. A strategy to mitigate the effect of climate changes on coastal regions;
5. Reduction of CO<sub>2</sub> emission and pollution by ships and others.

The EU assumes that the necessary conditions for achieving success of the Integrated Maritime Policy for the EU is the Integrated Approach to Maritime Governance. However, the integrated governance demands the Integrated Policy-making Tools that, cut across sea-related sectoral policies and support joined up policy making.

The EU assumes that three of 10 provided projects of Integrated Maritime Policy for EU are decisive for the success of all 10 projects. They can be considered as the Policy-making tools. These are the following:

- maritime surveillance;
- maritime spatial planning and integrated coastal zone management;
- comprehensive and accessible source of data and information.

Below, all the three decisive policy-making tools of the Integrated Maritime Policy for the EU will be presented and discussed.

## **AN EUROPEAN NETWORK FOR MARITIME SURVEILLANCE**

Maritime surveillance is monitoring on, over and under sea surface including the environment's behavior. Maritime surveillance is of the highest importance in ensuring the safe use of sea and in ensuring Europe's maritime borders. The improvement and optimization of maritime surveillance activities and interoperability at the European level are important for Europe to meet the challenges and threats relating to the safety of navigation, marine pollution, law enforcement and overall security.

European Commission states that the surveillance activities are carried out now by the Member States but most of these activities and threats that they address are transnational in nature within most MS. However, surveillance activities ensuring fisheries, the environment policing of the sea or immigration fall under the responsibilities of several different enforcement agencies operating independently from each other. This often results in sub-optimal use of source resources [4, 5].

Therefore, the European Commission advocates the need for higher degree of coordination on maritime surveillance through deeper cooperation within and among the MS' coastguards and appropriate agencies.

The gradual achievement of the Integrated network of vessel tracking and e-navigation systems for European coastal waters and high sea areas, including satellite monitoring and Long Range Identification and Tracking (LRIT) system would also provide an invaluable tool to public agencies. In order to achieve the above objectives the European Commission will:

- promote improved cooperation between MS's coastguards and appropriate agencies;
- take steps toward a more interoperable surveillance system to bring together existing monitoring and tracking systems used for maritime safety and security, protection of maritime environment, fisheries control, control of external borders and other law enforcement activities.

The general outline of the European Network for Maritime Surveillance has been, with particulars, presented in [2, 3]. Below, there are given two Figures that illustrate the above mentioned European Network for Maritime Surveillance.

In figure 1, there is given the general outline of the main components of the Global Monitoring for Environment and Security (GMES) constituting the European Network for Maritime Surveillance (ENMS).

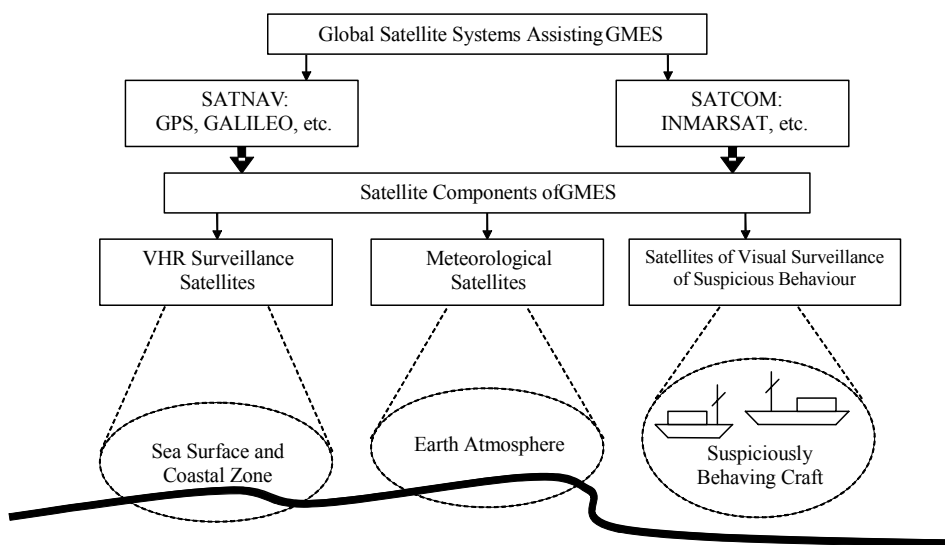


Fig. 1. The Main Components of the Global Monitoring for Environment and Security (GMES) segment

In figure 2, there is shown the main component of the European Network for Maritime Surveillance, i.e. The Global Monitoring for Environment and Security (GMES) segment.

