

SatCen@



ANNUAL REPORT 2022

30 years serving a European
security endeavour and beyond





*30 years serving
a European security endeavour*

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Cover photo: unsplash.com

A great deal of additional information on the European Union is available on the internet. It can be accessed via the Europa server (<http://europa.eu>).

Cataloguing data can be found at the end of this publication. Luxembourg:

Publications Office of the European Union, 2023

ISBN 978-92-95034-24-2

doi 10.2820/00882

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Printed on white chlorine-free paper.

This report is published in accordance with Article 7 of the COUNCIL DECISION 2014/401/CFSP of 26 June 2014.



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more**

“ The future is going to be written in space. The EU Satellite Centre turns 30 years and through these “eyes of Europe”, in Europe, from Brussels, in all capitals, we see what is happening. ”

H.E. HR/VP Josep Borrell

30th Anniversary and Inauguration of Extended HQ,
26 September 2022



“ SatCen constitutes a fundamental unit in the process by which the European Union has equipped itself with instruments that guarantee its strategic autonomy. The information provided by SatCen has greatly helped us in the decision-making process of the European Union and the Member States in the fields of common foreign and security policy. ”

H.E. Margarita Robles, Spanish Minister of Defence,
30th Anniversary and Inauguration of Extended HQ,
26 September 2022

30 years supporting a European security endeavour - SatCen milestones

1992 The agreement is signed to transfer the building on Torrejón Airbase to the Western European Union, establishing the SatCen HQ



2016 The Global Strategy for the EU's Foreign and Security Policy is released. SatCen is a key instrument for its implementation



1996 The WEU Satellite Centre assists inspectors on site in Kosovo in verifying the dismantlement of armaments and equipment



2020 Visit of HR/VP Josep Borrell to SatCen and recognition of the Centre as a "key asset for a Europe that protects its interests, security and citizens".



2002 The WEU Satellite Centre is transferred to the European Union and becomes the European Union Satellite Centre



COVID-19 Pandemic: Due to limitations on ground mobility, GEOINT analysis increases in relevance especially for EU missions and operations like IRINI



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2003 The European Security Strategy is released, and the EU starts launching military operations and civilian missions. The first EU operation supported by SatCen is EUFOR Althea in Bosnia and Herzegovina



2021 The first SatCen Board at Ministerial Level agrees to develop SatCen in line with the EU's level of ambition in security, defence and space



2011 The European External Action Service is formally launched. It is currently the main user of SatCen products and services



2022 The Strategic Compass is formally launched, aiming to "strengthen the EU Satellite Centre to boost our autonomous geo-spatial intelligence capacity".



2014 SatCen's mission is broadened to support the EU by providing products and services from the exploitation of relevant space assets and collateral data



SatCen celebrates its 30th anniversary with an inauguration ceremony of its extended Headquarters and an exhibition in Brussels, under the auspices of HR/VP Josep Borrell



30TH ANNIVERSARY AND INAUGURATION OF ITS EXTENDED HEADQUARTERS



Director Sorin Ducaru with former SatCen Directors Mr. Pascal Legai, Mr. Tomaž Lovrenčič and Mr. Frank Asbeck (left to right)



H.E. HR/VP Josep Borrell

KEY FACTS

On 26 September 2022, SatCen celebrated its 30th anniversary and inauguration of its extended headquarters.

The milestone event was conducted under the auspices of H.E. Pedro Sánchez, President of the Government of Spain, represented by H.E. Margarita Robles, Minister of Defence, and H.E. HR/VP Josep Borrell.



H.E. Margarita Robles
Minister of Defence, Spain



Mr. Gustav Lindstrom,
Director of the
EU Institute
for Security
Studies (EUISS)

510%
Increase in
impressions*



16k+
Profile
visits



SCAN ME
to see the related
EEAS video

*Compared to previous month



Mr. Christophe Morand,
Head DG DEFIS Security of
Information Task Force



30TH ANNIVERSARY EXHIBIT AND ROUNDTABLE DISCUSSION



Gen. Robert Brieger, Chairman of the EU Military Committee



Amb. Jitka Znamenáčková, Deputy Head of the Czech Permanent Representation to the EU and Permanent Representative to the PSC



Moderator: Mr. Fiott (Real Instituto Elcano).
Participants: Amb. Balfourt (EEAS), Adm. Bléjean (DG EUMS), Amb. Ducaru (SatCen), Amb. van den Heuvel (Council), Mrs Papantoniou (European Commission) and Amb. Pronk (PSC Chair)



Mr. Xavier Pasco, Director of the Foundation for Strategic Research



KEY FACTS

On the 7th of November, SatCen celebrated its 30th anniversary with the opening of an exhibition and a roundtable discussion under the auspices of the Czech Presidency of the Council of the European Union and the HR/VP Josep Borrell, and with the support of the General Secretariat of the Council of the European Union.

