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To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
Subject:	Report of the High Representative of the Union for Foreign Affairs and Security Policy to the Council on the functioning of the EU Satellite Centre (2014-2019)

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GREFFE

Report of the High Representative of the Union for Foreign Affairs and Security Policy to the Council

of 31/10/2019

Report on the functioning of the EU Satellite Centre (2014-2019)

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Report of the High Representative of the Union for Foreign Affairs and Security Policy to the Council

"Report on the functioning of the EU Satellite Centre (2014-2019)"

EXECUTIVE SUMMARY

In accordance with Article 22 of Council Decision 2014/401/CFSP of 26 June 2014, this report by the High Representative to the Council analyses the past five years of the functioning of the EU Satellite Centre (SatCen) and provides recommendations with a view to its future development.

The SatCen is a unique and valued intelligence instrument of the EU Common Foreign and Security Policy (CFSP), including the Common Security and Defence Policy (CSDP), supporting also Member States, EU institutions and agencies as well as international organisations. Over the past five years, it acquired 12700 satellite images and delivered 8834 products to its users. The annual production more than doubled during the period, with the number of products for core tasks being multiplied by more than three. While the EEAS, acting on behalf of the HR, and the Member States are the main users of SatCen services, support to international organisations and the cooperation with EU institutions and agencies have developed substantially. This has been achieved by means of improved efficiency, cooperation and increased income from EU Budget, with the support of an overall budget of €34 million and a workforce of 141 staff (in 2018).

The analysis of the functioning of the SatCen shows that it has performed well and achieved significant efficiency gains, in view of the fact that Member States' contributions remained constant while the production increased. However, several issues hindered the SatCen from further developing its capability, the root cause being in most cases insufficient long-term structural funding.

This report recommends that the SatCen's mission be pursued and reinforced in order to guarantee the highest level of quality and European autonomy in the assessment of internal and external threats and in order to continue adapting to growing demand and technology evolution. To this effect, and in line with the EU Global Strategy recommendation to enhance investments in Intelligence, Surveillance and Reconnaissance, the SatCen should benefit from sustainable resources responding to its long-term structural and evolution needs, in particular from the EU budget. Its operational and institutional governance modalities should be clarified accordingly.

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1. INTRODUCTION

As outlined in the Global Strategy for the European Union's Foreign and Security Policy, the Union is a global security provider, with the strength to contribute to peace and security in our region and in the whole world. In view of the current and emerging threats, an appropriate level of ambition and strategic autonomy is important for Europe's ability to promote peace and security within and beyond its borders. Europeans must be able to protect Europe, respond to external crises, and assist in developing its partners' security and defence capacities, carrying out these tasks in cooperation with others. Alongside external crisis management and capacity-building, the EU should also be able to assist in protecting its Members upon their request, and its institutions.

To this effect, better and shared assessments of internal and external threats and challenges are deemed essential and will require enhanced investments in Intelligence, Surveillance and Reconnaissance, based notably on aerial and space capabilities. The Implementation Plan of the EU Global Strategy recommends in this regard making full use of the EU Satellite Centre to enhance strategic foresight, anticipation and situational awareness.

The EU Satellite Centre (SatCen), with twenty-seven years of expertise in geospatial intelligence (GEOINT), is a unique and valued intelligence instrument of the EU Common Foreign and Security Policy (CFSP), including the Common Security and Defence Policy (CSDP). It also has proved very valuable for the Member States, EU Agencies and international organisations.

As a decentralised agency of the European Union with intergovernmental governance, founded on Articles 28 and 31.1 of the Treaty on European Union, SatCen supports the decision-making and actions of the Union in the field of the CFSP and in particular the CSDP, by providing products and services resulting from the exploitation of relevant space assets and collateral data, including satellite and aerial imagery. This mission is performed under the political supervision of the Political and Security Committee of the Council and under the operational direction of the High Representative of the Union for Foreign Affairs and Security Policy. In November 2017 and June 2019, the Council stressed the valuable contributions of the EU Satellite Centre to increasing European situational awareness.

The SatCen is today at a crossroads. The increased need for intelligence, the new paradigm in Earth observation, the expected new European Union space programme and security and defence proposals under the 2021-2027 multi-annual financial framework, and the appointment of a new director all offer opportunities for the fulfilment of SatCen's present and future missions. However, the SatCen has been facing a number of recent difficulties, such as budget approval and sustainability, which – if alleviated – would allow it to reach its full potential. In line with the requirement set out in Article 22 of Council Decision 2014/401/CFSP of 26 June 2014, this report analyses the past five years of the functioning of the SatCen and provides recommendations with a view to its future development.

2. BACKGROUND

The European Union Satellite Centre (SatCen) was established by Council Joint Action 2001/555/CFSP of 20 July 2001 and started working as an EU Agency from 1 January 2002. The continuation of the centre and the development of its mission were confirmed by Council Decision 2014/401/CFSP of 26 June 2014, as last amended by Council Decision (CFSP) 2016/2112 of 1 December 2016 ('the CD'). The centre is established in Spain (Torrejón de Ardoz) with a Liaison Office in Brussels.

Article 2.1 of the CD provides that the SatCen supports the decision-making and actions of the CFSP, in particular the CSDP, including EU crisis management missions and operations, by providing products and services resulting from the exploitation of relevant space assets and collateral data, including satellite imagery and aerial imagery, and related services (core mission). The SatCen may provide products and services to Member States, the European External Action Service (EEAS), the Commission or Union Agencies or bodies, as well as to third States and international organisations (extended mission, Article 2.2). The SatCen may also cooperate with the Commission, other EU bodies or Member States to maximise synergies and complementarity with other Union activities, in particular in the field of space and security (enhanced mission, Article 2.3).

Finally, the SatCen is in charge of performing the residual administrative tasks resulting from the dissolution of the Western European Union Article 2.5).

A previous report from the High Representative on the functioning of the SatCen was delivered to the Council on 14 September 2012 covering the period from 2001 until July 2012[1]. The report contained the following main recommendations:

- Remedy the insufficient level of funding notably by extending the application of the cost-recovery principle and by better prioritising tasking requests;
- Improve and strengthen the political steering of the tasking mechanism and create a Tasking Committee;
- Enhance the capabilities, notably through the use of the next generation of governmental imagery systems, supported by the implementation of a secure network and a specific portal for governmental imagery;
- Reinforce the analysis capacity through staff recruitments and secondments;
- Examine the use of GMES (now Copernicus)
- Pursue activities in R&D under the 7th Research Framework Programme
- Take into consideration emerging requests related to internal security
- Consider the adoption of a framework for cooperation with third parties, notably international organisations

An analysis of the implementation of these recommendations is provided in the Annex.

[1] Report from the High Representative to the Council on the functioning of the European Satellite Centre of 14 September 2012. Ref. Council of the European Union 13769/12, EEAS ref. EEAS(2012)01584

Article 22 of the CD requires that the High Representative presents, by 31st July 2019, a report to the Council on the functioning of SatCen, accompanied, if necessary, by appropriate recommendations with a view to its further development.

3. CONTEXT

The external landscape and security context has drastically changed in terms of geopolitical, technological and business drivers. The urgent need for more autonomy and autonomous security at European level combines with the need to take into account new players and capabilities from the private sector and to integrate new technologies such as artificial intelligence, machine learning and big data analytics. While, on Earth, the largest part of civilian, humanitarian and military interventions are highly dependent upon space-based capabilities, the outer space environment is subject to an increasing risk of in-orbit collisions, an arms race, militarisation and weaponisation. Reliable, resilient and available space-based capabilities are today an indispensable and strategic asset for regional powers.

The EU landscape is also under mutation, with a shift of political priorities towards more security and defence and a reinforcement of related EU policies, such as external relations, space, migration and border surveillance, maritime security, internal security, military mobility, and defence research. The proposed budget for the next multi-annual financial framework 2021-2027, as well as new initiatives presently under consideration, such as the EU Space Programme, the European Peace Facility and the European Defence Fund, the already existing European Defence Industrial Development Plan and PESCO projects also reflect these strategic priorities.

The European Union thus needs timely intelligence to make wise policy decisions in order to maintain 'a secure Europe in a better world' (European Security Strategy). It is the mission of the EU Single Intelligence Analysis Capacity (SIAC, consisting of the EU Intelligence Centre – IntCen – and the Intelligence Directorate of the EU Military Staff – EUMS Int) to provide intelligence analyses, early warning and situational awareness to the High Representative and to the European External Action Service (EEAS). It also offers its services to the various EU decision-making bodies in the fields of the Common Foreign and Security Policy (CFSP), the Common Security and Defence Policy (CSDP) and Counter Terrorism (CT), as well as to the Member States. Although the SIAC benefits from Member States' intelligence contributions, its reactivity, efficiency and reliability also depend on the unique autonomous EU intelligence collection capacity that is SatCen.

The Earth observation domain is undergoing significant developments, with a plethora of raw data, a growing range of services and an enlarged spectrum of security threats, while the volume and value of open source data are increasing. The defence and security user needs also are evolving towards requests for more reactivity (24/7 basis), all-weather day/night capability, real-time response and dissemination, and comprehensive and interoperable geo-services (and tools) that are easy to integrate into (remote) classified networks.

Finally, the SatCen is completing a 5-year cycle, 17 years after its creation as an agency of the EU. This period provides a good basis for analysing the implementation and added value of the 2014 Council Decision.

4. METHODOLOGY

This report covers the five years of the SatCen's activities, from the date of entry into force of the 2014 Council Decision, 26 June 2014[2], until 30 June 2019.

It was prepared on the basis of data and information provided by the SatCen, by the SatCen Board, by the EEAS Special Envoy for Space chairing the Board as the HR's representative, and by the Space Task Force supporting the Board chairperson and currently acting as Tasking Authority, as well as on the basis of inputs and feed-back from stakeholders, in particular:

- Deliverables and documents produced by the SatCen as part of its obligations, such as the Annual Activity Reports 2014 to 2018, the Closing Budget reports for the years 2014 to 2018, the Work Programmes and Budgets for the years 2015 to 2019, as well as data and statistics on its activities;
- Deliverables and documents produced by the Board, such as the minutes of its meetings for the years 2014 to 2019, the Food-for-Thought paper of 2017 and the Conclusions/Recommendations on the future of the SatCen adopted in June 2018;
- Feedback received from the users, notably through consultations of the Experts User Forum, the Technical Working Group, the Copernicus SEA Service, Frontex SLA Service, the EU SST User Interaction Mechanism and the SatCen Board, or through periodic reviews of the tasks implemented under EU funding instruments (delegation or grant agreements);
- The Staff Regulations and Financial Rules revised and approved by the Council in 2017.

This report provides information on the activities conducted by the SatCen during the period considered (Part 5) and assesses these achievements in the light of the previous recommendations, as well as from the point of view of their effectiveness, efficiency, relevance, coherence and EU added value (Part 6). Finally, this report contains a series of recommendations with a view to its further development.

5. FUNCTIONING OF THE EU SATELLITE CENTRE (FACTS AND DATA ON ACTIVITIES)

SatCen activities are driven by its customers who are described and prioritised under Article 2 of the Council Decision:

- the core customers: the Council, the HR and the CSDP missions and operations;

[2] When data related to the year 2014 could not be split to match the reporting period, it is used in whole in this report.

