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The European Space Policy - Its Impact and Challenges for the European Security and Defence Policy

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Since the adoption of a European Space Policy (ESP) in May 2007 space has been high on the political agenda. This policy must be gradually implemented into a European Space Programme, which would cover all EU policies, among them the European Security and Defence Policy (ESDP). A new body, the "Space Council" consisting of the Council of the European Union and of the Council of ESA at ministerial level has been created to coordinate and facilitate cooperative activities. Recognising that the Military capability will continue to be within the remit of Member States, ESP put as priority the need to improve coordination and synergies between defence and civilian space programmes and technologies, in a user-driven approach. The Council has noted that the organisation of the governance of space must be in line with the political ambitions of EU, ESA and their respective Member States. It also affirms the need to set up a structured dialogue with the competent bodies of the Member States and within the EU 2nd and 3rd Pillar as well as the European Defence Agency in order to address the preliminary elements of the future European Space Programme. Has the 2nd Pillar, which is responsible for the ESDP the necessary means to address these challenges?

1. Introduction

A recent study of the European Space Policy Institute (ESPI) describes very well the European situation regarding space: *"Space activities in Europe are carried out by multiple actors at different levels: (1) the overall European level with the EU; (2) the intergovernmental organizations, e.g. ESA; and (3) the Member States level with the national space actors. The European Union (EU) as the central political authority at European level has begun to get involved".*[1]

The facts are accurate and undeniable. During the last few years the EU has set increasingly ambitious goals for itself in a number of areas. One example is the effort to develop the EU's role as a global player in international security. In this area, the EU has laid out its ambitions in the *"European Security Strategy",*[2] which EU governments approved in December 2003.

Since investing in different types of space technology can help to succeed in this area, the European Union is taking increased responsibilities for space matters, especially related to space applications. A Europe without a clear space policy is a Europe that lacks ambition. That was the central conclusion of the European Space Agency's (ESA) so-called Wise Men's report nearly nine years ago.[3] Therefore a

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1 Wolfgang Rathgeber and Nina-Louisa Remuss, *"Space Security, A Formative Role And Principled Identity For Europe",* ESPI Report 16, January 2009. Available from http://www.espi.or.at/images/stories/dokumente/studies/espi%20report%2016.pdf

2 *"A Secure Europe In A Better World - The European Security Strategy",* approved by the European Council held in Brussels on 12 December 2003 and drafted under the responsibilities of the EU High Representative Javier SOLANA; The French EU Council Presidency updated the ESS: *"Report On The Implementation Of The European Security Strategy - Providing Security In A Changing World",* Approved by the European Council held in Brussels on 11 and 12 December 2008.

3 Carl Bildt, Jean Peyrelevade and Lothar Späth, 'Towards a Space Agency for the European Union', Report for the Director-General of the European Space Agency, November 2000. Available from http://esamultimedia.esa.int/docs/annex2_wisemen.pdf

need to establish a European Space Policy has been endorsed by EU Heads of State and Government.

But the question of who would develop such a Policy and implement it into a viable European Space Programme arose again. Europe did not suddenly discover space. ESA, a space giant, had been there for over 30 years and has made huge achievements for the European citizen. But the ESA has a mandate only for civilian scientific or experimental programmes and has not extended to defence related programmes which have remained out of its mission.

After some time, Europeans understood that there is no need to engage in lengthy negotiations to integrate the two institutions at this time.[4] To overcome difficult issues regarding the different competences between these two main space actors in Europe, a new structure had been envisaged at the higher European political level. Thus the Framework Agreement between the European Community and European Space Agency[5] provided the common basis for the development of an overall European Space Policy. Since this is a progressive continuing process, the Framework Agreement has been extended in 2008 for another four years until 2012.

Under this institutional framework a European Space Policy (ESP) has been jointly elaborated for the first time. [6] This is a document of the European Commission (EC) and of the Director General of ESA, taking account of the views of the Member States (MS) of these two bodies. The ESP establishes a commonly accepted vision to strengthen Europe as a world-class space leader responding to the needs of European policies and objectives, in terms of applications, services and related infrastructures.

Although the ESP is not the last in a series of space policy documents adopted in recent years, its importance as the cornerstone for space in Europe remains unequalled, since it not only provides the framework for the development of such actions but it acknowledges crystal clear the following three key actors in defining the space policy and programme: The European Union, ESA[7] and their respective Member States.

The ESP formally establishes a link between space activities and the European Security and Defence Policy (ESDP).[8] The Wise Men Report mentioned that ESDP is incomplete without a space component. ESDP relies on a mixture of civil and military instruments for crisis and conflict management. In the light of this, ESP recognises that space technologies are often dual-use in nature and that Europe can pursue the respective synergy in the domain of security (and particularly between civilian and military actors for conducting civilian and military Crisis Management Operations).

ESP put also as priority the need to improve coordination and synergies between defence and civilian space programmes and technologies, in a user-driven approach.[9] But ESP mentions also that Military capability will continue within the remit of Member States.

2. The Cooperative Character of the European Space Policy

The European Space Policy should allow its key players to increase coordination of their activities and programmes, and organise their respective roles relating to space, providing a more flexible framework to facilitate Community investment in space activities. 'The Space Council', a joint meeting of the Council of the European Union and of the Council of the ESA at ministerial level, is the top level body for coordinating and facilitating European cooperative activities. [10]

4 This is because there are important institutional differences between the supranational European Commission and the inter-governmental ESA. Both organisations also have different memberships, financial rules etc. According to its mandate, ESA can only work on programmes that only have 'peaceful purposes'. See Carl Bildt & Mike Dillon, *"Europe's final frontier",* 2004. Available from http://www.bildt.net/dbdocuments/cb000092.pdf

5 Council Decision on the signing of the Framework Agreement between the European Community and the European Space Agency (12858/03 RECH 152 7 October 2003).

6 Communication from the Commission to the Council And The European Parliament, European Space Policy, COM(2007) 212 final, Brussels, 26.4.2007.

7 The key role, competence and expertise of ESA for research and development in the space domain, has been recognised by the Resolution on the European Space Policy, unanimously approved by both the European Space Agency and the European Union Councils, meeting at ministerial level.

8 The EU is developing a common security and defence policy, covering all questions relating to its security, including the progressive framing of a common defence policy. The European security and defence policy allows the European Union to develop civilian and military capacities for international crisis management, thus helping to maintain peace and international security. The ESDP is part of the common foreign and security policy (CFSP) established by the Treaty on European Union in 1992. The EU pursues five main objectives: to safeguard the common values and fundamental interests of the Union; to strengthen the security of the Union; to preserve peace and international security in accordance with the UN Charter; to promote international cooperation; and the development of democracy and the rule of law, including human rights.

9 Commission Working Document, *"European Space Policy Progress Report",* Com (2008)561 final, Brussels, 11.9.2008.

10 Council Resolution *"Taking forward the European Space*

Cooperation and cooperative approaches are the main tools selected for building the European Space Architecture at this point of time.

The term "cooperatively" suggests that cooperation is more beneficial than competition in many circumstances and especially in security issues. It is used as an alternative option to integration on the one hand and to national policies on the other hand.

The base of such a regime, as it was declared in the early nineties, would be the *"Cooperative security",* which is a process whereby countries with common interests work jointly through agreed mechanisms to achieve a common end (either to reduce tension and suspicion; or to enhance development prospects). It is a well established strategy in the European continent that produced cooperative structures especially after the end of the Cold War period.