7k+



Profile visits



64k+

Impressions*



SCAN ME
to see the related
EEAS video

*Compared to previous month

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Foreword by the Director



Twenty twenty-two was an exceptional year for the EU Satellite Centre for a wide range of reasons. Three of them stand out: Firstly, the international security context has become more challenging and complex, having a direct impact upon SatCen's activity. With Russia's unprovoked and unjustified military aggression against Ukraine, the political environment changed drastically, providing an even stronger requirement for geospatial analysis supporting decision-making and actions at political and operational levels across the EU. The Centre went to its human resource limits to further increase its output and provide speedy responses to urgent analysis requests for situational awareness on the unfolding war. Yet another important test for SatCen's adaptability and versatility. The extraordinary operational intensity throughout the whole year also provided important lessons learnt regarding the Centre's current needs, as well as its future development. The goal is clear: to maintain this high tempo activity in an increasingly complex environment and in a sustainable manner.

Secondly, the EU adopted the Strategic Compass, reflecting an increased EU level of ambition for its role in security and defence and with direct relevance to SatCen. This programmatic document of strategic importance highlights the unique role of SatCen and includes a specific commitment 'to strengthen the EU Satellite Centre to boost

our autonomous geo-spatial intelligence capacity.' Against this background, the Centre is closely aligning its operational activity and evolution with the objectives and ambitions described in this key document.

Thirdly, 2022 marked an anniversary milestone and an inflection point for SatCen's development. The Centre celebrated its 30th anniversary in Torrejón de Ardoz under the auspices of H.E. Pedro Sánchez, President of the Government of Spain, represented by H.E. Margarita Robles, Minister of Defence, and H.E. Josep Borrell, High Representative of the Union for Foreign Affairs and Security Policy and Vice-President of the European Commission (HR/VP). On that occasion, SatCen also officially inaugurated its state-of-the-art headquarters extension. It was built and equipped on budget and on time, with a view towards SatCen's future development. The Centre also presented a dedicated 30th anniversary exhibition in the Justus Lipsius building in Brussels, reflecting the wide range of SatCen activities. This exhibition was flanked by a high-level roundtable debate on the future of the Centre, under the auspices of the Czech Presidency of the Council of the European Union and of the HR/VP Josep Borrell, and with the excellent support of the General Secretariat of the Council. Both anniversary events brought together a wide range of high-level officials, SatCen users, partners and stakeholders.

This particular 2022 context offered, therefore, a relevant opportunity to take stock of SatCen's achievements over the past three decades and to reflect on its future. What does SatCen represent today for the EU and its Member States? What has SatCen delivered to its stakeholders, users and partners? How is it adapting to the future?

Simply put, its core task and key achievement have been to provide 'security from space' through trustworthy, reliable, timely geospatial intelligence analysis; being in the words of HR/VP Borrell, the "eyes



of Europe”. It has also supported ‘security in space’ through its function as the Front Desk of the European Space Surveillance and Tracking (SST) Consortium for the last seven years, providing alerts to avoid collisions in space, track possible fragmentations and monitor atmospheric re-entry of space objects.

Thus, SatCen is one of the most trusted sources of autonomous analysis for EU decision-makers and Member States. It supports long-standing WMD nonproliferation efforts, humanitarian and crises management missions, disaster relief, refugee contingencies, border security and the monitoring of irregular migration, to mention just a few key areas of activity.

The Centre also supports EU civilian and military Common Security and Defence Policy (CSDP) missions and operations, from the Horn of Africa to the Sahel, and from the Mediterranean to Georgia. Based on the mandate provided by the Council, it has supported key EU partners such as the UN, the Organization for Security and Cooperation in Europe (OSCE), the Organisation for the Prohibition of Chemical Weapons (OPCW) and most recently third countries in need, such as Ukraine and Moldova.

Furthermore, SatCen maximises synergies with Commission services and EU or international agencies, like the European Defence Agency (EDA) and the European Space Agency (ESA), on activities related to security, defence and space. It is the enti-



ty entrusted with supporting external action within the Copernicus programme, the Earth observation component of the European Union's space programme.

In a nutshell: SatCen is a concrete example of EU operational strategic autonomy. It is concrete proof that EU pooling and sharing actually works. It is both a diplomatic tool to implement EU policies and an operational tool for civilian and military action.