- if capacity so allows and without prejudice to the core tasks, respectively:
  a) The Member States, the EEAS, the Commission or relevant EU agencies and bodies;
  b) Third States associated with SatCen activities;
  c) If relevant in the field of the CFSP, and the CSDP in particular, international organisations.

In addition, SatCen may also, without prejudice to its core tasks, cooperate with the Commission and with Union agencies, bodies or Member States, with a view to maximising synergies and complementarity, in particular in the area of space and security.

SatCen activities imply handling tasking, including secure and classified information whenever appropriate, from well-identified customers, as detailed below, and delivering the requested products and services, including secure and classified products whenever appropriate, to those customers, through secure and classified connections whenever appropriate.

As will be detailed in the following paragraphs, the number and type of users has greatly increased in the considered period.

5.1. Operational activities

SatCen activities cover the following areas:

1) Support to CSDP missions and operations;
2) Support to humanitarian aid, contingency planning, general security surveillance and the fight against terrorism and organised crime;
3) Analysis of critical infrastructures, military capabilities and weapons of mass destruction;
4) In the field of cooperation: the Copernicus Security Service / Support to external action and contributions to the Copernicus Security Service on Border Surveillance; as well as the contribution to the Space Surveillance and Tracking Support Framework;

The deliverables are:

a) Products and services described in a portfolio updated on a yearly basis. These products and services can be classified up to SECRET UE/EU SECRET;
b) Space Surveillance and Tracking Service;
c) Training services;
d) Internally developed IT tools.

The request and delivery of products and services are carried out following specific tasking procedures[3]. Only SatCen User Points of Contact (POCs) are authorised to submit requests to the SatCen Liaison Office in Brussels which forwards them to the Tasking Authority (EEAS, presently the Space Task Force) which assesses the sensitivity of the task and its compliance with CFSP/CSDP policies. Against this background, the Tasking Authority authorises the requests and prioritises the generated tasks in case of need.

[3] Doc 42/16 of 10 May 2016 to the SatCen Board on the SatCen tasking procedures

In application of Article 4.2 of the Council Decision, all requests are made available by the HR to the Member States, the EEAS, the Commission and Union agencies or bodies with which SatCen cooperates. Depending on the legal basis used for the request and on their classification level, the products and services may be shared (Articles 4.1 and 4.3 of the Council Decision).

SatCen delivered 8834 products for the period 2014-2018. Total production more than doubled during the said timeframe to reach a yearly level of 2354 products in 2018. This reflects a global growing interest by users in SatCen capabilities and expertise.

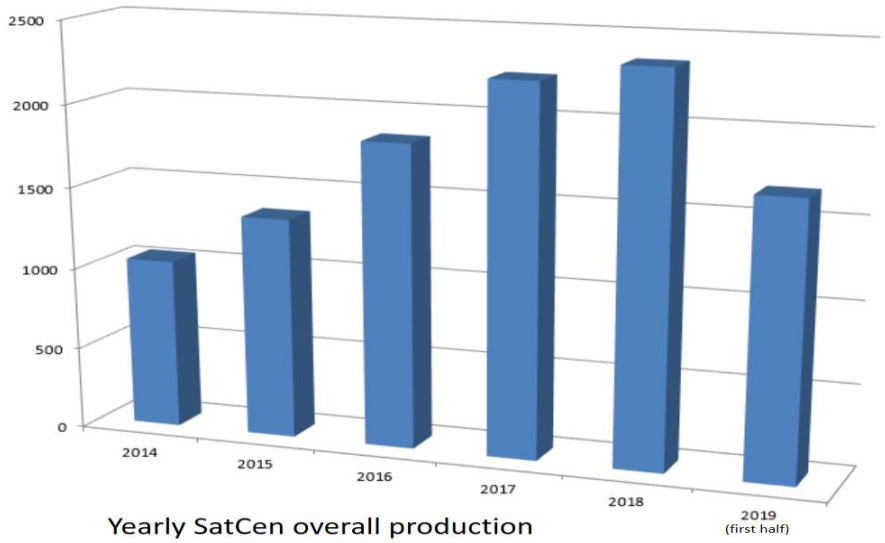


Figure 1 – Evolution of SatCen total production 2014-2019 (first half) - Source: EU SatCen

The following points can be highlighted:

- The SIAC and CSDP and crisis management department of the EEAS, acting on behalf of the HR in the CFSP/CSDP decision-making process, are the main users of the SatCen.
- The number of products for core tasks has multiplied by more than three during the period considered and represents approximately 30% of SatCen products, with an increase in the last 4 years to 46% in 2018, and is still increasing in the first half of 2019.
- Member States rely also increasingly on SatCen products, with a number of products having multiplied almost by three, representing approximately 20% of SatCen products, with 24% in 2018.
- International organisations, i.e. the OSCE (for the SMM-Ukraine) and the OPCW, are also important beneficiaries of SatCen products, with a share of 24%, although the demand decreased in 2018.
- Between May 2017 and mid-2019, the Copernicus Service for Support to External Action received 195 tasks and distributed 356 products (this production is integrated into the relevant

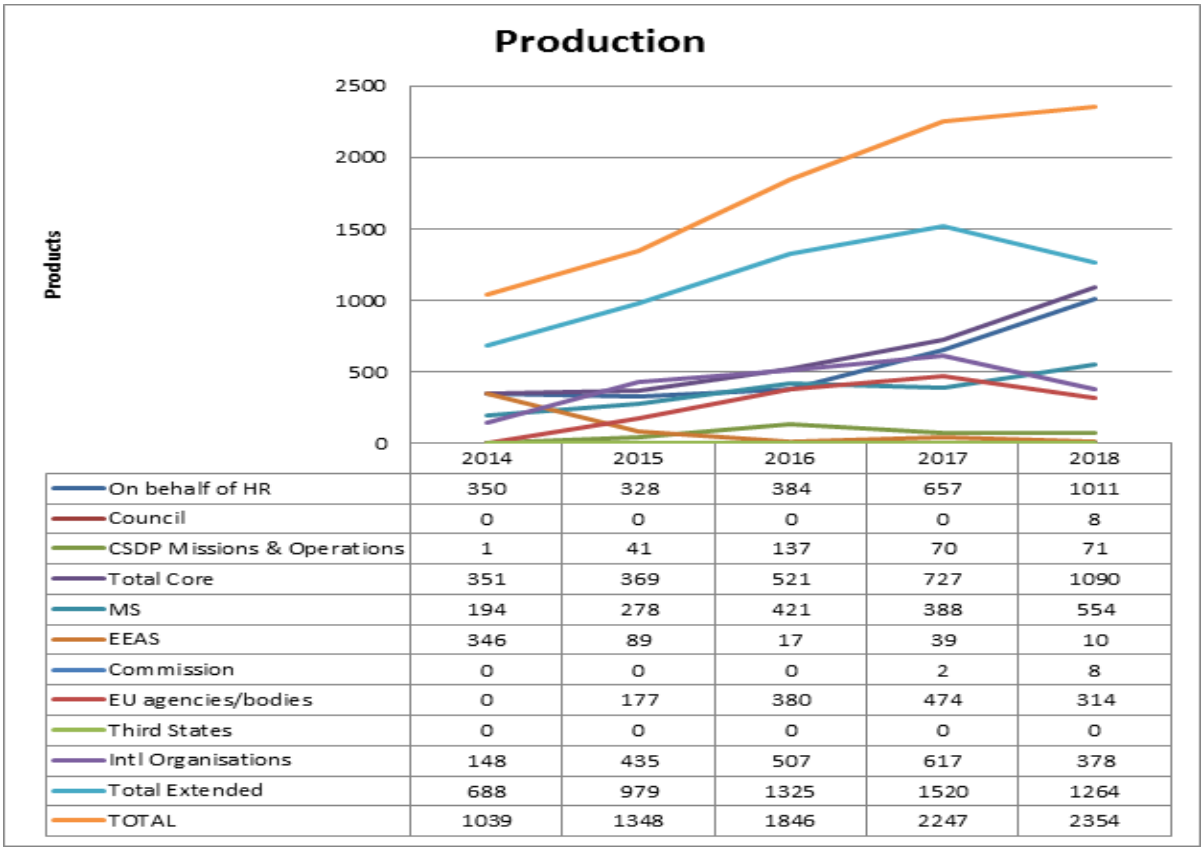
categories hereunder). The production share, corresponding to the beginning of the operational phase (2017), represented 7% of the total production in 2018;

- Frontex began requesting SatCen products in 2015 and has been doing so regularly since, under a Service Level Agreement (SLA) in the framework of the Copernicus Security Service for Border Surveillance. This represents a share of 17% of the total production for the last four years, with 13% in 2018.
- Finally, the uptake by CSDP Missions and Operations remains very low throughout the period considered, with an average of less than 4%.

The following tables provide an overview of SatCen production:

Number of products delivered by SatCen						
Annual reports:	**2014**	**2015**	**2016**	**2017**	**2018**	**Cumulated**
on behalf of HR: EEAS SIAC and CSDP/crisis management	350	328	384	657	1011	2730
Council	0	0	0	0	8	8
CSDP Missions & Operations	1	41	137	70	71	320
Total Core tasks	**351**	**369**	**521**	**727**	**1090**	**3058**
Member States	194	278	421	388	554	1835
EEAS	346	89	17	39	10	501
Commission	0	0	0	2	8	10
EU agencies/bodies (i.e. Frontex)	0	177	380	474	314	1345
Third States	0	0	0	0	0	0
Intl Organisations	148	435	507	617	378	2085
Total extended tasks	**688**	**979**	**1325**	**1520**	**1264**	**5776**
TOTAL	**1039**	**1348**	**1846**	**2247**	**2354**	**8834**
% of core tasks	**34%**	**27%**	**28%**	**32%**	**46%**	

Table 1 - Source: SatCen annual reports 2014-2018



	2014	2015	2016	2017	2018
On behalf of HR	350	328	384	657	1011
Council	0	0	0	0	8
CSDP Missions & Operations	1	41	137	70	71
Total Core	351	369	521	727	1090
MS	194	278	421	388	554
EEAS	346	89	17	39	10
Commission	0	0	0	2	8
EU agencies/bodies	0	177	380	474	314
Third States	0	0	0	0	0
Intl Organisations	148	435	507	617	378
Total Extended	688	979	1325	1520	1264
TOTAL	1039	1348	1846	2247	2354

Table 2 – Source: SatCen Annual reports 2014-2018

The production times[4] for fast products have been drastically reduced between 2014 and 2018: in 2014, only 1,6% of the products were delivered in less than 24 hours after image reception, while these products represented 68,2 % of the total production in 2018. 94% of SatCen products in the first half of 2019 were 'fast products'[5].