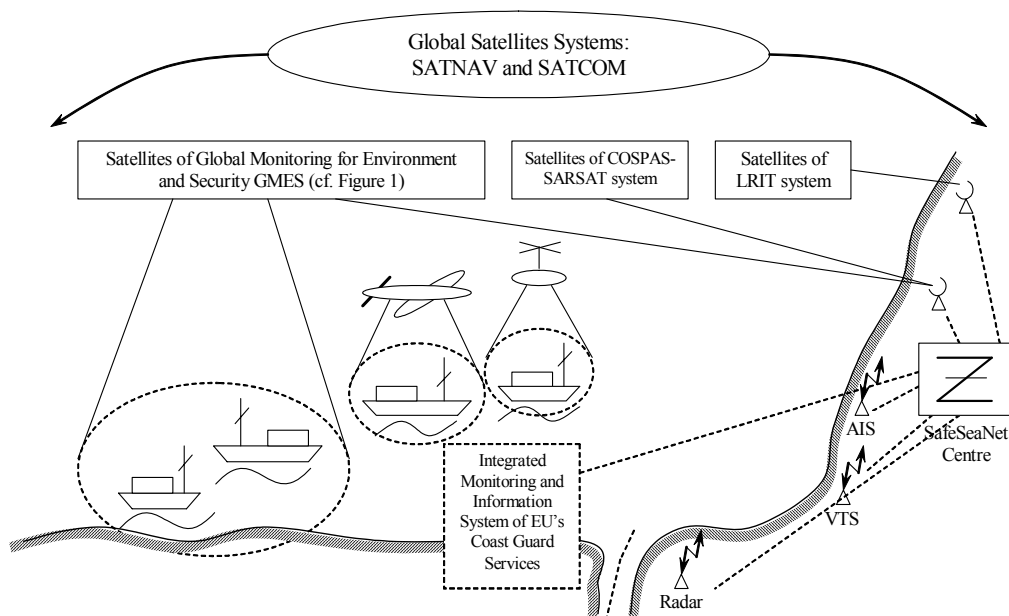


Fig. 2. The Main Components of the European Network for Marine Surveillance (ENMS)

## MARITIME SPATIAL PLANNING AND INTEGRATED COASTAL ZONE MANAGEMENT

The second tool for Integrated policy-making of the EU constitutes the Maritime Spatial Planning and Integrated Coastal Zone Management (ICZM). Spatial planning refers to the methods used by the public sector to influence the distribution of people activities in spaces of various scales [9].

Existing planning framework have a largely terrestrial focus and often do not address how coastal development may affect the sea and vice-versa. Therefore, the EU must address the challenges that emerge on sea, ranging from the maritime transport, fishing, aquaculture, leisure activities, off-shore energy production, and other forms of sea bed exploitation.

Maritime spatial planning is therefore a fundamental tool for the sustainable development of maritime areas and coastal regions, and for the restoration of European seas to environmental health. Especially, the following issues should be considered in maritime spatial plans:

- environmental protection;
- protection of sustainable management of natural resources;
- industrial issues, e.g. wind energy plants;
- main shipping routes;
- cables and pipelines;
- fishing;
- tourism, etc.

Integrated Coastal Zone Management (ICZM) is the process for the management of the coast using integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries in an attempt to achieve sustainability [10].

The term 'integrated' in expression 'Integrated Coastal Zone Management (ICZM)' refers to the integration of the objectives and also to the integration of the many instruments needed to meet these objectives. It means the integration of all relevant policy areas, sectors, and levels of administrations. It means also integration of terrestrial and marine components of the target territory in both time and space [10].

It should be stressed that already in 2002 the Recommendations concerning the implementation of Integrated Coastal Zone Management (ICZM) were passed by the European Union [10].