The objective set by the ESP for the ESDP domain is to meet Europe's space security and defence needs, including all aspects of security. According to the EC's Staff working document *"Impact assessment of the European Space Policy"*[11] which accompanied the ESP document to the Council and the European Parliament, a range of four options for achieving this objective has been assessed. These include:

- The zero option of no change.
- A step increase in coordination while retaining the current mix of national and non-EU intergovernmental framework for the majority of space activities in Europe.
- An option involving more significant change, bringing those intergovernmental activities into the European Union framework.
- An even more radical change option, to bring space activities from national and intergovernmental frameworks into the European Community framework.

A number of studies considering the first option have concluded that it would leave problems of the past to persist. EC's Strategic Aerospace Review for the 21st century pointed out that the current situation negatively affects the competitiveness of Europe's aerospace industry and jeopardises the implementation of the ESDP.[12] In the Response to the STAR 21 Report, a Communication from the Commission to the Council, the need of a change of the political and regulatory has been referred.[13] Also EC's and ESA's White Paper action plan mentions that resources available today will not be sufficient to meet the objectives assigned to the overall European space policy as defined in this White Paper. [14]

The last two options, although they could have significant potential benefits, face political and possibly legal objections, based partly on the high level of uncertainty about exactly what they might entail.[15] This conclusion can be practically verified; at least in what concerns the third option above. In 2004 there has been an attempt to bring an intergovernmental activity of 6 European MS called the BOC (Besoins Opérationnels Communs) initiative into the EU framework (2nd Pillar). [16]

Initiated outside the EU policy by a group of MS, the BOC document was conceived as the first step towards an eventual autonomous European capacity in strategic imagery *"aimed at supporting all the information requirements necessary to undertake the ESDP Tasks".* This attempt did not have any success.[17]

Policy", as adopted by the Competitiveness Council meeting on 26 September 2008, 13569/08.

11 Commission Staff Working Document, *"Impact assessment of the European Space Policy",* accompanying document to the Communication from the Commission to the Council and the European Parliament European Space Policy, COM(2007)505, Brussels, 26.4.2007

12 "STAR21 : Creating a coherent market and policy framework for a vital European industry", European Commission Enterprise publications, July 2002.

13 *"A Coherent Framework for Aerospace - a Response to the STAR 21 Report",* Communication From The Commission To The Council, The European Parliament, The European Economic And Social Committee And The Committee Of The Regions, COM(2003) 600 final, Brussels, 13.10.2003.

14 *"WHITE PAPER, Space: a new European frontier for an expanding Union An action plan for implementing the European Space policy",* Brussels, 11 November 2003, COM(2003) 673, chapter 5.2. entitled "Match ambitions and resources".

15 According to the EC: *"During the extensive consultations in the preparation of the ESP, Member States have made it clear that they would not want the ESP or the way in which it is considered for endorsement to pre-empt in any way the outcome of this further analysis, which should include the scope for enhancing cooperation within the existing EC-ESA Framework Agreement and the outcome of studies being on the impact of the options on ESA. For these reasons, the options 3 and 4 would not be politically feasible at this point in time".*

16 The EU consists of three so-called pillars, structured by the remits to be accountable for. In the first pillar, EU member states have already decided to pool their sovereignty and delegate decision-making powers to the EU institutions, basically to the Commission. The second and third pillars are covered by intergovernmental cooperation, mainly dealt with in the Council. Foreign Policy and Security/Defence issues fall within the 2nd pillar, while issues of internal security and Justice within the 3rd pillar. ESPI Report # 16 ibid mentions that *"The Treaty of Lisbon foresees space as a shared competency and the abolishment of the pillar structure, but its entry into force is uncertain ".*

17 BOC was elaborated by FR and GE, then it was presented to ESP, ITA, BE and GR. This joint document contains the

So the advocated approach in the ESP *"a step increase in coordination while retaining a non-EU intergovernmental framework for the majority of space activities in Europe"* is not conservative but a pragmatic and realistic one.

In this context, Space Council has noted that the governance of space must be in line with the political ambitions of EU, ESA and their respective Member States. And how this is going to be assured? Council affirms the need to set up a structured dialogue[18] with the competent bodies of the MS and within the EU 2nd and 3rd Pillar as well as the European Defence Agency. [19]

That brings us to the main issue of this article: How has the EU 2nd Pillar addressed space capabilities so far? Has there been any involvement into space policy issues or programmes? Who are the 2nd Pillar's main actors and how they deal with such issues? Have there been elements for the definition of a future space programme which will cover the 2nd Pillar's needs? Does the EU 2nd Pillar have the necessary means to address space issues that fall under its competency?

3. Developing an ESDP and Space Policy: A Chronicle

This Chapter look backwards and describe how the issue of Space has been developed in the ESDP framework since it was first introduced to the 2nd Pillar in 2002 to the EU Military Committee (EUMC).[20]

The debate within the 2nd Pillar started with the Hellenic Presidency's initiative "ESDP and Space" which was presented at the EUMC (25/9/02). It claimed that the existing European Space Strategy[21] developed jointly by EC & ESA in 2000 focused on the competency of transport, environment and research[22] and had not taken into account the developments regarding the ESDP.[23]

The initiative attempted a survey of the whole range of ESDP space-related missions, such as Command, Control Communications and Information (C3I), Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR), Early Warning, Signal Intelligence, Positioning, Navigation, and Timing, Weather, Oceanography and Mapping, Combat Search and Rescue (CSAR) and Space Surveillance. Also it identified shortfalls in the following three domains of Space assets: strategic satellite imagery, signal intelligence (SIGINT) and early warning satellites.

Further the EUMC has been also informed that the 1st Pillar together with ESA, following a Parliament's request, would start before the end of the year an inter-linked initiative (called the Green Paper on European Space Policy), setting out a range of ideas presented for public debate towards the development of an overall European Space Policy which should embrace all aspects of European Policies. As the way ahead, the initiative commented that the formulation of a conceptual ESDP Space Policy, to be part of the forthcoming coherent European Space Policy, has been envisaged.

This idea was not new and neither were its elements. Back in 1998, an almost identical initiative had been successfully pursued, this time in the Western European Union framework. WEU was convinced that space-based observation represented a strategic capability which is needed to acquire in order to meet its security and defence responsibilities. The creation of the SatCen at Torrejon in 1991, revealed this. The decision to study the feasibility of an independent

"Common Operational Requirements for a European Global Earth Observation System by Satellites". The BOC brings together contributions from a number of member states to form a collaborative programme that is implemented in its first phase on the individual elements of Helios-2, SAR-Lupe, Cosmo-SkyMed. MUSIS could be its second phase.

18 "REPORT Space policy" , – Preparation of the second "Space Council" of 7 June 2006, 27 May 2006.

19 An intergovernemental agency subject to the Council's authority and open to participation by all Member States in the field of defence capabilities development, research, acquisition and armaments. It has been created after a European Council's decision (Thessaloniki, Hellenic Presidency, 2003).

20 EUMC has been set up in 2001 and is the highest military body set up within the Council. It is responsible for providing the PSC (Policy and Security Committee) with military advice and recommendations on all military matters within the EU. It exercises military direction of all military activities within the EU framework. It is staffed by the Chiefs of staff, represented by their military delegate and gives directives to the EU Military Staff.

21 Council Resolution of 16 November 2000 on a *"European space strategy"*. Official Journal C 371 , 23/12/2000 P. 0002 – 0003.

22 The Council expressed its agreement that the European Space Strategy should be developed along the following three components identified: First, strengthening the foundations of space activities; second enhancing scientific knowledge and third, reaping the benefits for markets and society. CFSP is embedded in the third component of this Space Strategy under the title *"reaping the benefits for markets and society through a demand-driven exploitation of the technical capabilities of the space community"*, and is associated exclusively with the thematic area of global observation. "Europe and Space: Turning to a new chapter" (COM(2000) 597 – 2001/2072(COS)), 28 September 2000.