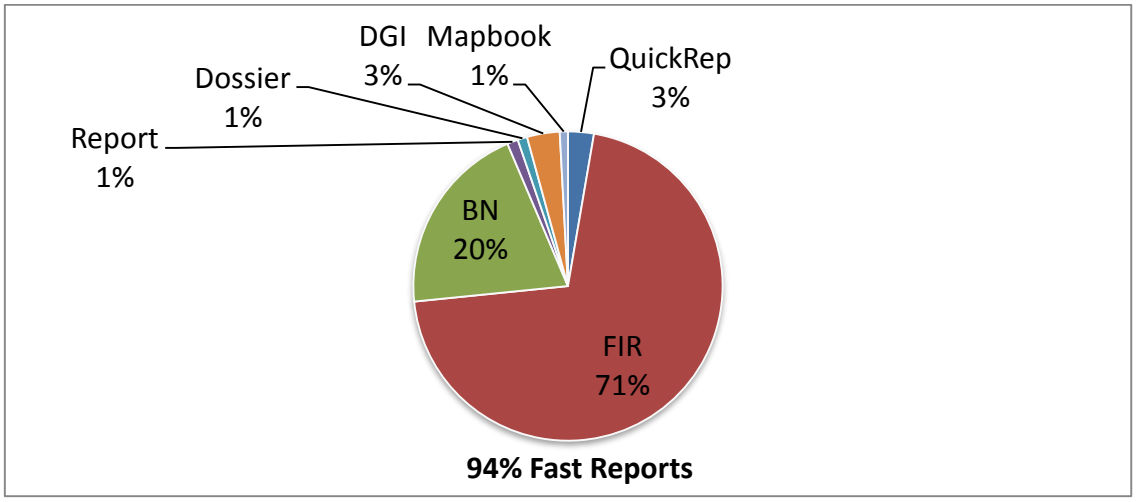


Fig.2 – Types of SatCen Reports in the 4 first months of 2019 – Source: SatCen operational review – 114th Board meeting

[4] Time between start of analysis and publication
[5] Fast products are analyses performed in less than 24 hours, from data reception to product delivery

The share of classified products is the following:

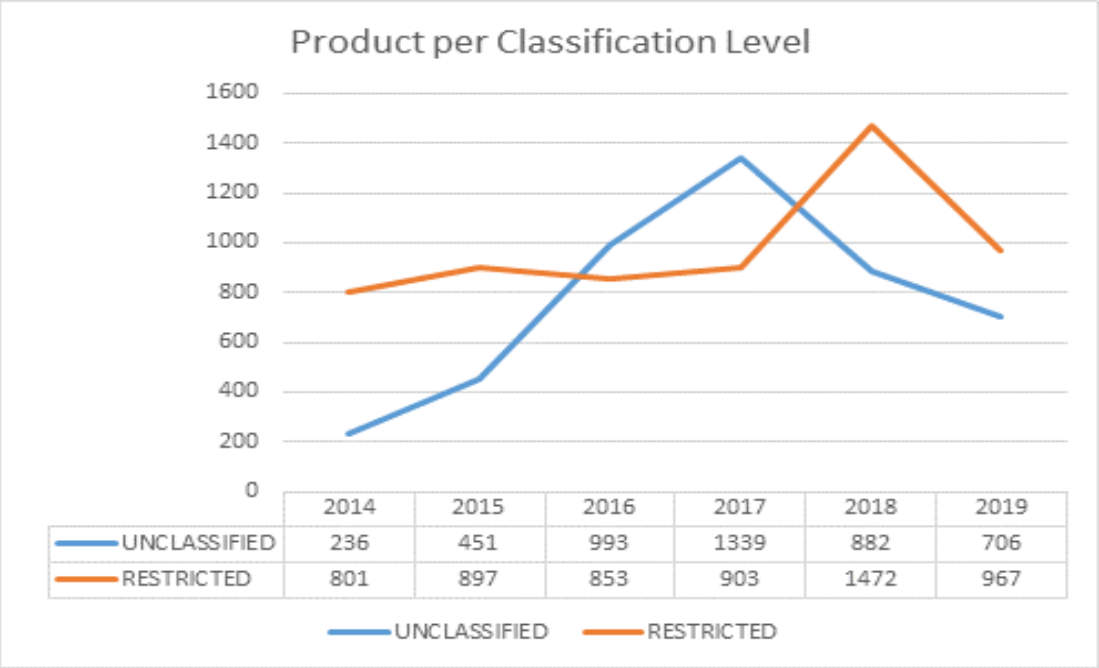


Figure 3 – Evolution of products per classification level –Source – SatCen Annual reports2014-2018 + 2019 figures

5.1.1. Core tasks under Article 2.1 of the Council Decision (Support to the Union on CFSP/CSDP)

Under this provision, the SatCen provides products and services to support decision-making and actions in the field of CFSP/CSDP at the request of the Council or the High Representative. These products and services are considered as core tasks. It is understood that they include the support provided to the CSDP tasks of the EEAS, i.e. to EUMS and IntCen, as well as to the Civilian Planning and Conduct Capability (CPCC), Military Planning and Conduct Capability (MPCC) and the CSDP Missions and Operations themselves.

Direct requests by the Council and on behalf of the HR by the SIAC and CSDP-crisis management department of the EEAS

The number of requests on behalf of the HR by the SIAC and CSDP-crisis management department of the EEAS multiplied almost by three during the period considered. This mainly illustrates the remarkable increase of the use of SatCen expertise, in particular by the SIAC. Compared to overall SatCen production, the percentage of core tasks has also increased from 24 % in 2015 to 46% in 2018 and even higher in the first half of 2019, demonstrating the synergies with the other tasks. IMINT and GEOINT are core instruments in establishing facts and validating intelligence for civil and military purposes, strategic and operational decision-making and planning. SatCen imagery and geolocation capabilities have therefore been playing an increasingly vital role for SIAC to provide intelligence-based situational awareness for decision-makers in the EU and in Member States.

Moreover, the reorganisation of the EEAS in March 2019 has brought the IntCen under the direct authority of the HR, providing more clarity on the fact that IntCen activity is supporting decision-making by the HR.

The EEAS contributes to the financing of SatCen activities by means of an SLA, currently providing €450,000 per year for data acquisition.

For the first time in 2018, eight products were delivered directly to the Council (8 archaeological sites in Iraq reviewed in order to assess the destruction and looting carried out by Daesh).

CSDP Missions and Operations

Since 2015, 16 CSDP missions and operations have been and are still being conducted by the EU. Their use of SatCen products and services is limited. Only 5 of them resorted to SatCen: EU NAVFOR Med Sophia, EUTM Somalia, EU MM Georgia, EU NAVFOR Somalia and EU CAP Sahel. This represents an average of 3.6% of total production, with the exception of a peak in 2016 when EU NAVFOR-Med requested more than a hundred SatCen products. In 2018, these requests represented 3% of the total production. It is not possible to define a trend in the evolution of the requests during the period considered.

While the feedbacks from the few supported missions are positive, this low uptake is striking concerning activities that are part of SatCen's core mission. The main factors that may explain this very limited support are:

- The limited awareness and knowledge about SatCen, leading to a lack of consideration of SatCen capabilities in the planning and preparation of EU CSDP missions and operations, combined with the high rotation of missions and operations personnel;
- Consequently to the lack of awareness, the absence of budget provisions on the side of the missions and operations;
- The fact that the products and services are subject to cost recovery without any possibility for the PSC to waive this obligation; indeed it shall be noted that Copernicus SEA service from 2017, started to support, free of charge, missions and operations with unclassified products;
- The lack of alignment and framework with the provisions of the ATHENA Mechanism,

5.1.2. Tasks under Article 2.2 of the Council Decision (support to Member States, EEAS, Commission Union Agencies, third States, IGOs)

Member States

Member States are entitled to submit requests to the SatCen. As main contributors to the SatCen general budget and the SatCen pension budget, this ability represents a "payback" of their contribution, in addition to the sharing of the whole production (8834 products over the whole period).

Over the period, Member States were the third largest user category of SatCen products and services. On the whole, Member States' use of SatCen products and services has been stable, with a 20% share of total production. This share has increased from 18% to 24% and the trend seems consolidated. The use of the Download Central facility and the completion of the EU OPS WAN connection to the capitals should help sustain the demand from Member States.

EEAS

Apart from the requests made on behalf of the HR in the framework of Article 2(1) of the CD, the EEAS also uses SatCen products, such as a geoportal used to plan possible routes for crisis evacuation services.

Commission

The Commission is entitled by Article 2.2 of the Council Decision to use SatCen. In practice, DG ECHO and DG DEVCO are the typical users of SatCen's services. However, the majority of the support to - and cooperation with - the Commission is done through Copernicus, whose the services are delegated to EU agencies. As expressed below, some of them - like the European Borders and Coast Guards Agency (Frontex) - are very active in areas where the SatCen may contribute.

EU Agencies

SatCen cooperates with Frontex on the basis of a Service Level Agreement (SLA) signed in March 2015 and renewed on December 2017, to support the monitoring of coastal activity and external border activity, as part of the Border Surveillance component of the Copernicus Security Service entrusted to Frontex by the European Commission. SatCen services are used to identify routes, means of transportation, patterns of launch and landing operations and border-crossing activities.

The production for Frontex represents a share of 17% of total production over the last four years, with a rather stable average from 2016 (the service was launched in 2015) of 389 products per year. This activity is fully funded by Frontex and is managed as a multi-annual project, separated from the operational budget. The associated products are made available to Member States, as all the SatCen production.

There is at this stage no formal cooperation arrangement between SatCen and the European Maritime Safety Agency (EMSA), entrusted by the European Commission with another component of the Copernicus Security Service, the maritime surveillance service. However, their respective activities are often complementary and could considerably benefit from structured cooperation frameworks.

International Organisations

Support to international organisations contributes to the EU CFSP. It has been materialised by SatCen during the period through support to the Organisation for the Prohibition of Chemical Weapons (OPCW) and the Organisation for Security and Co-operation in Europe (OSCE). The production over the period is substantial, representing a share of 24% of the production over the period.

SatCen provided support to OPCW **DELETED** 2014 (148 products), 2015 (66 products) and 2018 (22). The support is provided on the basis of Service Level Agreements with cost recovery on the products covered by the Foreign Policy Instruments Service (FPI). SatCen supported inspection and verification teams deployed **DELETED**.

SatCen also provided and continues to provide support to OSCE **DELETED** in 2015 (369 products), 2016 (507 products), 2017 (617 products) and 2018 (355 products). In 2016, the OSCE was the primary user of SatCen products and services among international organisations. This support is also subject to cost recovery supported by the FPI.

The medium term inability to predict and plan this type of production, subject to cost recovery, puts SatCen resources under pressure.

It should be also noted that the cost recovery applied to the products and services provided to international organisations may exceptionally be waived by the PSC (Article 10.5 of the CD). An EU instrument was used to bear the financial burden and support European Union diplomatic action.

Support to international organisations can also be provided within the framework of Copernicus SEA, as foreseen by the Delegation Agreement with the European Commission: for instance, during 2018-2019, Copernicus SEA provided services to the UN Department of Peace Keeping Operations (DPKO).

Third States

No third State has made any request for SatCen products and services during the concerned period.

According to the Council Decision, the notion of third State relates to "*Non-EU NATO members and other states that are candidates for the accession to the Union*". Furthermore, the potential involvement in SatCen activities is subject to a case-by-case evaluation and the compliance of provisions set out in the annex of the Council Decision.

5.1.3. Tasks under Article 2.3 and Article 18 to maximise synergies and complementarity in space and security

Research and Innovation (R&I)

SatCen performs R&I activities to maintain its capabilities at the state-of-the-art as stated in Article 7.6 of the CD. Originally, the centre had a research budget within its core component, but since 2014, almost all research and cooperation activities have been limited by the operational budget as a result of the non-growth of Member States' contributions. As a result, the budget line Technical Development decreased from €795,000 in 2002 to €200,000 in 2018 (€220,000 in 2014), and is now essentially used for IT upgrades (e.g. new workstations, new software). Hence, SatCen lost part of the possibility to perform internal research, applied to its operational and technological needs.