Following the EU Recommendations, member States have begun to use ICZM to regulate the spatial development of economic activities and to set up spatial planning systems for Europe's coastal waters.

It should be stressed that the European Commission will develop a road map in 2008 to facilitate the development of maritime spatial planning by the Member States of the European Union.

## **EUROPEAN MARITIME OBSERVATION AND DATA NETWORK**

Provided by the Integrated Maritime Policy of the European Union establishing and development of the European Maritime Observation and Data Network constitutes the third policy-making tool of that new proclaimed Integrated Maritime Policy for the European Union.

Availability and easy access to a wide range of natural and human activities data on the oceans is the basis for strategic decision making on maritime policy. Given the vast quantity of data collected and stored all over the Europe for a wide variety of purposes, the establishment of an appropriate marine data and information infrastructure is of the utmost importance.

This data should be compiled in a comprehensive and compatible system, and made accessible as a tool for better governance expansion of value-added services and sustainable maritime developments. This is considerable undertaking with many dimensions, and will need to be developed according to clear and coherent plan over a period of years.

Data on oceans and seas are available from many sources but assembling them for particular applications take considerable effort and there is no overall policy for keeping them for posterity. The objective here is to integrate existing but fragmented initiatives in order to facilitate access to primary data for public authorities, maritime services, related industries and researchers.

It should be stressed that the European Maritime Observation and Data Network is considered to constitute the component part of the Global Monitoring for Environmental and Security (GMES) system. This system is now developed by the European Space Agency (ESA) and the European Union's institutions [5, 6, 7, 8]. The European Maritime Observation and Data Network will also constitute the component system of the Global Earth Monitoring System of Systems (GEMSS). This system is being developed by the Groups on Earth Observation (GEO). This Group is being managed by the European Union, the United States, Japan and South Africa.

The European Commission will take steps in 2008 towards a European Maritime Observation and Data Network, and promote the multidimensional mapping of the Member States' waters, in order to improve access to a high quality data.

The European Commission with the support of a specially constituted advisory group, will prepare in 2009 an EU's action plan to make progress in this area on the basis of the road map to be published in 2008. It will provide an overview of the main data and information service categories to be covered and some of their sources and uses, as well as examples of benefits and added value of better integration and clarify how this initiatives relates to other initiatives.

In the second half of 2008 the European Commission will also propose a programme for the development of mutually compatible the multidimensional mapping of seas in the Member State's waters.

## CONCLUSIONS

The main objectives of this paper is to call the readers' attention to the changes taking place in the issue of maritime surveillance and maritime information management. These changes can be expressed as the 'integration process' concerning the all activities, procedures and processes regarded to the gathering

and use of the maritime information concerning the maritime environment and maritime security.

The integration and linkage of data sources and supply mechanism is very closely related to marine environmental protection, science and research, and technology development. This constitutes one of the cornerstones of an integrated approach: integrated access of data will enable better use of data and provision of customized services to different users, thus facilitating process in many other areas.

However, according to the authors, the most important conclusion is that the integration process in: 1) maritime surveillance, 2) maritime spatial planning and Integrated Coastal Zone Management (ICZM), and 3) establishing an European Maritime Observation and Data Network is and must be considered in the future as the policy-making tools regarding all the large scale projects, programmes and policies concerning the maritime affairs on the Member States' waters of the European Union.

## REFERENCES

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## STRESZCZENIE

W referacie podjęto próbę przedstawienia dokonujących się zmian w Unii Europejskiej dotyczących całego procesu obserwacji morskiej oraz zarządzania informacją morską. Przyczyny tych zmian mają głównie ekonomiczny i polityczny charakter, są one bowiem generowane przez stale zwiększające się i zaostrzające współzawodnictwo między podstawowymi regionami ekonomicznego, politycznego, technologicznego i społecznego rozwoju współczesnego świata. Unia Europejska staje się coraz bardziej istotnym uczestnikiem wspomnianego współzawodnictwa. Zapewnienie trwałego i zrównoważonego rozwoju gospodarki Unii Europejskiej, a zwłaszcza gospodarki morskiej, wymaga stosowania coraz to nowych i bardziej efektywnych narzędzi realizacji polityki morskiej przez Unię Europejską.

Recenzent prof. dr Daniel Duda