23 Further analysis of this argument could be found on Alexander Kolovos, *"Why Europe needs Space as part of its security and defense policy"*, SPACE POLICY, Volume 18, Issue 4, November 2002, pages 257-261.

European space-based observation system for defence purposes in 1992-93 reflected willingness and determination to move ahead. Also the activities towards a possible WEU participation in a developing multilateral programme (the then Helios programme) demonstrated an ongoing determination.

All these constituted elements of a developing WEU Space programme in the Earth observation domain. But something was missing. The WEU did not have an overarching Space Policy, under which this space programme was conducted. To this end, on February 1998, the WEU Hellenic Presidency presented a first working paper for a framework to establish the formulation of such a policy.[24] The Italian Presidency continued the work, the Permanent Council approved the document on the 'WEU Space Policy' and finally the Ministers on November 1998 in Rome took note of this document (SGS (98) 11 final).[25]

In 2002, the Satellite Centre was inherited by the EU. But, in the new environment, the situation remained the same. The roles space could play in EU's CFSP / ESDP policies were not specifically documented in any EU official document. And that gave the idea of a new initiative, about the same old topic.

Member States seemed to be taken by surprise by this initiative which might have touched a sensitive issue since such kind of activities had been taken so far only at the level of MS. Space is regarded as a politically sensitive issue at the level of the 2nd Pillar, due to its close association with intelligence, which traditionally is an exclusive responsibility of EU MS within the EU Council. This may explain why there were so many difficulties in the formulation of a common view between MS on space activities for ESDP in the 2nd Pillar.

In their written comments, after the EUMC presentation, some delegations stated that there was a need for a comprehensive inventory of all assets and that a *"first stocktaking"* could prove very useful. Also the conclusions of work of ECAP panels[26] related to the relevant Space elements/shortfalls will have to be taken into account.

Other delegations wondered about the selected *"bottom up"* approach to work out a space concept of the EU within the framework of the ESDP. They shared the view that a reflexion on the character undoubtedly "trans-Pillar" must be undertaken very upstream; and that dual character must be taken into account. In this context, it would be very helpful to find out in detail what is being developed in this field in other bodies of the European Union, since space technology could be of as much importance to civil crisis management as to military crisis management.

One MS stated that the structures charged to express the various needs for the EU within the 2nd Pillar had to be determined. Also the co-operation and interaction between EUMC and those forums or bodies in EU and ESA which deal with space matters must be examined. In the following months it took many exchanges of views and bilateral discussions with the EUMS and also with most of the space-faring European MS to analyse the content of this initiative and to play down concerns of all kind. Some MS characterised the initiative as ambitious.

The issue was debated again at an informal session of the European Ministerial Staff Directors, held in November 2002 in Athens. During this session the initiative was not only characterised as ambitious but one delegation from a big space-faring MS wished the Presidency luck in its implementation underscoring how difficult and fluid the issue is.[27]

The initiative has been launched at a key period, but maybe the timing of its first presentation came too early. On 21 January 2003 the Green Paper process on European Space Policy has been adopted by the European Commission, while its inaugural conference was held in Brussels on 6 March. Its aim was to initiate a broad debate, which lasted for 4 months, on the medium- and long-term future use of space for the benefit of Europe. The answers given and the choices made would determine the future of Europe as a space power. Among issues to be debated were political sensitive issues including space-based security and the needed institutional arrangements.[28]

The second presentation of the Hellenic

[24] Initiative *"WEU Earth Observation Space Policy",* presented by Alexandros Kolovos, at the Space Group of WEU, [SGS(98), Bruxelles, 27/2/1998].

[25] Rome Declaration, page. 10, para. 5, 16/11/1998.

[26] European Capability Action Plan project group. The ECAP has been launched in late 2001 with the aim to advance the implementation, by the Member States concerned, of selected solutions identified at first by the ECAP panels, in view of remedying the shortfalls.

[27] *"Greece to Pursue Integrated Space Policy in ESDP",* DEFENCE NEWS, 6 January 2003, p. 13.

[28] At a request from the EC, author participated as the Presidency's representative in various meetings on the development of the Green Paper, so had a unique opportunity to witness in parallel how things developed both in 1st and 2nd pillar.

Presidency's initiative at the EUMC (March 2003) has been largely augmented by the coming of Commission's Green Paper and EC's request for contribution from the 2nd Pillar.

This time, the timing was right. Initiative's aim now was twofold. To answer to the various comments of MS by reviewing the European space effort in an overall context and, having in mind the overall debate for the Green Paper[29] to raise the awareness of the need for a coherent approach to space and to map out a way forward for 2nd Pillar.

The initiative commented that EU is institutionally weak when it comes to security space since there is no space unit within the 2nd Pillar, nor any other instrument to deal with the development of space capabilities. To this end the initiative recommended that:

- The EUMC should convene a Task Force of experts which will be in charge of elaborating the relevant Space Policy, which will cover all CFSP-ESDP considerations.
- As a way ahead, additional steps could be the formulation of a concept paper, which would elaborate all the needed space capabilities, the definition of the common operational requirements, the identification of shortfalls, and the proposal of remedial steps, contributing thus to the development of a balanced EU Space Security Programme, avoiding any duplication.

As a response to this initiative, the EU Military Staff[30] has been tasked by EUMC to bring together in an information paper entitled *"Space Systems Needs for Military Operations"*[31] the areas in which space systems could improve EU military capabilities, in order to overcome the shortfalls. Thus the second recommendation of the Hellenic initiative has been covered.

In the meantime, Presidency walking 'hand in hand' with 1st Pillar's space authorities decided to host jointly with the EC a Green Paper consultation event on *"Security and Defence Dimension of Space: Challenges for EU".*

The Workshop took place in Athens on 8 and 9 May 2003. Panel sessions addressed critical space- and defence-related issues such as current technological requirements, capabilities, and shortfalls, as well as institutional aspects. It was maybe the first time that ESA's vision regarding its role in security and defence has been openly presented.[32] The final outcome of this event has been presented in Paris in June 2003.

Then the 19 May 2003 General Affairs and External Relations Council (GAERC) recognised the importance of space applications and functions needed in order to enhance EU capabilities to carry out crisis management operations.

It also noted the Green Paper from the Commission and the European Space Agency and invited Member States to contribute to the ongoing consultation process.

During the GAERC[33], a special experts Group called *"Space Assets"* ECAP Project Group was launched in the framework of the ECAP process, on the basis of requirements expressed by several ECAP groups working on various elements of the EU capabilities requirements, thus covering also the first Hellenic recommendation.

The importance of space applications and functions was also recognised in the Presidency report on ESDP, endorsed by the European Council at Thessaloniki on 19-20 June 2003.

On 24 June 2003, the four-month public consultation on the 1st Pillars' Green Paper on European Space Policy came to a close in Paris. Among other dimensions, the security dimension of space has been presented.[34] A special

29 On 15 April 03, after an invitation from the Hellenic Presidency, the Commission made a presentation to the Policy and Security Committee (PSC) of the Green Paper on European Space Policy and its consultation process. To this end Commission has asked for a contribution to its work from the 2nd pillar.

30 European Union Military Staff (EUMS). Established in 2001, it performs early warning, situation assessment and strategic planning for Petersberg tasks, including identification of European national multinational forces and to implement policies and decisions as directed by the EUMC. It is staffed by experts from national military organizations.