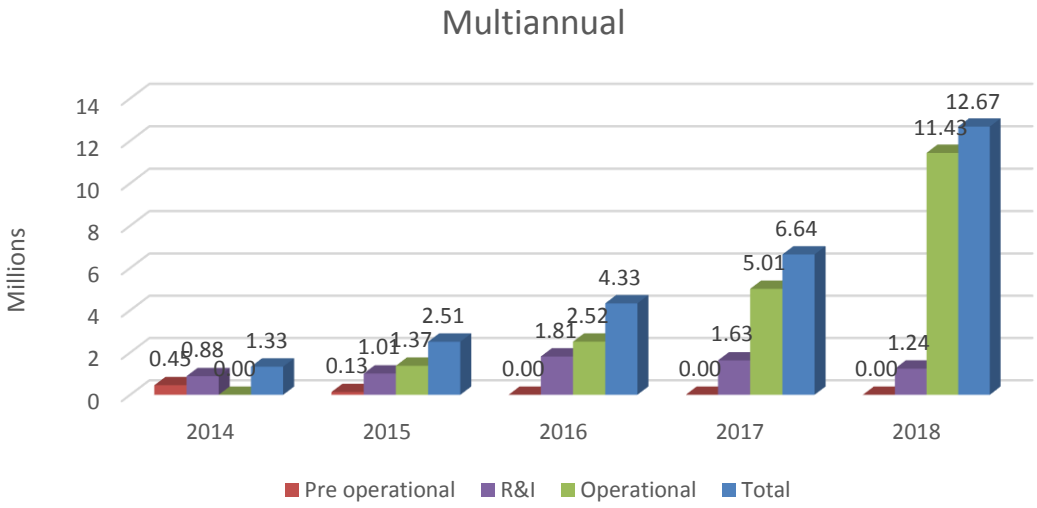


Fig. 4 – Evolution of multi-annual budget between 2014-2018 – Source: SatCen

Figure 4 shows the evolution of the multi-annual budget between 2014 and 2018, in relation to the following elements:

- Pre-operational projects aiming to pave the way and build the foundation for future operational activities
- R&I applied activities (incl. projects and service evolutions of delegated operations)
- Delegated operations including Copernicus SEA, SLA with Frontex and SST SF (front desk).

As shown in the diagram, pre-operational activities in 2014 and 2015 paved the way for the implementation of operational activities that progressively increased over 2016 and 2017. This explains the decrease in the pre-operational budget and increase in the operational budget over the period 2015-2018. R&I activities related to projects diminished over the period 2017-2018 (as the overall number of projects decreased) nevertheless, figures remained rather constant due to the increase of service evolution activities.

In view of the above, SatCen participated during the considered period in R&I activities as a contributor to other entities' R&I activities or projects, mainly under the Horizon 2020 Framework

Research Programme, the Copernicus programme and SST, or for Frontex and the European Defence Agency. They addressed cooperation in the field of space and security, in particular the development of data provision, services, tools and applications in the field of Earth observation, geospatial analysis and data management, leading to achievements such as those listed in the paragraph on *Cooperation*.

Since 2014, R&I and cooperation activities have been separated from the operational budget, since these activities and their funding are planned on a multi-annual basis. Dedicated staff are devoted to R&I activities. The allocated (multiannual) budget amounts around €450,000 for the projects under Horizon 2020 gained on a competitive basis, to which approximately €1 million should be added for the service evolution activity of SEA, Frontex and SST. This budget is almost entirely funded by the Commission. By the end of 2018, more than 20 projects were managed by SatCen providing a substantial part of SatCen total funding. They represented for the period a budget of €3,5 million covering temporary staff and other expenditure dedicated to R&I activities, i.e. an annual budget of around €700,000. As mentioned, this R&I funding mainly comes from the Commission (Horizon 2020, Service Evolution activities in the frame of Copernicus SEA Delegation Agreement, support to Frontex SLA and SST activities). It is only once a project has terminated that a financial balance can be achieved. This approach was validated by the SatCen Board and the College of Auditors.

The Service Evolution activities in the frame of Copernicus SEA Delegation Agreement, Support to Frontex SLA and SST activities, contribute to the overall R&I activities of SatCen. Furthermore they paved the way for a further involvement of SatCen in the Copernicus and SST programmes.

Nevertheless, in addition to the achievements made possible through the activities mentioned, SatCen would fully benefit from a dedicated R&I budget, in order to recover autonomy in defining and conducting internal research activities.

SST/SSA

Space Situational Awareness (SSA) activities - which include Space Surveillance and Tracking (SST) - contribute to the protection of space assets. They are synergetic and complementary activities making use of the operational character of the SatCen.

As part of the service function of the EU Space Surveillance and Tracking (SST) support framework established in 2014[6], the SatCen contribution is governed by the SST Implementing Arrangement signed on 14 September 2015 with the consortium of participating Member States (initially DE, ES, FR, IT and UK, extended in 2018 to PO, PT and RO). SatCen acts as the SST Front Desk and the main interface towards SST users, while the sensor and processing functions are under the responsibility of the participating Member States.

[6] Decision No 541/2014/EU of the European Parliament and of the Council of 16 April 2014 establishing of framework for space surveillance and tracking support

This activity is financed by the European Commission through a complex set of grants. Out of the total €167.5 million provided by the European Commission in the current MFF, the SatCen has received €2.66 million in the period 2014-2018.

Up to June 2019, 1.6 million EU SST products have been provided through the SatCen EU SST portal to around 100 authorised users protecting 130 European satellites. The majority of these products are Conjunction Data Messages (CDM) containing space object orbital information used to analyse potential conjunctions, derived from US and EU SST data. Other products include re-entry predictions and fragmentation reports. SST users are Member States, the Council, the Commission, the EEAS, authorised public and private satellite owners/operators, and civil protection authorities.

The report on the implementation of the SST support framework of 3 May 2018[7] underlined that, while the EU SST has delivered initial achievements, its further development needs to be stepped up, especially with regard to its performance, autonomy, and governance. Concerning the SatCen, the report notably recommends simplifying the financing scheme and further exploring the role of SatCen in EU SST governance to facilitate the provision of EU SST services.

Copernicus

In the context of Copernicus[8], and as a follow-up of the recommendations of the 2012 report of the HR, the SatCen has been entrusted since 2016 by the Commission with the provision of the Copernicus Security Service component, "Support to External Action" (SEA). This component complements the Border Surveillance and Maritime Surveillance services entrusted respectively to Frontex (to which SatCen provides products and services under the previously mentioned SLA) and EMSA, also under the Copernicus Security Service[9].

The SEA service has been provided since mid-2017, based on a Delegation Agreement signed on 6 October 2016. For the period 2016-2021, the funding amount by the Commission is fixed at €28.3 million. The service today provides unclassified geo-intelligence products to the external action user community, including CFSP/CSDP and its missions and operations, to assist the EU and its Member States in their operations and interests outside of the EU (in line with the Tasking Procedures applicable to SatCen products). In accordance with the Copernicus programme objectives (requirements reflected in the Delegation Agreement), a large part of the service is outsourced to industry.

By mid-2019, i.e. after 2 years of operation, the SEA Security Service had received 195 tasking requests, and had delivered 356 products. Although the overall Copernicus data policy allows the classification of products in circumstances where the interests of Member States have to be guaranteed, the Delegation Agreement contains restrictions in this regard. As a consequence the

[7] Report from the Commission to the European Parliament and the Council on the implementation of the Space Surveillance and Tracking (SST) support framework (2014-2017), COM(2018)256 final of 3 May 2018.
[8] Final Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Mid-term evaluation of the Copernicus programme (2014-2017), Brussels, 23.10.2017 COM(2017) 617
[9] See paragraph 5.1.2 above

products delivered remained so far unclassified. Some CSDP Missions and Operations however nevertheless used this service, when classification was not needed, and thereby showed the complementarity of the Copernicus SEA Security Service and SatCen core activities.

Training

SatCen continued to provide training during the period concerned with the aim to enhance expertise on Imagery Analysis/Intelligence and Geospatial Intelligence (IMINT/GEOINT) to image analysts from EU Member States, EU SatCen, EU Institutions and third States.

The courses covered the following topics:

- Introduction to GEOINT;
- Introduction to IMINT;
- Radar imagery;
- Nuclear Fuel Cycle and Nuclear Weapons related facilities;
- Critical industries;
- Sketch-up courses.

This training mainly takes place at the premises of the SatCen. The average number of course participants per year is 134. In situ courses are also organised on demand. Currently, Frontex is the main requester and beneficiary of these courses (60%).

Moreover, training instructors were exchanged during the period with IT, FR and DE, while SatCen welcomed guest instructors from BE, FR, IT, DE, NL and DG JRC.

With the constant increase in participants (reaching 287[10] in-house and in-situ courses participants in 2018), the available resources fell short and suffered from the dire SatCen budgetary situation during the period even though the training activity is a strong and valuable "pay back" to the benefit of the Member States that in return take largely benefit (more than 50% of the Member States) of this unique offer in the field of security and defence.

Other cooperation

The cooperation of SatCen with the relevant institutions, agencies and organisations under Article 2.3 and Article 7 of the CD have led to the following achievements in the concerned period:

- The implementation of the Support to External Action (SEA) Copernicus service with its precursor activities such as G-Next and G-Sextant;
- The role of SatCen in EU-SST as SST Front Desk with precursor activities such as PASS and STEP;
- The development of the EUROSUR pre-operational services with projects as SAGRES, LOBOS and, more recently, the Service Level Agreement with Frontex;

[10] Source: Operational overview – Board 114

- The implementation of projects with a technological and policy component such as Reaching Out, Civilex, CivilNext, EU CISE, MARINE EO, and EU CIVCAP;
- The development of new capabilities for data management and exploitation with projects with a technological component such as BigDataEurope, EVER-EST, and BETTER;
- The cooperation with the European Defence Agency (since 2004), formalized by a cooperation agreement signed in 2016 between the two agencies. This agreement includes a roadmap of activities updated on a yearly basis and paves the way to further developments with activities such as MARSUR, SULTAN, REACT, RSP Display, GISMO. GISMO (GeoHub) is deployed to several EU Missions and Operations as well as to some Member States. Furthermore, it is used as GEO background for the major EU Crisis Management exercises (CME and MILEX).
- The SatCen - ESA Administrative Arrangement signed in 2018 provides a formal framework to work together in R&I topics of common interest. Today, a number of cooperative activities are in place mainly related to the development of new Earth Observation (EO) applications and space technologies that could help increasing the SatCen portfolio in the future.
- The fostering of cooperation with the Group on Earth Observation (GEO) with projects such as NextGEOSS and E-SHAPE as well as with the participation in the EuroGEO initiative and the creation of the Space and Security Community Activity. This collaboration contributes to the building of worldwide synergies with other key EO actors having access to the latest global developments in the EO field.

5.2. Supporting capabilities and activities

5.2.1. Imagery acquisition

From an operational perspective, SatCen does not have direct control over or access to satellite sensors. It is dependent on its providers. This situation can impact the-GEOINT process.