31 EUMS paper *"Space systems needs for military operations"* (9793/03 dated 27 May 2003).

32 According to the ESA's presentation *"the meaning of the words "peaceful purposes" in ESA's charter must be examined in accordance with the UN Outer Space Treaty, where "peaceful purposes" under international law means "non-aggressive". Every activity lawful for States is, under the international space law regime, is also lawful for ESA. This means, that there is no restriction of ESA's capacity to launch and implement programmes for defence and security purposes or dual purposes and for public bodies in charge of defence and security, as long as these activities remain non-aggressive."* Later on, in 2004 its Council approved a position paper *"ESA and the defence sector"* with the same arguments.

33 GAERC Conclusions on ESDP, Council Of the European Union 9174/03, Brussels, 19 May 2003, paragraph 22.

34 Alexander Kolovos, *"The Security Dimension",* EC and ESA, European Space Policy Consultation-Closing

mention has been done to the Presidency's initiative on the 2nd Pillar.[35]

On 25 June 2003, the PSC[36] contributed to the EC's consultation process of the Green Paper on European Space Policy by a position (SN 2211/1/03) of which an interesting extract is presented:

"A credible CFSP/ESDP requires the autonomous ability to gather and transmit information in order to support EU-decision making. In particular the areas of Earth observation, navigation and telecommunications are relevant to CFSP and ESDP. These areas offer broad scope for co-operation in the EU. The relatively high cost of space-based assets and the constraints on the financial resources available indicate the need to take advantage of the synergy inherent in dual-use systems, where appropriate. There is a also a need to have good co-ordination between the users of space-based assets that are currently available to the EU's Member States and common assets such as the EUSC. In the light of the on-going development of ESDP, further and regular trans-Pillar reflection is needed to ensure that the security and defence aspects of CFSP and ESDP are taken into account during further deliberations on an EU Space Policy and possible programmes".

Attached to this position was the approved EUMS paper *"Space Systems Needs for Military Operations"* (9793/03), the first official document produced by a Council body on the ESDP requirements for Space assets. This document provides a general overview of the areas where space-based applications would enhance military effectiveness.

Looking from a time distance, PSC's position seems well balanced and includes all main principles of today's discussion.

On 27 November 2003, the Green Paper became White. Commission presented to the 2nd Pillar the White Paper on "Space: a new European frontier for an expanding Union."[37] Its chapter 3.4 entitled *"Space as a contribution to the CFSP, the ESDP and to the anticipation and monitoring of humanitarian crises"* made explicit reference to the security dimension of Space. It was interesting to note that Annex 2 made the following reference: *"the White Paper highlights the need to develop an ambitious European Space Policy".* That extract shows the somehow diverging approaches between main actors responsible for the formulation of a Space Policy in the 1st and 2nd Pillar.

Replying to the White Paper, on 2 December 2003 the PSC reiterated its position, already expressed in its initial contribution to the Green Paper consultation process, that further and regular inter-Pillar reflection is needed to ensure that the security and defence aspects of CFSP and ESDP are taken into account during the deliberations on an EU Space Policy and its associated programmes.

On this basis, initial work began in Council bodies on ESDP aspects of the future EU Space Programme. As this work would benefit from clear guidelines, the EU Council developed for the first time a Space Policy, as a guideline for the co-ordination of all actions in the field of the use of Space assets for ESDP purposes.

On 22 November 2004, the Council approved the document *"European Space Policy: ESDP and Space",* which provides the identified and agreed upon ESDP requirements to be reflected in the global EU Space Policy and its corresponding European Space Programme.

The document is also intended to serve as a reference for future proceedings with regard to military capabilities, and recommended that a comprehensive Roadmap be developed, including further actions to be taken. In its first paragraph, the initiative 'ESDP[38] and Space' has been characterised by the Council as "*a detailed study of the military needs issued by the Hellenic presidency on 15 March 2003".*

Some MS felt that although the Council's "ESDP and Space" document was a step ahead, it contained only general implementation guidelines with no clear indications of the level of involvement of the EU 2nd Pillar in the development of space assets. But it must be

Conference (Paris, 23-24/6/03).

35 Carl Bildt, former Prime Minister and currently Minister of Foreign Affairs of Sweden, during his speech mentioned that *"The Hellenic Presidency has done for Space more than all other Presidencies before".*

36 PSC: Policy and Security Committee at the Ambassadorial level. Established also in 2001, it deals with of all aspects of CFSP aspects including ESDP. It has a central role to play in the definition of and follow-up to the EU's response to a crisis. It is in charge of the political control and strategic direction of EUMC.

37 "White Paper, Space: a new European frontier for an expanding Union An action plan for implementing the European Space policy », Brussels, 11 November 2003, COM(2003) 673

38 *"ESDP and Space",* doc. 11616/3/04 REV 3 dated 16 November 2004.

noted that due to the highly political and sensitive character of ESDP and Space, the document had to reflect the smallest common denominator so as a consequence its guidelines remained basically general.

According to our judgement this document fully addressed the aim of the first Hellenic initiative: to formulate of an overarching conceptual ESDP Space Policy which will then proceed through logical steps to the ESDP capabilities which will be required. This was the best thing that could be expected at that time. This can be proved by the following paradigm: ECAP Space Assets Project Group on the request of the PSC drafted in July 2004 a Strawman Paper with the title *"Space systems needs to support ESDP".*

The Paper, although it has been presented to PSC, did not receive any response at the EU level. Although the Paper provided clear ideas on possible EU capability development in the field of space assets, it was thought that it represented the view of the experts involved based on their technical and common understanding of the operational requirements.

Therefore it was considered that it did not express the operational requirement agreed by the EUMC and thus it should be considered as an information paper. Especially its suggestion that the EU should become a military space power, could not gather unanimity by all MS as some believed that EU should just co-ordinate or use MS assets and not own them.

In May 2004, the Commission informed the 2nd Pillar on the setting up of panel of experts on Space with the aim to study security aspects of the envisaged Space programme of the European Communities. The Commission proposed that appropriate expert's in user requirements from the Council Secretariat participate on its work.

The possibility of setting up a panel jointly by the Council Secretariat and Commission was raised initially. Finally this solution was abandoned, as it raised institutional difficulties, and the Commission thus decided to establish its own panel. A possible explanation about this could be that some MS might not have wanted to be committed by the outcome of this report which was published on March 2005.

The EC's *"Report of the Panel of Experts on Space and Security"* (SPASEC Report), was an excellent and detailed study which brought together the possible defence and security aspects of the future European Space Programme. On 7 June 2005, the PSC endorsed the Secretariat document *"Draft initial road map for achieving the steps specified in the European Space Policy: ESDP and Space"*[39], which provides the envisaged planning for the achievement of the 9 steps identified in said document, a prerequisite for the realisation of the overall objectives of the ESDP Space Policy.

This draft initial road map is based on the assumption that the civilian and military needs for all actions in the field of the use of space assets for ESDP purposes are compatible, with potential for synergy, an assumption confirmed by the "SPASEC Report".

The "Draft Initial Road Map"* is a very important document since its agreed 9 steps have paved the way for the current ESP. Among the steps mentioned in the draft road map, the fifth requires that "*A global EU Space Policy should be developed and regularly updated, including the agreed ESDP requirements".

The Document recommended that *"This Policy shall be developed in accordance with the provisions of the Framework Agreement between the European Community and the ESA, as approved by the Council on 26 April 2004. The ESDP contribution, as presently provided in doc. 11616/3/04 REV 3, shall be taken into account, as well as any updates thereof prior to any revision of the global EU Space Policy".*

Since the PSC has invited the Commission and/or EDA to follow-up on these actions, the work on the actions identified has continued. On 22 May 2007 the joint EU/ESA Space Council adopted a resolution which welcomed and supported the joint Commission / ESA document on ESP, which includes a section on security and defence.