From a sensor perspective and as mentioned above, users' needs drove SatCen to procure 92% of the images as clear weather daylight optical VHR (geospatial resolution < 1 m) while only 6.5% were all-weather SAR. Although the SatCen has been able to organise and operationalise a 24/7 availability, a 24/7 monitoring of locations of interests is not yet fully achievable. This is even more reflected in the relatively flat trend over the period compared to the steep increase in optical imagery.

From a budget point of view imagery acquisition represented over the period a yearly average of €3.3million[11] with a low in 2014 (€3 million) and a peak in 2018 (€3.9 million). Although there is a growth in the expenditure over the period of about 30%, it is rather erratic and not consolidated. Imagery acquisition is influenced by the following factors:

- The contribution of the Member States (quasi flat for several years)

[11] Compilation from the closing accounts

- The EEAS SLA (flat €450,000 so a diminishing resource in real terms over time)
- The cost recovered (as explained above, not consolidated in time)
- The free quota acquired via the Copernicus Data Warehouse (DWH) which represents an estimated indirect saving of €3million per year – partially for 2016 but completely for 2017 and 2018

	2014	2015	2016	2017	2018	Cumulated
Commercial SAR	29	121	88	425	163	826
Total Commercial SAR	**29**	**121**	**88**	**425**	**163**	**826**
Commercial Optical HR	9	12	20	6	89	136
Commercial Optical VHR	1040	1360	1804	3476	3916	11596
Total Commercial Optical	**1049**	**1372**	**1824**	**3482**	**4005**	**11732**
Total Commercial	**1078**	**1493**	**1912**	**3907**	**4168**	**12558**
Governmental (SAR & Optical)	**52**	**48**	**40**	**25**	**34**	**159**
Total	**1130**	**1541**	**1952**	**3932**	**4202**	**12717**

Table 3 - Number of images - Source. Annual reports 2014-2018 + SatCen unofficial document on governmental imagery

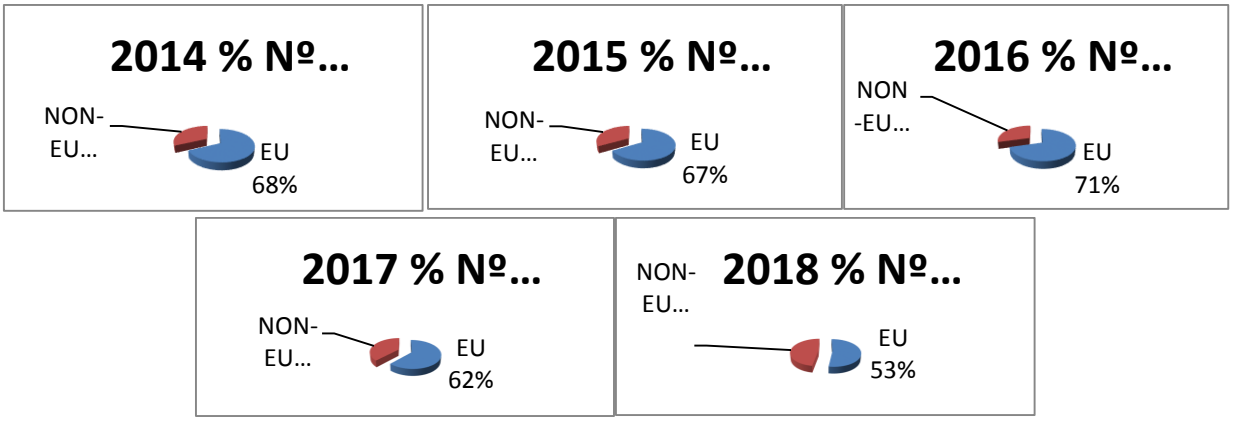


Fig.5 – Share of EU and non-EU images acquired by SatCen 2014-2018 – Source: SatCen

As illustrated by the figure above, the share of the images procured from non-EU sources (47% in 2018) increased in the last years. This can be explained by the evolving requirements expressed by

users, e.g. for higher resolution and faster re-visit times. This demand requires capacities that are not always or easily available in Europe.

Governmental imagery

SatCen benefits from governmental imagery via arrangements concluded between the EU and Member States' classified governmental capacities: Helios 2, Cosmo-Skymed (CSK) and SAR Lupe. Every year a Governmental Imagery Forum is organized with the aim of reviewing the results of cooperation with the different partners and seeking ways to improve.

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Commercial imagery

The SatCen usually procures images from the commercial/private sector. While the quality and reactivity of this type of acquisition is high, confidentiality cannot be guaranteed.

Whenever possible, preference is given to European providers, to support European autonomy as well as to consolidate the competitiveness of European industry. However, today the commercial systems providing the best geospatial resolution are from the US.

As mentioned above, this commercial imagery is the main data source for SatCen, providing flexibility and reactivity in routine conditions but may have limitation in case of crisis.

Copernicus Data Warehouse

Access to the Copernicus Data Warehouse (DWH) had been initially granted by the Commission to all entities entrusted with the provision of the Copernicus Services for the purpose of developing Copernicus services and tasks as well as any R&I activities. The SatCen has benefited from access, for all its tasks, since mid-2016. Three quotas were defined for SEA Service, support to Frontex and other SatCen activities; this last quota was entrusted on the basis of an informal agreement. This temporary free quota to acquire imagery via the DWH (roughly an equivalent of 100 000 km² per year) enabled SatCen to nearly double its acquisitions without additional cost generating an indirect saving of about €3 million per year. It helped substantially to mitigate the flat budget decided by the Member States and the surge in task requests.

Indeed, in view of the very high demand for access to the DWH by all Copernicus users and service providers, the system is facing limitations and access had to be prioritised. Under these circumstances, SatCen's access to the DWH for non-Copernicus tasks has not been available since May 2019.

Other types of data

During the considered period, SatCen increasingly used open source data, providing complementarity with images but also generating specific issues. This trend is clearly to continue, adding a large volume of accessible and relevant data to exploit.

In addition, while no aerial images have been used so far, the SatCen has recently started to evaluate new types of data sources, such as drones or High Altitude Pseudo Satellites (HAPS), which are close to being operational. R&I activities have started to evaluate their use.

5.2.2. IT capability

The SatCen relies on heavy IT infrastructure for administrative management and operational production, distribution and storage. This implies continuously developing its own tools in the areas of task management, geospatial data management and dissemination and artificial intelligence.

The IT budget available over the period oscillated between €1.7 million in 2014 (9.7% of the SatCen Operational Budget) and €1.9 million in 2018 (9.6% of the Operational Budget). Even if this budget was more or less the same, the proportion dedicated to IT was reduced drastically since, in 2009, the IT budget was €1.8 million representing 15% of SatCen Operational Budget.

Concerning the IT staff, the same trend is noted: 14 persons in 2009 (representing 15% of the total SatCen staff), 14 (12.7% of the total staff) in 2014 and 14 (10%) in 2018.

The part of the IT budget directly dedicated to cybersecurity aspects grew from 3.2% in 2009 to 17% in 2018 reducing furthermore the part of the budget available for innovation. The part dedicated to maintenance grew from about 50% in 2014 up to 80% in 2018, leaving a small margin for investment and renewal of the equipment and the software. Putting this in relation with SatCen

dire budgetary situation, it puts at risk the ability to remain state-of-the-art and at the cutting edge of technology.

From 2014 to 2018 SatCen developed many operational applications to increase SatCen productivity. These included imagery processing tools, automatic reconnaissance tools and, recently, AI solutions.

The continuous high rhythm of innovation required, the exponential growth of the data collected and processed, (as mentioned above), the increasing number of tasking requests and the interactivity expected by the users will soon require further upgrades to the current SatCen IT capability. This will require financial resources beyond the current fund allocated to IT developments.

Concerning the security aspects, in 2015 and in 2018, the SatCen underwent two thorough inspections by the Spanish NSA of its classified network. Both were successful and demonstrated the seriousness applied by SatCen to security issues allowing it to perform at EU Secret Level. This is of particular importance since the number of users of the classified network, the volume of data managed by the network and the number of operational applications directly hosted have increased quickly in the past 5 years.

5.3. Budget

The 2014 SatCen budget was composed only of an Operational Budget and a Pension Budget.

It was decided in 2014 to separate the cooperation projects, which participate to the synergy and complementarity logic and are of a multiannual nature, from the Operational Budget. Since 2015, a Multiannual Budget linked with these projects has thus been introduced.

The Operational Budget is funded by Member State contributions, an EEAS contribution, cost-recovery and by projects. The Pension Budget is funded by Member State contributions and SatCen staff.

In 2017, new Financial Rules were adopted by the Council and brought a major improvement to the budget management, with the introduction and application of the IPSAS (International Public Services Accounting Standards) providing more transparency and a segregation between the main centre costs (Administrative, Operational, Pension and Multiannual projects).

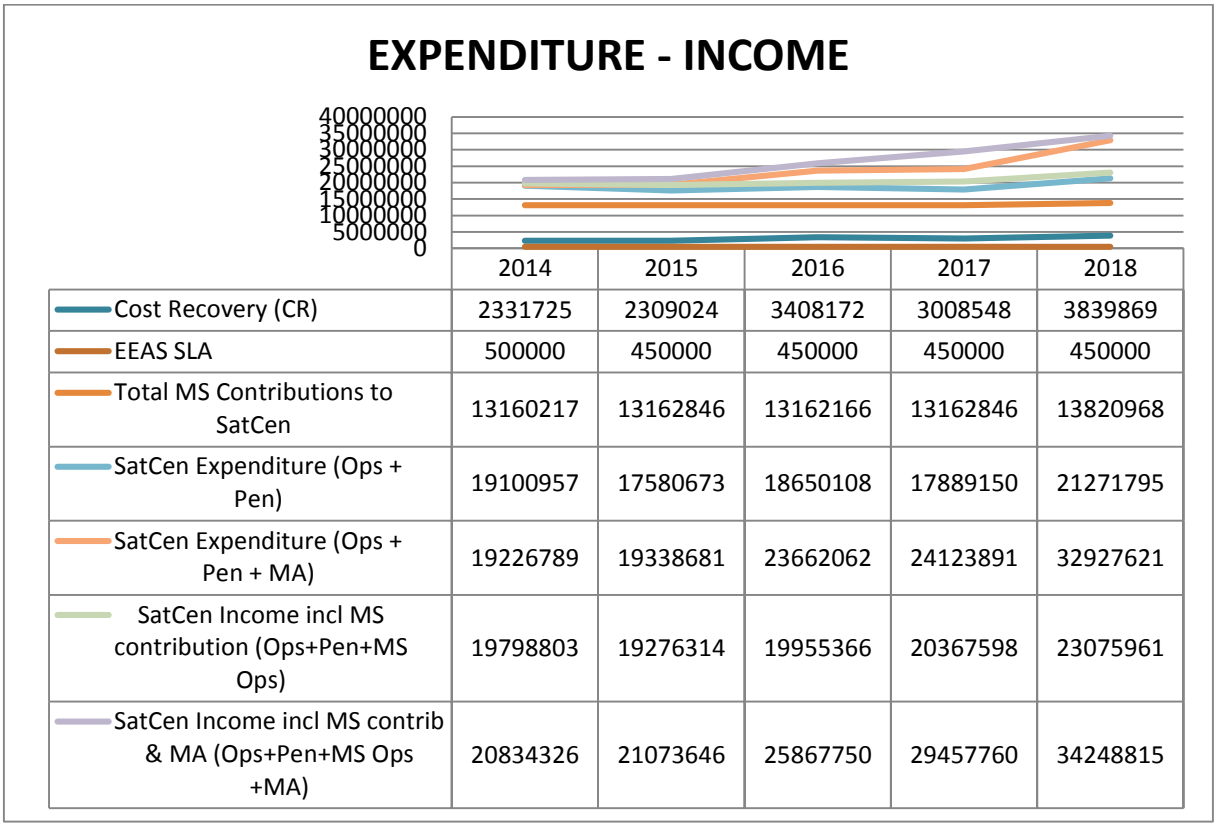
In 2018, the Closing Accounts were presented in nearly full compliance with the IPSAS. The transition to the IPSAS generated an unexpected surplus of about €800000.

Article 10 of the CD provides for the various categories of funding: Member States contributions, cost-recovery from products and services delivered to third parties and to CDSP missions and operations, the general budget of the Union on a case-by-case basis, third States or other third parties and possible earmarked financial contributions on the basis of a cooperation arrangement.

The following table and figure summarise the evolution of the budget over the period:

CLOSING ACCOUNTS DATA	2014	2015	2016	2017	2018	Cumulated	Min	Average	Max
Operational Budget expenditure	18485839	16754848	18013445	17168375	*20496142*	90918650	16754848	18183730	20496142
Operational Budget income (including EEAS SLA & CR)	6255209	5768595	6481989	6918530	*8988825*	34413148	5768595	6882630	8988825
MS Contributions to Operational Budget (MS Ops)	12275199	12245659	12260665	12243591	*12838998*	61864112	12243591	12372822	12838998
Cost Recovery (CR)	2331725	2309024	3408172	3008548	*3839869*	14897337	2309024	2979467	3839869
EEAS SLA	500000	450000	450000	450000	450000	2300000	450000	460000	500000
Pension Budget expenditure	615118	825825	636663	720775	775653	3574034	615118	714807	825825
Pension budget income (including MS contribution)	1268395	1262060	1212712	1205477	1248138	6196782	1205477	1239356	1268395
MS Contributions to Pension Budget (MS Pen)	885018	917187	901501	919255	981970	4604930	885018	920986	981970
MultiAnnual Projects expenditure	125831	1758008	5011954	6234741	11655826	24786360	125831	4957272	11655826
MultiAnnual Projects income	1035523	1797332	5912384	9090162	11172854	29008255	1035523	5801651	11172854
EXPENDITURE									
SatCen Expenditure (Ops + Pen)	19100957	17580673	18650108	17889150	21271795	94492684	17580673	18898537	21271795
SatCen Expenditure (Ops + Pen + MA)	19226789	19338681	23662062	24123891	32927621	119279044	19226789	23855809	32927621
INCOME									
SatCen Income incl MS contribution (Ops+Pen+MS Ops)	19798803	19276314	19955366	20367598	23075961	124276310	19276314	20494808	23075961
SatCen Income incl MS contrib & MA (Ops+Pen+MS Ops +MA)	20834326	21073646	25867750	29457760	34248815	153284565	20834326	26296459	34248815
Total MS Contributions to SatCen	13160217	13162846	13162166	13162846	13820968	66469042	13160217	13293808	13820968
RATIOS	2014	2015	2016	2017	2018	Cumulated			
MS Contribution / SatCen Income (Ops+Pen+MS Ops)	66.47%	68.29%	65.96%	64.63%	59.89%	53.48%			
MS Contribution / SatCen Income (Ops+Pen+MS Ops+MA)	63.17%	62.46%	50.88%	44.68%	40.35%	43.36%			

Table 4 – Evolution of SatCen budget 2014-2018 – Source: Closing Budget Reports



	2014	2015	2016	2017	2018
Cost Recovery (CR)	2331725	2309024	3408172	3008548	3839869
EEAS SLA	500000	450000	450000	450000	450000
Total MS Contributions to SatCen	13160217	13162846	13162166	13162846	13820968
SatCen Expenditure (Ops + Pen)	19100957	17580673	18650108	17889150	21271795
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SatCen Income incl MS contrib & MA (Ops+Pen+MS Ops +MA)	20834326	21073646	25867750	29457760	34248815

Figure 6 – Evolution of SatCen budget 2014-2018 – Source: Closing budget reports

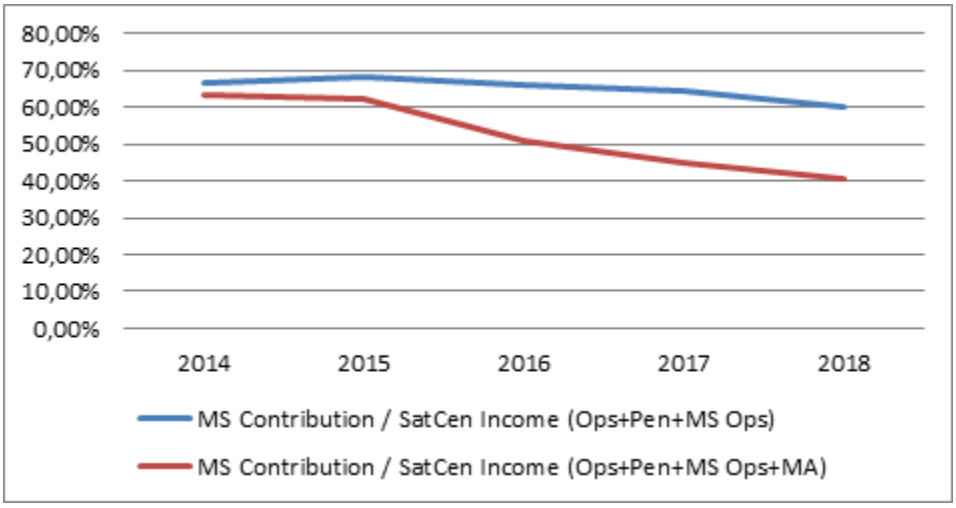

Fig. 7 – Evolution of the share of Member State contributions vs SatCen income – Source – Closing budget Reports

Member States contributions (Operational Budget)

For the first part of the considered period (2014-2017), Member State contributions to the SatCen Operational Budget remained in the line with the previous austerity, meaning the continuation of a zero nominal growth of their nominal contributions. However, 2018 saw a breakthrough with a budget increase of 5%, barely offsetting inflation.

The 2019 budget, adopted as late as at the end of July 2019, provides for a slight decrease (-0.06%) of Member States contributions (€ nominal conditions, see below).

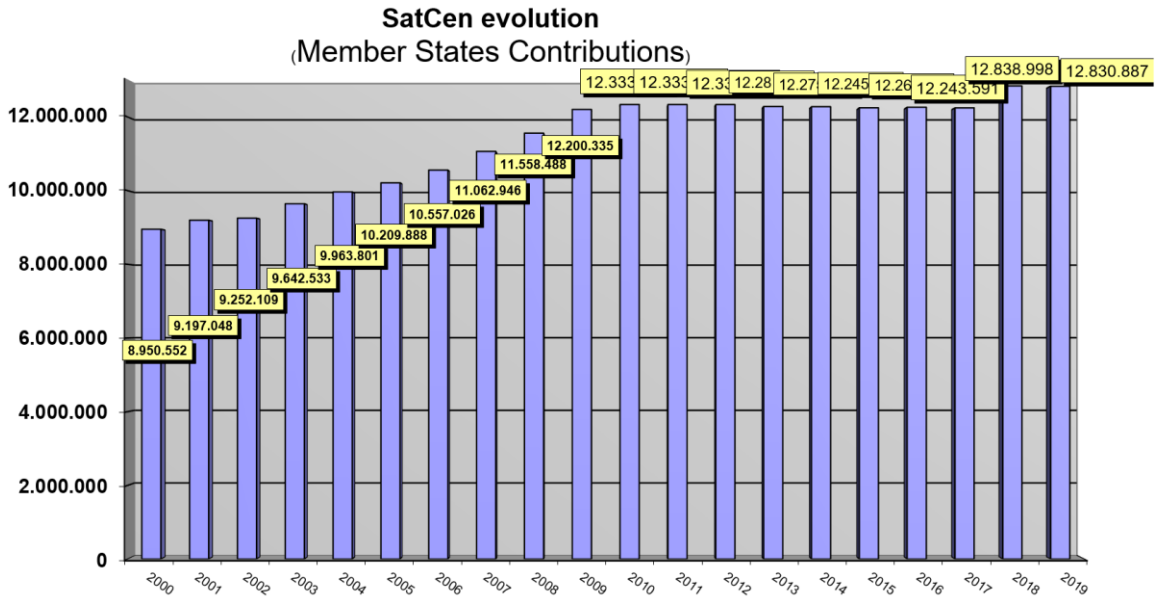

Fig. 8 – Evolution of Member States nominal contributions in actual euros- Source: SatCen

Taking into account the inflation (constant 2000 euros value), the SatCen Operational Budget has been decreasing during the last years.

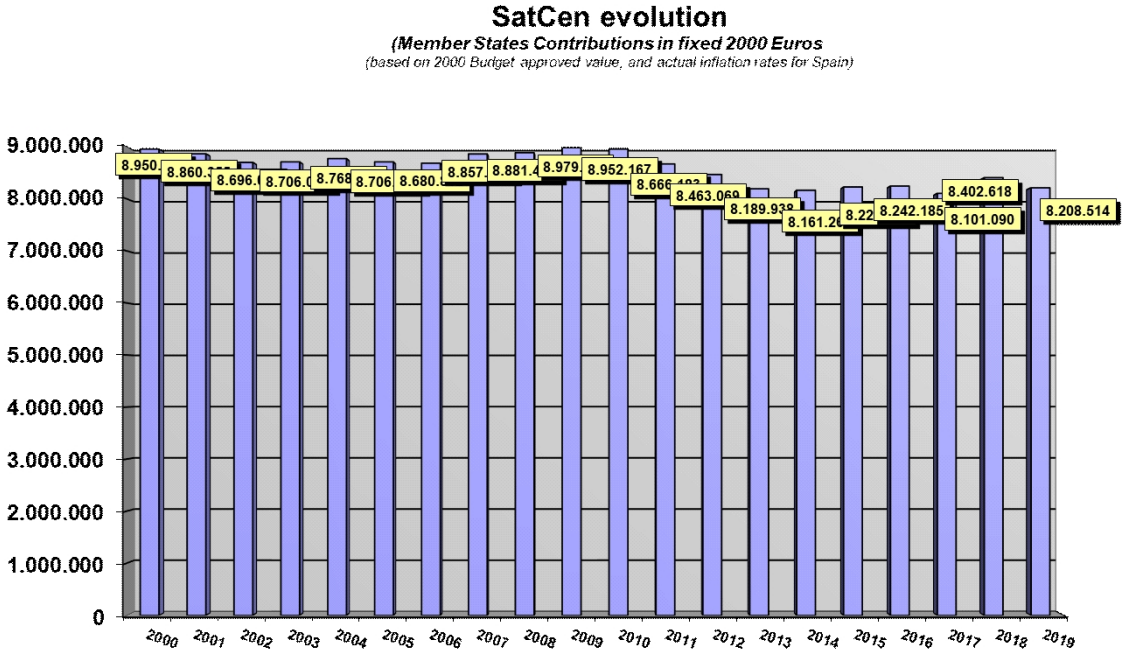

Fig. 9 – Evolution of Member States real contributions in constant 2000 euros – Source: SatCen

This situation puts SatCen under increasing pressure with regard to the increase in demand over the period. In relative terms, the operational expenditure remained flat and at an average of €19 million, thanks to other budget lines complementing the Member States contribution, such as the two following ones.