4. Implementing Policy to a Corresponding European Space Programme: Challenges for the 2nd Pillar

From all the above it is obvious that much work has been done regarding ESDP and Space in the 2nd Pillar. This work did not stop at the conceptual level, giving just general policy guidelines. The Member States in the Council have identified Europe's generic space system needs both for

[39] Draft initial road map for achieving the steps specified in the European Space Policy: *"ESDP and Space",* Council of the European Union, 9505/05, Brussels, 30 May 2005.

military and civilian crisis management operations and have stressed the necessity of interoperability between civilian and military users.

Elaborating more on the requirements issue, according to step one, mentioned in the draft road map, the EUMC had to update its May 2003 document on *"Space systems needs for military operations"*, drawing on the approved policy[40] and extract and refine the ESDP requirements for space-based capabilities, taking into account the work on operational requirements carried out by the SPASEC Report.

Main identified space capabilities needed for various ESDP missions have been found in the domains of communications, Earth observation, signal intelligence, early warning for missile defence, positioning-navigation-timing, and space surveillance. Updated military needs were approved by the GAERC in November 2005.[41] Also the document on the *"Generic Space Systems Needs for Civilian Crisis Management Operations"* (10970/065) has been adopted (June 2006).

These requirements, following the third step mentioned in the draft road map, were provided to the Commission and to the MS (2006) and will be used as elements in the development of the future EU Space Programme.

Member States in the *"Space Council"* have been also invited to introduce their priorities in order to contribute to the preparation of the European Space Programme, taking full account of their already envisaged programmatic priorities in the ESA and EU framework.

Although it is apparent that military capability will continue to be within the remit of Member States, according to the ESP section 3.4 MS have acknowledged that: "*this should not prevent them from achieving the best level of capability, within limits acceptable to their national sovereignty and essential security interests. Sharing and pooling the resources of European civilian and military space programmes, drawing on multiple use technology and common standards, would allow more cost-effective solutions".*

How can this been done? The Council's *"Draft road map"* of 2005 had already paved the way in this too. In its fourth step it mentions that *"In the context of the European Space Programme, a permanent inter-Pillar dialogue should be established to ensure global coherence of all EU needs and requirements, with a view to optimise all programmes since the initial design phase and avoid unnecessary duplications and spending while respecting the institutional framework, competencies and prerogatives".*

So the Council in the spring of 2007 re-iterated the old principle, that the way to go ahead was under the umbrella of a permanent cross-Pillar "structured dialogue" which aims at raising awareness about respective programmes and identifying opportunities for the complementary development of space-based assets for respective user communities. This would be implemented by close and regular contacts between the Council General Secretariat, the Commission and EDA, allowing for a dialogue already within the preparatory phase of the European Space Programme.[42]

The increased coordination option is hoped to accelerate the process of connecting EU policies to the potential benefits offered by space systems. But what would be some of the elements, the orientation and the timeframe of this dialogue? First of all the structured dialogue must address the current agreed priorities of the European Space Policy which will lead in time to a structured European Space Programme covering the period to 2013. [43]

Lending a term from the report of a study which was requested by the European Parliament's Subcommittee on Security and Defence, the possible progresses for a European Space Programme based on the cooperative principle, will be naturally *"evolutionary rather than revolutionary".*[44]

According to Council's decisions, the top priorities for the future EU Space Programme will

[40] *"ESDP and Space"*, dated 16 November 2004.

[41] *"Generic Space Systems Needs for Military Operations"* (6091/06) and *"Space Systems Requirements as per Requirements Catalogue 2005"* (RC 05) approved by the GAERC, (doc. n. 13732/05 dated 7 Nov 05).

[42] According to 1st Space Council : *"The European Space Programme will constitute a common, inclusive and flexible framework on the basis of which activities and measures would be taken by the European Union, the European Space Agency and other stakeholders (e.g. national organizations)".* Programme will be drawn up in light of the overall recommendations set out in the White Paper on Space action plan (2003).

[43] It should be noted that by that time, both GMES and GALILEO would be operational while on the other hand some of the today's main intergovernmental assets such as Helios-2, may have reached their operating deadline.

[44] *"The Cost of non Europe in the Field of Satellite Based Systems",* Study, Directorate General for External Policies of the Union, European Parliament, PE 348.587, EXPO/B/SEDE/2006/15, December 2007.

be its two flagships' programmes GALILEO and GMES and a newer third, regarding satellite communications.

GALILEO radio navigation system is a civil programme under civil control[45] and constitutes the first flagship space programme of the EU; it is a user-driven application programme. GALILEO is essential for crucial applications such as border control, transport management and logistics, financial operations and the surveillance of critical energy and communications infrastructures.

Global Monitoring for Environment and Security (GMES, also referred to as Kopernikus), has become the second EU flagship, capable of mobilising European actors and resources in support of environment and security policy. It requires the integration of space-based and ground-based monitoring capacities in user-driven operational application services. The full system architecture for GMES is currently being established. GMES relies on some dual use observation capacities.

Long term research into satellite communications technologies, has been envisaged in the context of the *"i2010"* (European Information society in 2010) initiative, as part of an integrated approach to information and electronic communications. Recently the 6th Space Council called on the EC, ESA and its MS to consider integrating satellite technologies in future broadband projects in response to institutional demand in support of European programmes and policies, including security. Filling the gaps in the field of telecommunications is the highest priority for any action plan.

Both GALILEO and GMES are civilian long term collaborative projects, which may take many years before they mature. Their status is depending on the development of dedicated technologies, the construction of a space infrastructure by the European space industrial base, and long-term funding and running commitment from a federated European user-community.

ESP acknowledges that GALILEO, GMES and satellite communications systems will provide services which may be of interest for some security applications; and that civilian programmes have a multiple-use capacity and that GALILEO or GMES may have military users, so their military utilisation is not ruled out.[46]

But the absence of a common understanding of what is embedded in the term *"security"* within the GMES has resulted in a cautious involvement of the 2nd Pillar in the program. Also the purely civilian character of GALILEO fails to address one of the initial arguments that led to the decision of GALILEO development ("the serious problems of both sovereignty and security if Europe's safety critical navigation systems are out of Europe's control"[47] (such as GPS or Glonass).

Apart from these large programmes, it must be noticed that according to elements coming from relevant Council's documents, the dialogue could focus also on:

- The autonomous ability to gather and transmit information in order to support EU-decision making.
- The interoperability between current space systems in Europe in the fields of Earth observation and communication.
- Other space domains which may be relevant to CFSP and ESDP.
- The definition of the way and means to improve the coordination between civilian and defence space programmes in long-term arrangements.
- The need to take advantage of the synergy inherent in dual-use systems.
- The development of a Strategy on International Relations.[48]
- The need to develop adequate instruments and funding schemes for Community actions in the space domain.
- The engagement of both international partners and the private sector.
- The development of a coherent data policy.
- The priorities of the planned activities with regard to EU policy objectives.
- The definition of the responsibilities and tasks of the different actors.
- The indicative timetable attached to the different tasks.

Since the Council has underlined the benefits of drawing on existing capacities and infrastructures, the preliminary elements and orientations of the future European Space

[45] Transport Council Resolution on GALILEO, 5 April 2001.

[46] ESP recognises also that the uses made by any military users of Galileo or GMES must be consistent with the principle that Galileo and GMES are civil systems under civil control, and consequently that any change to this principle would require examination in the framework of the Title V/TEU and in particular Articles 17 and 23 thereof, as well as in the framework of the ESA Convention.