Cost Recovery (Operational Budget)

Following the recommendation made in the 2012 Report on the functioning of the SatCen to "extend the application of the cost recovery principle", the Centre has developed cost recovery policies. In accordance with Article 10.4 of the CD, products and services provided to third parties under Article 2.2 of the CD and to crisis management missions and operations are subject to cost recovery charges. The governance and procedures for the application of these charges are defined in the Implementation Procedures for Cost Recovery, approved by the SatCen Board on 23 July 2015 and last amended by the Board on 25 April 2017.

Cost recovery appeared to be one of the funding alternatives for SatCen and indeed brought substantial financial support to the SatCen budget, about €2.7 million annually on average over the period considered. About €13 million were injected in the SatCen budget over the 2014-2018 period, which represent the equivalent of Member States contributions for one year.

Incorporating cost recovery estimates in the budgets brings however a risk and an instability given the unpredictability of such requests and therefore revenues.

As indicated above, and despite the fact that the support to EU CSDP missions and operations constitutes SatCen's core mission, the application of cost recovery for the products and services provided to them partially explains the very low uptake. Furthermore, the provision of Article 10(5) limiting the possibility to waive the cost recovery only to third parties leads to paradoxical situations where EU missions are charged while non-EU requests can sometimes be satisfied free of charge, after a waiver granted by the PSC.

EEAS financial contribution (Operational Budget)

On the basis of Article 10.6 of the CD, the EEAS and the SatCen sign every year a Service Level Agreement (SLA) aimed at "providing the EEAS with products and services and collateral data requested by the later", upon request. This contribution (which was decreased in 2015 from €500000 in 2014 to €450000), brings a regular yearly income of €450000 that is not subject to indexation, however, to cover inflation.

Financial contributions from cooperation (Multiannual budget)

The SatCen has also concluded a number of agreements with the Commission to undertake tasks and projects on its behalf, such as the provision of the Copernicus SEA service (€16,1 million 2016-

2019), the support to Frontex for Border Surveillance (€15 million 2015-2019), the Space Surveillance and Tracking (€2.7 million 2016-2019).

Over the period, the growing budget of MultiAnnual Projects, mainly with the Commission, explains the increase in SatCen total expenditure, from €21 million in 2014 up to €33 million in 2018, decreasing the relative Member States contribution to this total expenditure from 60% to less than 40%.

Indeed, the last five years have witnessed a significant evolution in the sources of funding related to cooperation activities, multiplied by 16 on the considered period. This led to an increase in SatCen overall production and directly supported the core activities of the SatCen (Copernicus, SST, development of operational IT tools). It also helped prepare future activities (R&I on artificial intelligence).

The increase in overall expenditure comes with a change in the structure of the sources of funding and in the expenditure allocation. Cost-recovery is a case-by-case funding source that does not allow long term planning and development. Although it has *a posteriori* proven to solve in some instances short term financial problems of SatCen, this type of funding does not solve the structural and long-term funding needs of the SatCen.

Budget adoption rules

The budget is adopted by the SatCen Board by unanimity of the representatives of the Member States. The opposition by a single Member State can block the budgetary procedure and impair the functioning of the Centre for several months, as illustrated by the late adoption of the 2019 budget.

The current text of the Council Decision also does not allow Member States, nor the EU general budget, to provide additional non-earmarked financial contributions, as is the case for instance for the European Security and Defence College which can receive annual or multiannual contributions from the EU general budget or in-kind contributions from Member States[12].

Audit mechanism and College of Auditors

In application of Article 12 of the Council Decision and of Articles 42 and 43 of the SatCen Financial Rules, a College of Auditors annually audits the centre's general budget and multi-annual budget. The College of Auditors is in principle composed of three auditors from different Member States, supported by staff as required, acting under their responsibility. However, for the five consecutive years covered by this report, only two auditors were nominated by Member States.

[12] Council Decision (CFSP) 2016/2382 of 21 December 2016 establishing a European Security and Defence College (ESDC) and repealing Decision 2013/189/CFSP

Audit reporting

During the period of reporting, the College of Auditors has unanimously concluded that the final accounts, fairly present, in accordance with the Financial Rules, the financial position and the financial performance of the European Union Satellite Centre. In addition, the transactions and information reflected in the final accounts are in compliance with the rules. Closing Budget Reports were examined by the SatCen Board, giving the discharge to the Director in all cases during the referred period.

The new Financial Rules (FR) approved in May 2017 prescribed reporting in accordance with the International Public Sector Accounting Standards (IPSAS). The Centre was then granted by the College of Auditors (CoA) a 1-2 year period adaptation to the new FR and the Board agreed to apply this requirement at the closure of Budget 2018.

In 2017 and 2018, however, the CoA issued a qualified opinion linked to the still uncomplete implementation of the IPSAS requirements despite the important efforts already accomplished and recognised. The missing elements identified in the CoA reports mainly concern improvements of the accounting system and accounting policy, to be approved by the Director and copied to the Board. The CoA recommended to SatCen to develop an action plan. The SatCen committed, in its reaction to the audit report on the 2018 closing account, to develop the SatCen Financial Operational Procedures-Finance Manual that will cover all accounting policies, practices and procedures of the centre in full compliance with the Centre's Financial Rules.

In 2018, the CoA made several recommendations for improvements to the financial management of the Multiannual Projects: definition of general rules to define the surpluses, improve the reliability of the incomes estimation ("funds for some projects are used by other projects") and the contribution to the building extension to be "charged to the surplus of duly closed and audited projects".

WEU RATU

Article 23 of the CR addresses the administrative tasks following the dissolution of the WEU.

The associated costs (WEU RATU) are borne by Belgium, France, Germany, Greece, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom. These costs, managed separately, have no financial impact on the general budget. This is in compliance with the EU Council decision 2011/297/CFSP of 23 May 2011, under which the residual administrative activities of the WEU were transferred to the SatCen.

Pension budget and Pension Reserve Fund

By its decision of 8 February 2008, the SatCen Board established the Pension Reserve Fund (PRF) and authorised the Director to delegate the management of the PRF to the International Service for Remunerations and Pensions (ISRP),

The management of the fund by the ISPR provides good results, with an actual real return of 5,46% since December 2012, which outperforms the initial objective of 3,95%, generating an increase of a little bit more than €15 million in 6 years. The total assets of the SatCen PRF amounts in 2019 to €31,33 million, 93,65% of this being invested on the basis of the strategy adopted on 29 February 2012. However, this outperformance will not cover the existing structural gap and long-term structural deficit of €12 million in 2019 (+ 100% compared to the deficit existing when the fund was created in 2008). The Member States having not filled the original gap at the time in 2008, the gap logically increases.

As noted by the SatCen Board in 2018, for the fund to be sustainable, i.e. able to meet pension payments as they come due indefinitely, additional contributions of €12 million would be needed.

5.4. Staff

The SatCen employed 141 staff in July 2019, including 93 permanent posts.

The evolution of SatCen human resources is illustrated in the table below:

Evolution of SatCen human resources 2014-2019						
	2014	2015	2016	2017	2018	2019 (July)
Posts						
Permanent	87	90	90	89	90	93
Temporary	12	25	30	36	43	41
Staff						
Local	3	1	2	1	1	-
SNEs	5	5	7	5	7	7
Trainees			3			
Total	107	121	132	131	141	141

Table 5 - Source: SatCen annual reports 2014-2018 + internal SatCen source for 2019.

In 2014, the SatCen had 87 permanent posts. This figure remained relatively stable, despite the sharp increase in the activities and services of the SatCen, including for core and extended activities.

The number of temporary posts, funded through multiannual budget, increased during the reporting period by a factor 3.6, from 12 in 2014 to 43 in 2018, while the associated budget has increased by a factor of 16 (see section 5.4). While at the beginning they were almost entirely involved in

project-related activity, with the implementation of the Frontex SLA, Copernicus SEA and SST services, in 2018 more than 36% of temporary staff paid for by the multiannual budget has been devoted to operational activities and more than 16% to supporting ones.

This demonstrates that the increase in the level of service and number of products to core users has been accommodated thanks to productivity gains and synergies with multiannual projects.

The evolution of SatCen personnel costs in the period considered is illustrated by the following table:

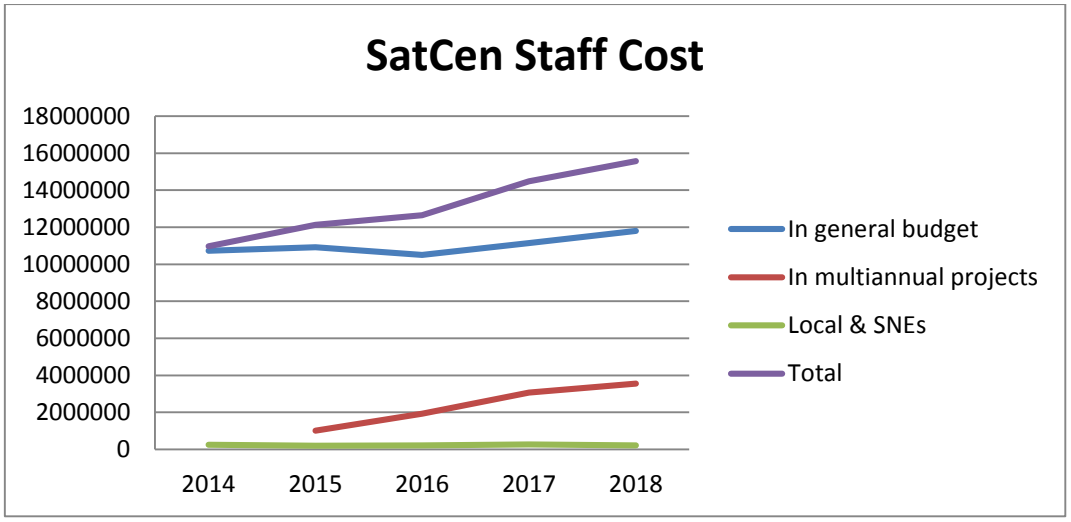

Fig.10 – Evolution of SatCen staff costs - Source: Budget Closing reports 2014-2018 (2014 figures do not distinguish costs related to multiannual projects)

This shows an increase of personnel costs of 42% in the period concerned, meaning an annual average of 9.2%, mainly given by the increase in the number of temporary posts paid for by the multiannual activities, which account for 23% of the global personnel costs in 2018 (compared with 8% in 2015).

With the evolution of SatCen's tasks and services towards more complex and integrated products, the profile of staff has to become more focussed on scientific profiles. However, the SatCen is facing difficulties to attract and retain adequate competencies. 62% of the staff comes from France, Italy and Spain, while 9 Member States are not represented at all among SatCen staff. The breakdown of staff by nationality is therefore concentrated in a few Member States of origin. Furthermore, the centre is facing a rejection rate of 32% from the top candidates retained after a selection process, with a particularly high rate among highly-skilled scientific profiles. The lack of attractiveness of the centre seems to be explained by financial reasons linked to current employment conditions, career development opportunities, or access to international schooling and - for temporary staff - the absence of long-term prospects.

A review of the SatCen Staff Regulations was initiated in 2014 and led to the adoption of new Staff Regulations on 15 May 2017[13].

By a judgment of 25 April 2018, the General Court of the EU annulled the decisions of the Director of the SatCen and of the Board of Appeals that led to the dismissal of a staff member in 2015 on the grounds notably that the EU has jurisdiction to rule on disputes between the SatCen and its staff members, in the same way as for disputes between any servant of the Union and their employer. In order to comply with the judgment, the SatCen staff rules will probably have to be updated, with revised internal and external appeal mechanisms for individual decisions on staff matters.

5.5. Institutional Governance

As an agency of the European Union established by the Council on the basis of Article 28 of the Treaty on European Union, in the field of CFSP/CSDP, the SatCen is subject to a specific and complex governance arrangement. While the Political and Security Committee exercises political supervision over the SatCen, the High Representative ('the HR') gives it operational direction, notably by prioritising the requests addressed to the SatCen. In practice, the operational direction has been delegated by the HR to the Space Task Force of the EEAS, headed by the Special Envoy for Space and attached directly to the Secretary General of the EEAS.

The SatCen Board is chaired by the HR[14] and composed of representatives of the 28 Member States and a representative of the European Commission (without the right to vote). The Board approves the annual and long-term work programmes and the budget. It assesses the implementation by the SatCen of the political guidance and of the operational direction given to it, and adopts all relevant decisions relating to the SatCen's mission. 27 SatCen Board meetings took place during the period considered, which is more than the 2 meetings per year foreseen in the Rules of Procedure of the Board. This is mainly due to the budgetary cycle provided for in the Council Decision (CD) and, in the last two years, to the detailed reflection on the future of SatCen based on the Food-for-Thought paper of 2017, leading to the set of conclusions/recommendations adopted by the Board in June 2018 and further endorsed by the PSC in July 2018.

The SatCen Director has the full managerial responsibility to ensure the execution of the mission of the SatCen (Article 7 of the CD), and to execute the tasks entrusted to him under the CD, such as preparing the work of the Board, informing the PSC about the annual work programme, establishing working relations and cooperation, implementing the budget, conducting the day-to-day administration of the SatCen.

[13] Council Decision (CFSP) 2017/824 of 15 May 2017 concerning the Staff Regulations of the European Satellite Centre, OJ L 123, 16.5.2017, p. 7.
[14] In practice, it is the Special Envoy for Space who chairs the SatCen Board as the HR representative.

The Chairman of the European Union Military Committee, the Director General of the European Union Military Staff and the European Union Civilian Operations Commander may attend Board meetings. Representatives of other relevant Union bodies may also be invited to Board meetings.

With regard to the practical implementation of Article 3 of the Council Decision establishing the SatCen, the 'operational direction' given by the HR and the 'political supervision' exercised by the Political and Security Committee under the responsibility of the Council, need to be put into effect in a consistent way and clarified, in order to avoid duplication, or - on the contrary - gaps, in the exercise of those responsibilities.

5.6. Consultation of the SatCen's stakeholders

SatCen Users

The SatCen pursued its regular coordination activities with its users, through the Expert Users Forum, the Technical Working Group, the Industry Days, the Copernicus Forum and Committee, and the SST users' interaction mechanism. In the field of Copernicus cooperation, SatCen organised Copernicus SEA users' workshops in 2018. Finally, SatCen regularly collected user feed-back through these interactions and the product deliveries.

In view of this report, SatCen users were specifically consulted in May 2019 through the Expert Users' Forum and the Technical Working Group. It appears that the SatCen users who replied [15] use a large number of products in the portfolio and are highly satisfied with the quality, timeliness and volume of the products and services. Some of them suggested a limited number of improvements, notably related to product accessibility (collaborative platforms), shorter response time (time between request and delivery) and layout of products. Suggestions for additional products concerned the expansion of databases, the provision of change detection layers and the development of structured observation management products.

In the EU SST support framework, SatCen collects regularly user feedback through the so-called SST user interaction mechanism. In February this year, a consultation to measure and assess users' satisfaction with the SST services and the SST Front Desk was overall positive (scoring 8 out of 10).

SatCen Board members

Twelve Board members (European Commission and Member States) replied to the consultation conducted in the period July-September 2019. They generally consider that the SatCen has performed well and fully carried out its mission during the period concerned, by delivering high quality products and services, responding to growing demand despite budgetary constraints. They stress the importance and added value of the SatCen for Member States, as it contributes to

[15] A questionnaire was sent to members of the Expert Users Forum and the Technical Working Group on 23 May 2019, with a reminder on 5 June 2019. 13 replies were received from Member States and from the EEAS.

enhancing their intelligence capacity (notably through training). They also underlined SatCen's crucial contribution to EU autonomy. All replying Member States consider that the functioning of SatCen could nevertheless be improved and submitted a number of suggestions to this effect.

From a technological perspective, several Member States would like to see an improvement in access to the data, information and products (e.g. tasking procedures, Download Central, search system, download capacity, online catalogue or portal, and use of digital encryption keys). The creation of a platform is often mentioned and supported. From a capability development perspective, comments support an enhanced SatCen capability in R&D, new technologies, better integration of radar imagery, and access to Earth observation governmental imagery. From a governance and resources point of view, the replies underline that the SatCen should remain a CFSP agency, with the Member States as the main stakeholders. However, several comments suggested exploring how the Commission could have a more prominent role. Additional funding for SatCen, coming from the EU budget or alternative sources, is indeed considered necessary to provide more stability and to allow the SatCen to face coming challenges. Finally, from the administrative viewpoint, some comments suggest to update the staff rules and implement a rotation mechanism for higher grades. The comments also suggest rationalising the functioning of the Board and adapting the decision-making (based on unanimity), and more generally reviewing the Council Decision. Some comments go as far as to question the status of the SatCen as a CFSP Agency and suggest analysing other possible models allowing a more structured role of (and funding by) the EU institutions.

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ANNEX

Main findings of the Report from the High Representative to the Council on the functioning of the European Satellite Centre of 14 September 2012

Ref. Council of the European Union 13769/12 - EEAS ref. (2012)01584

Analysis of their implementation

1. "The Centre has its own budget based on Members States' contributions. This is insufficient to meet the growing demands for its products. One of them would be to extend the application of the cost recovery principle. The other one would be a better prioritization of taskings and requests through the improvement and extension of the Geospatial Task Force with the EEAS corporate board members. (…)"

- Cost recovery has been indeed implemented.
- Prioritisation of tasking and request is performed by the Tasking Authority, currently the Space Task Force.

2. "Secondly, also a better prioritization and a tighter political steering of taskings are needed. For that reason, the existing Internal Geospatial task Force (IGTF), should be led by members of the Corporate Board transformed into a Tasking Committee in order to: strengthen the political steering of the tasking; better screen and prioritise the increasing number and variety of taskings; liaise with the EEAS Intelligence steering board; and provide guidance on the application of the cost recovery principle to all users″.

- The Tasking Committee has functioned for the first part of the period concerned. It has not been adapted yet to the March 2019 internal EEAS re-organisation.

3. "The centre relies mainly on commercial providers to acquire imagery. To increase the current EUSC capability, the use of governmental imagery of Member States should be facilitated (military imagery to be provided on the basis of agreements by Belgium, France, Germany, Greece, Italy and Spain) and its continuity ensured:

- A secure network should be set up between the EUSC and national providers of governmental imagery to allow the effective implementation of current agreements between the EUSC and Member States on the provision of governmental imagery. However, a feasibility study and cost analysis would be necessary.

- With a view to developing effective use of governmental imagery, initiatives for pooling and sharing data in the field of Intelligence Surveillance and Reconnaissance (ISR) should be fostered.

In this respect, the EUSC, in close coordination with the Agency (EDA), could examine the possibility of developing a specific portal for governmental imagery, as well as for associated data distribution networks.

- In order to ensure the continuity of access to governmental imagery after 2015 and taking into account lessons learned in the implementation of existing agreements, consultations should be conducted with Member States concerned and EU bodies such as the EDA regarding EUSC's access to the next generation of systems.″

- The use of governmental systems has been implemented for the current generation.
- EU OPS WAN is providing a secure network; its improvement in term of performance (bandwidth) is under discussion.
- Such a specific portal for accessing governmental imagery has not been implemented because of the challenges of interfacing with the different systems.
- Access to the next generation of governmental systems is under discussion.

4. "The quality of geospatial services depends on the quality of the imagery but also very much on the expertise of the image analysts. The EUSC analysts staff should be reinforced. Seconded National Experts would usefully reinforce the Centre's operational staff capacity in order to effectively address crisis situations."

- The number of image analysts has increased to follow the demand but is limited. SNEs are deployed by Member States but their number remains flat and small.

5. "Global Monitoring for Environment and Security (GMES) was established to help respond to European policy makers' growing need to rapidly access geospatial information. Areas of applications include maritime surveillance (including border surveillance), humanitarian aid missions and early warning and prevention of conflicts. In order to better support CSDP missions and operations, the EUSC use of GMES should be further examined. Furthermore, the future governance of the GMES security services should be defined with a view to setting up a better coordination between the different geospatial services supporting EU external action".

- EUSC is now fully involved in GMES, renamed Copernicus, through the responsibility of the Support to External Action Service and support to the Border Surveillance Service managed by Frontex. These activities are done in compliance with the Copernicus rules on access to data and services[16] but also according to the SatCen rules.

6. "As the only EU operational entity in the area of space and security, the EUSC has been involved from the start in research and pre-operational activities of the Global Monitoring for Environment

[16] Commission Delegated Regulation (EU) No 1159/2013 of 12 July 2013 supplementing Regulation (EU) No 911/2010 of the European Parliament and of the Council on the European Earth monitoring programme (GMES) by establishing registration and licensing conditions for GMES users and defining criteria for restricting access to GMES dedicated data and GMES service information

and Security (GMES) programme under the 7th Framework Programme of the Commission. The EUSC should continue to pursue the activities in research and preoperational activities under the Seventh Framework Program with the understanding that this will neither lead to an increase of the Member States' financial contributions nor adversely impact on the core task of the EUSC."

- EUSC has been involved in various research projects of the 7th and Horizon 2020 Framework Research Programmes, having the objective to transfer the results to operational level.
- These activities are funded by the Commission and do not lead to an increase in the Member States' financial contributions, while increasing its operational capacity (e.g. SEA, Frontex, SST).

7. "The current mission statement of the EUSC is to support the decision making of the EU in the framework of CSDP. The new Council Decision however needs to take into account emerging requests for EUSC products to support EU institution pursuing internal security policy objectives".

- The 2014 Council Decision did not implement internal security in the field of activity of EUSC.

8. "Finally, the demands from international organizations - especially NATO and the UN – are growing. The new Council Decision should take into account the need for a framework for cooperation with third parties″.

- The possibility to support third parties has been included in the 2014 Council Decision.