[47] COM (1999) 54 Final / European Commission / 10 February 1999.

[48] Commission Working Document, *"European Space Policy Progress Report",* COM (2008) 561 final, Brussels, 11.9.2008.

Programme had been prepared by the consultative bodies established by the EC-ESA Framework Agreement, namely the EC-ESA Joint Secretariat, the European Space Policy Expert Group, and the High Level Space Policy Group.[49]

It is true that there are too many actors in the field of EU space policy. This governance reality may lead to difficulties of co-ordination of the overall actions in the field of space. But also the different position has been held from ESPI: *"The more actors get involved in space, the better it is for this policy area, it arises only the challenge to find ways to handle this trend".*[50]

But who are the main actors in the frame of the 2nd Pillar? An extract from a recent EC's Working document, with the title *"European Space Policy Progress Report"* (Sep. 2008) is rather revealing:

> ***"In view of an improved coordination between civil, security and defence related space activities, the services of the European Commission and the EU Council General Secretariat have set-up a structured dialogue, involving also the European Defence Agency (EDA) and EU Satellite Centre (EUSC)."*** **The objective is to exchange information and optimize the synergies between the various actors' activities and programmes, in the context of ESDP and other EU Policies.**

To this we would like to add that the Council Secretariat is supported by the EUMS and the situation Centre (SITCEN). There is also the third Agency of the EU (the Institute for Security Studies), who has a role to play as well. A recent study from ESPI gives all necessary general information regarding these entities along the whole framework for space and security in Europe.[51]

European Defence Agency (EDA)

The EDA is an EU agency with around 100 staff. EDA has been created by a Joint Action of the Council of Ministers on 12 July 2004 to support the Member States and the Council in their effort to improve European defence capabilities in the field of crisis management and to sustain the ESDP as it stands now and develops in the future. High Representative (at present Mr. Solana) is Head of the Agency, chairman of the Steering Board, which acts under the Council's authority and within the framework of guidelines issued by the Council. EDA's access to the Council is maybe more streamlined than the other two EU Agencies since it refers directly to the MS Ministers of Defence (its Steering Board).

> **The EDA work covers mainly the development of military capabilities and armaments, which are areas for which Member States are solely responsible.**

But the EDA also has roles - in research and technology, the defence industry and markets - which interact with Commission competences. The Joint Action establishing the EDA indicates that the agency *"should fulfil its missions in full respect of the competences of the European Community".*

The EDA involvement in the Council's Draft Initial Road Map, step #7, is described as such: *"Based on agreed operational needs, the following actions could be undertaken: In the longer term, the requirements for space capabilities needed for security and defence as well as for other purposes should be developed and agreed upon, and drive future programmes that may be the subject of multilateral co-operative projects supported or possibly managed by the EDA on behalf of Member States."*

Since identifying and acting on Europe's capability needs are at the root of the EDA's mission it seemed logical that EDA would deal with the ECAP Projects evaluation. EDA has been tasked by the Council (endorsed on 23 May 2005 at GAERC) to examine the individual ECAP Project Groups and the process as a whole. After this evaluation, some of them would cease or some would be migrated for a more integrated process associated with the EDA. Although the migration for Space Assets ECAP Project Group has been decided with an indicative timeline of January 2006, finally this group of experts ceased its work.

The SPASEC Report recommended that *"In order to support the exchange of information, Commission with the coordination of 2nd Pillar*

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[49] It can be expected that every major move regarding this issue evolves mainly from the Space Council's decisions. For example in 2008 Council identified as new priorities within the European Space Policy also the Climate Change and International Security and Space Situational Awareness (SSA).

[50] Schrogl, Kai-Uwe, Mathieu, Charlotte, Bruston, Jean, Rieder, Sebastian *"Governance of Space Activities in an Evolving European Framework – How to Achieve Coherence and Effectiveness?"* ESPI Perspective #18. Vienna: European Space Policy Institute, February 2009.

[51] Wolfgang Rathgeber, *"The European Architecture for Space and Security",* ESPI Report 13, August 2008, available from http://www.espi.or.at/images/stories/dokumente/studies/espi_report_13.pdf.

(EDA) should support and develop a process to ensure interoperability between current space systems in Europe in the fields of Earth observation and communication", it was logical for EDA to concentrate its work to these two main space domains.

According to its program for 2006 its work would focused "*to foster cooperation on interoperability of ground stations for communication and observation while exploring in parallel possibilities for longer-term cooperation in image intelligence capabilities".* EDA's focus on satellite communications, has been successful since proposals focusing on effective collaborations on this domain have emerged (notably with regard to the creation of a dedicated Ad-Hoc Project Group on the European Satellite Communication Procurement Cell).[52] On the other hand its mission on Earth observation initially was not carried out, since some MS reacted in the way this mission was allocated to EDA. It seems that the situation has already changed.

EDA has launched Research and Technology projects such as the "Micro-satellite Cluster Technology"[53] or studied solutions regarding space born Synthetic Apperture RADAR (SAR). EDA also assisted MS contributing to EU operations by providing a capability to analyse imagery received from a variety of tactical platforms (Unmanned Air Vehicles, reconnaissance aircraft, etc.) at one single work-station, with the help of the SatCen. With a Tactical Imagery Exploitation Station (TIES) demonstrator end-users could have workstations integrating satellite and locally acquired reconnaissance as well as mapping at their disposal. It has also worked on Maritime Surveillance on facilitating an ESDP recognised Maritime picture and on the definition of military requirements, with a focus on linking the wide range of entities involved in managing maritime surveillance across the EU (i.e. EU Satellite Centre provided expertise in this project).

But maybe the most important engagement of EDA in space activities is the acceptance of the Multinational Space-based Imaging System (MUSIS) as a new programme. MUSIS has been launched in 2006 by six European Union Member States: Belgium, Germany, Greece, France, Italy and Spain.

The MUSIS project aims at establishing a multinational space-based imaging system for surveillance, reconnaissance and observation to ensure continuity of services from the current French Helios II, German SAR LUPE and Italian Cosmo-Skymed and Pléiades systems, from 2015-2017 onwards. The project has now become an EDA Category B project and will be open to participation of other EDA participating MS. Since the MUSIS project is already a quite challenging operation it is understandable that the existing contributing Members will evaluate if new proposed contribution would be acceptable.

The involvement of EDA in MUSIS can be considered very positively, essentially on the harmonisation of requirements regarding the ground segment issue. *"Space-based related assets are critical to improve European military capabilities, including for information gathering. The approved project will be critical to ensure this capability in the longer-term and I welcome very much the initiative of the six EU Member States to bring it to EDA",* Javier Solana, Head of the EDA, said.[54]

According to the recent Report by the Head of the EDA to the Council (GAERC, 18 May 2009) EDA will also support wider European participation, and seek synergies with Earth observation programmes on the civilian side, in particular with the Global Monitoring for Environment and Security (GMES) programme of the European Commission.

Ministers of Defence have tasked the Agency on 18 May 2009 to propose a framework for maximising complement arities and synergy between defence and civilian security-related activities.

EDA will also propose a coordinated Programme which will benefit from the Commission's activities within the 7th Framework Programme in areas such as Space and Security research.

EDA, having a common interest with ESA in security-relevant programmes, is exploring synergies in programmes like the *"Space Situational Awareness (SSA)",* the European Data Relay Satellite System or the Unmanned Aerial Systems (UAS). The SSA programme, which has been approved by the ESA's Ministerial Council in November 2008, directly

[52] *"Council conclusions on European Security and Defence Policy (ESDP)"*, 2943rd EXTERNAL RELATIONS Council meeting, Brussels, 18 May 2009.

[53] The aim of the project was to work on a system of micro-satellites that could achieve similar resolution and accuracy as larger satellites, but at lower cost.

[54] European Defence Agency, Press Release, New Project on Space-Based Earth Surveillance System, Brussels, 5 March 2009.

serves the strategic aims of the ESP by supporting the independent capacity to securely operate Europe's critical space infrastructure. MS mandated the EDA to consolidate the military requirements (by 2010) and that was why a new EDA Project Team, dedicated to SSA, was established.

EU Satellite Centre (EUSC)

The creation of the Satellite Centre at Torrejon, Spain in 1991, immediately after the first Gulf War, was the first major contribution to a genuine European space-based capability in Earth observation domain. Following an experimental period it became Western European Union's permanent body in 1995.

SatCen became an EU Agency in 2001. In accordance with its Council Joint Action, the EUSC shall, in coherence with the European Security Strategy, support the decision-making of the European Union in the field of Common Foreign and Security Policy (CFSP), in particular the European Security and Defence Policy (ESDP).

The political supervision is exercised by the Political and Security Committee (PSC) while its operational direction is given by the Secretary-General/High Representative. Its core capability is focused on imagery analysis mainly from Earth observation satellites producing Geospatial Intelligence (GEOINT) products and services. Its products result from the analysis of satellite imagery and collateral data, including aerial imagery. Furthermore it provides related services (i.e. training).

The EUSC, with around 100 staff, focuses its activities in support of CFSP/ESDP priority issues defined within the European Security Strategy (Counter Terrorism, Non-proliferation of Weapons of Mass Destruction, Regional Conflicts, State Failure and Organized Crime). This support includes activities such as general security surveillance, the missions in Article 17 (2) TEU, treaty verification, arms and proliferation control, maritime surveillance and environmental monitoring (including both natural and man-induced disasters) or exercises.

During its first period as an EU decentralised Agency, EUSC's role was not clear enough to other major space players.[55] But its role as a true actor of European Security and Defence Policy and crisis management, has been recognised since it was mobilised for all EU operations.[56]

According to its Director *"SatCen has experienced a remarkable evolution during the last two years, mainly due to the huge increase in task requests for ESDP operations and missions. The EUSC has had to shift its workforce completely in order to attend to the large amount of tasks for these operations and missions, all first priority".*[57]

Over the last years EUSC has made use of imagery from almost every existing commercial satellite in fulfilling its tasks, but in some cases experienced difficulties regarding its availability for operational support. Progress was made on access to European governmental imagery which is of paramount importance for the EUSC.

On November 10, 2008, France, Italy, Spain, Belgium and Greece signed an arrangement for the EU to get access to Hélios II governmental imagery through the EUSC. On the same day, Italy signed an arrangement to give the same access to classified imagery from the COSMO-SkyMed Synthetic Aperture Radar (SAR) satellites. An agreement on another SAR satellite sensor, Germany's SAR-Lupe, is forthcoming. The Council in May 2009 encouraged the facilitated access of the EUSC to governmental imagery.

Where does EUSC stand regarding the initially identified elements of the preparatory phase of the European Space Programme?

SatCen, as the only relevant CFSP/ESDP operational tool, is already contributing to the permanent cross-pillar "structured dialogue".

EUSC currently participates *as observer* in a number of governance mechanisms of space policy and programmes in all its aspects (i.e. EC and ESA's High Level Working Group, GMES Advisory Council and GMES Program Office), implementing the ESP recommendation for optimising synergies through a structured dialogue with the MS and within the EU 2nd and

[55] This is evident from the recommended actions of the White Paper on Space pursued. On section 3.4. *"Space as a contribution to the CFSP, the ESDP and to the anticipation and monitoring of humanitarian crises",* among other recommendations there is the one dealing with a study on the potential role of the EU Satellite Centre.

[56] Javier Solana, EU High Representative for Common Foreign and Security Policy, at the meeting of EU foreign and defence ministers in November 2008.

[57] Frank Asbeck, *"EU Satellite Center – A bird's eye view in support of ESDP operations",* European Security and Defence Policy, Issue 8, summer 2009.

3rd Pillar. This participation is coordinated closely with the Council General Secretariat. Matters of Space Policy have been currently dealt with at the Directors' level.

The Centre has already been involved in elements of the future European Space Programme, for example the GMES/Kopernikus Community program. The Centre was mentioned in the Communication from the Commission to the Council and the European Parliament. This shows that the EUSC is attaining a higher profile in the space and security related activities of the Commission.[58]

According to SatCen's Annual Work Programme: *"During 2008, potential roles for the EUSC in GMES were outlined. They ranged from introducing the EUSC as a main GMES interface with the ESDP community to placing the EUSC as a key player in providing GMES core services for security".* This involvement is bringing along other actors from the 2nd Pillar, such as Council General Secretariat (DG E VIII) and the EUMS (it has applied to be part of the user group of some GMES security projects). Also the EUSC has cooperated with the EDA and the Council Secretariat EUMS and SITCEN in identifying CFSP related needs.

Unlike for GMES, the EUSC has not made any moves to participate in any of the bodies of the first Flagship of the European Space Policy. The GALILEO project is not only a major European investment in essential European infrastructure but also essential for crucial applications such as border control, transport management and logistics, financial operations and the surveillance of critical energy and communications infrastructures.

As it has been also proposed from the European Parliament,[59] the EUSC should examine in the future the ways that can use the Public Regulated Services (PRS) signal for specialised GEOINT products (i.e. interactive maps), or in order to enhance the geographical accuracy of the acquired images in theatre by using PRS data as Ground Control Point's.

MUSIS will replace current governmental Earth observation capability that the EUSC currently uses and ensure continuity of service from 2015 onwards. It was approved as an EDA programme (aiming at federating nationally provided space components through a generic user ground segment). According to EDA, other PMS have already expressed interest to join and, furthermore, potential synergies with Europe's Global Monitoring for Environment and Security (GMES) initiative will be assessed.[60]

The Commission's Green Paper on Space also suggested that GMES and the BOC (whose MUSIS implements its second phase) have many points of interaction, so the GMES could be complemented by BOC. In light of this, it is likely that EUSC will pursue to be present in the relevant discussions, as a way to cover also the requirement of the availability of assets when needed (step # 2 of the Council's initial road map).

Among other activities in the Earth observation domain, SatCen and the European Maritime Security Agency have initiated cooperation in various domains related to the use of image interpretation for maritime security (i.e. detection of pollution by ships).

SatCen has also demonstrated its capability to address issues belonging to the responsibility of the 3rd Pillar.[61]

Furthermore, in expanding its operational capability, the SatCen has already used elements of different space domains (such as satellite communications) in its work in order to speed up commercial satellite data ordering and delivery.

Also it has conducted pilot projects for product dissemination, since there is a need of improving the channels that send products in supporting EU Operations, which on external theatres usually go directly to the demander.

ESA's EDRS would be of interest to EUSC's mission since compared to the existing Earth observation ground stations network, it will allow delivery of near real time data, provide improved

58 *"GMES will make an important contribution to serve the EU's civil security needs. In addition, it will provide opportunities for additional capabilities for the ESDP. All possible civil and military synergies should be pursued to ensure a better use of resources, in full complementarity with the EUSC, which is already operational in this area".* Communication From The Commission to the Council and the European Parliament, Global Monitoring for Environment and Security (GMES): From Concept to Reality {SEC(2005)1432}, Brussels, 10.11.2005, COM(2005) 565 final.

59 Von Wogau, Karl, *"Resolution on Space and security",* EP Committee on Foreign Affairs INI/2008/2030, 10/07/2008. The European Parliament adopted it by 483 votes to 99, with 20 abstentions.

60 EDA Bulletin Issue 12, June 2009.

61 Workshop on Space and Internal Security – Developing a Concept for the Use of Space Assets to Assure a Secure Europe, European Space Policy Institute (ESPI),Vienna, Austria, 28 May 2009.

redundancy and increase European independence. In the longer term, it is expected to provide independent communication to security-related systems while it will contribute to improving considerably the data recovery of GMES services.

The Centre takes also part in the Space Situational Awareness, an ESA's Preparatory Programme. SSA directly serves the strategic aims of the ESP by supporting the independent capacity to securely, sustainably and safely operate Europe's critical space infrastructure. MS mandated the EDA to consolidate the military requirements and EUSC can cooperate to this.

The SSA User Group features the participation of the national space Agencies and Ministries of Defence of several ESA's Member States as well as representatives of the EU Council, EC, EDA and EUSC. The operational experience of the EUSC in managing commercial and governmental data together with its experience in handling different levels of confidentiality is seen as a key asset in this context.

Finally, EUSC is currently undertaking a trial project with the US National Geospatial Agency (NGA), which might lead to greater collaboration, pursuing thus the international Cooperation dimension of the ESP. It has been noted that beyond Europe, basic cartographic information is lacking to support the efficiency of operations linked to humanitarian aid, food security, crisis management and conflict prevention. There is also a need to improve the data collection on populations, available infrastructure and resources in sensitive areas within and beyond Europe.[62] NGA-EUSC collaboration could be a growth area that would significantly benefit EU operations along wider interests.

The EC's activities within the 7th Framework Programme in areas such as space research along relevant programmes of ESA are of high interest to EUSC, and SatCen has already participated in such projects.

Institute for Strategic Studies (EUISS)

EUISS is a focal point for academic exchange, networking and monitoring of the European security agenda as well as a policy-orientated think tank supplying European policy-makers with analysis, advice and suggestions. The Institute via its detailed studies and its high level conferences has significantly contributed both to the public awareness needed and to the debate regarding the role of space systems in the defence and security needs of the European Community. One of the early characteristic examples of its support is the published report entitled *"The Galileo Satellite System and Its Security Implications",* EU-ISS occasional papers, n°44, Paris, April 2003.

In December 2003 EU ISS published another a report, drafted together by six European research institutes, which was presented to a seminar that the Italian Presidency organized in Rome[63] entitled *"Space and Security Policy in Europe"* with the aim of furthering the general discussions on the importance of space applications (ISS occasional papers n° 48).

Also, on 16 March 2007, the EUISS held a seminar on Global Monitoring for Environment and Security (GMES) with a view to raise stakeholders' awareness on the security dimension of GMES and to obtain guidance for implementation.

Council General Secretariat (CGS)

The Secretariat has been enforced to act as a co-ordinating body of the actions of the 1st and the 2nd Pillar interacting also with the Member States, to implement the roadmap and the relevant ESDP Space policy. As such it is already involved in the permanent cross-Pillar *"structured dialogue"* within the preparatory phase of the European Space Programme.[64]

CGS also has the capability to approve the requirements set out by EDA and the civilian requirements in close coordination with EUMC and CIVCOM, including EUMS and CPCC (a new entity in charge of the planning, deployment, conduct and review of civilian ESDP crisis-management operations).

The Council General Secretariat, according to EUSC's and EUISS's Joint Actions, since 2001[65] has regular contacts with both Agencies (i.e. the Satellite Centre receives not only operational

[62] Communication from the Commission to the European Parliament and the Council, *"Global Monitoring for Environment and Security (GMES): Establishing a GMES capacity by 2008 - (Action Plan (2004-2008))",* COM (2004) 65 final, Brussels, 3.2.2004.

[63] Istituto Affari Internazionali, International, *"Report on space and security policy in Europe",* Rome, October 2003.

[64] According to 1st Space Council : *"The European Space Programme will constitute a common, inclusive and flexible framework on the basis of which activities and measures would be taken by the European Union, the European Space Agency and other stakeholders (e.g. national organizations)".*

[65] Before their functions were transferred to the EU, the Centre and the ISS were part of the WEU structure.

direction, but also practical support and advice from the Secretariat).

Especially with the SatCen, the Secretariat's Directorate-General E (that is External Economic Relations, Politico-Military Affairs, Defence Aspects (DG E VIII)), has been an effective interface for the EUSC's tasking. This function results from the role of High Representative for CFSP exercising the operational direction to the Centre (it includes mainly tasking issues) and is in practice delegated to the Director of DG E VIII. All tasks put forward on the Centre are channeled via DG E VIII so the SG/HR, as well as the PSC and the EUSC Management Board have the necessary visibility. CGS coordinates and prioritises all task requests. Also CGS supports the coordination of issues between the Centre and other bodies of the Council.

Among the other space-related functions of the Secretariat are the following: GSC has worked together with the Commission on the identification of end-user communities of the GMES for future security applications and on specific generic requirements to fulfil security missions. Also it has participated as representative of the EU Council to the SSA User Group. Along with the EC it will also work on recommendations regarding the report SG/HR presented to the European Council (2008), about the security implications of climate change.

Finally, the Secretariat deals with the relations with international organisations as well as with third parties that also present a space dimension for cooperation.[66]

5. Conclusions

Space shall remain high on the EU political agenda for the forthcoming years. One possible impact of the current difficult economic period is to lose some of the momentum space has gained the last years. This on the other hand may give enough time for necessary organisational actions.

In 2002-03 when ESDP and Space have been addressed for the first time, it has been said that the 2nd Pillar had a weak institutional presence regarding space matters. Even if it was true back then, that did not bother initially the EUMC (with the help of the EUMS) and later on the CGS to efficiently produce such a huge and important work covering all issues: from the definition of the policy level as a guideline for the co-ordination of all actions in the field of the use of Space assets for ESDP purposes to the definition of the relevant operational requirements and to the close interaction with other actors.

The adoption of the ESP and the call for a cooperative *'Structured Dialogue'* towards the definition of the future European Space Programme urges again the contribution of the 2nd Pillar along with its Member States. Of course this dialogue needs to be further put into practice and the development of a more comprehensive agenda should be pursued. This time the issue of updating the requirements would be just a building block. Much remains to be done.

Admittedly the exercise of developing an EU Space Programme is more complicated since it there are so many actors (with new also added), and many multi-dimensional programmes involved. A possible removal of the "Pillars system" would facilitate this exercise.

The EDA, the EUSC, the EU Military Committee and the CIVCOM, the EU Military Staff and the General Secretariat of the Council, each one in its competence, can contribute significantly to the developing of the European Space Programme which would cover also 2nd Pillar's needs. These bodies must have the personnel and budget resources required for this new and extended role.

Presently one thing is sure. The new task, apart from wide consultation, coordination and commitment will require a mixture of operational and technical expertise, which at this time may not be present in all these entities.

But since this task will be a long evolutionary process of increasing complexity which will take many years to evolve, EU institutions have all the time not only to bring advisers and highly qualified experts to augment this work but to make also any kind of necessary adjustments (i.e. set up special units, formulate necessary mechanisms, define procedures, etc). Time is on their side.

[66] The EUSC, apart from using the Kiruna ground receiving station in Sweden, examines also the possibility to utilise and the Norwegian KSAT satellite ground station. This would give to the EUSC access to multi-mission stations where programming and reception of data from different satellites can be performed. It also gives possibilities for frequent contacts with near-polar orbiting satellites.

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