In terms of development dynamics, some key highlights are worth mentioning: the volume of activity has increased by about 10 times in just over a decade, with a considerable acceleration in the last four years. The complexity and quality of SatCen

products have evolved significantly, as well as its reactivity and speed of delivery – all driven by user demand.

These acceleration trends have been amplified in 2022, with the extraordinary volume of analysis output for its key users, the European External Action Service (EEAS) and the Member States, which has practically doubled from one year to another, and with unprecedented speed of delivery.

Modern information technology and artificial intelligence tools, developed inhouse, have been key to achieve this.

At the same time, 2022 marked the conclusion of the prototype development phase of the classified IT platform. This included the relevant security accreditation of the prototype infrastructure, therefore preparing the ground towards full implementation in 2023-2024.

- The volume of activity has increased by about 10 times in just over a decade, with a considerable acceleration in the last four years.
- The complexity and quality of SatCen products have been significantly enhanced, as has the reactivity and speed of delivery – all driven by user demand.
- Every euro invested in SatCen has a multiplier effect, with all SatCen products (analysis or specialised artificial intelligence products developed at the Centre) are shared with all Member States. As result, products, services and data accessed by each Member State are worth many times their national financial contribution.

Finally, SatCen's extended headquarters have alleviated space-constraints and will make it possible to accommodate further developments, in line with increased demand and ambition.

Furthermore, in terms of value added, it is important to stress the Centre's effectiveness and efficiency. Every euro invested in SatCen has a multiplier effect, with all SatCen products (analysis and

specialised artificial intelligence products), as well as the possibilities offered by the classified network, being shared with all Member States. As a result, products, services and data accessed by each Member State are worth many times their national financial contribution.

All these results have been achieved based on the interest, needs and support of all our stakeholders, and thanks to the work and dedication of the highly qualified and engaged SatCen staff, sharing a strong sense of mission and European identity.

To be clear, satellite imagery and technology empowerment are key resources for our work. But it is the professionalism, unique experience, skills and competences of our staff that make the difference. Therefore, I would like to extend my gratitude to the SatCen 'stellar' team, as well as to SatCen's key stakeholders, the EU Member States, for the political guidance and growing support, as well as to our colleagues in the EEAS, the Commission, the General Secretariat of the Council and to our key users and partners. A special gratitude, on the 30th anniversary occasion, goes to the Spanish Government for the valuable host nation support and to HR/VP Josep Borrell, the Chair of the SatCen Board, for his operational direction and guidance, as well as his support in putting SatCen into the EU "political orbit".

Sincerely,
Ambassador Sorin Ducaru
SatCen Director





H.E. Mr Klaus Iohannis, President of Romania,
30 June 2022



H.E. Mr Charles Michel, President of the European
Council, 30 June 2022



H.E. Mr François Bausch, Deputy Prime Minister,
Luxembourg MoD, 31 August 2022



H.E. HR/VP, Josep Borrell, 04 July 2022



Rear Admiral Stefano Turchetto, Operation
Commander EUNAVFOR MED IRINI, 12 May 2022



Mr Philippe Adam, French Space Commander, 21
November 2022



Mr Marian Sima, Chief of Romanian Military
Intelligence, 05 April 2022



Brigadier General Danilo Morando, Italian Ministry
of Defence, 06 April 2022

1 SATCEN OPERATING IN A DYNAMIC SECURITY ENVIRONMENT

1.1 The SatCen Mission

SatCen is the EU's geospatial intelligence agency, providing specialised analysis services across the fields of space, security and defence. It was founded in 1992 as part of the Western European Union to provide analysis products derived from satellite imagery and was incorporated into the European Union as an agency in January 2002.

The wide spectrum of tailored analysis services SatCen now provides to its users in the EU, its Member States, as well as for international partners like the UN, OPCW and the OSCE, contribute directly to political decision-making, as well as to the planning and conduct of civilian and military action in the field of CFSP and CSDP. The Centre also supports the early warning of potential crises to allow timely diplomatic, economic and humanitarian measures to be taken.

At the same time, the Centre is mandated to maximise synergies and complementarities with other EU

activities in space and security, which provides the foundation for *inter alia* its key role as the entrusted entity for the Copernicus Service in Support to External Action (SEA) and other Commission funded projects and activities.

Furthermore, SatCen supports the European Border and Coast Guard Agency (Frontex) as operational service provider for the Copernicus Border Surveillance programme. The Centre also works closely with EDA and ESA, as well as with other institutions and international organisations.

SatCen is a highly operational, efficient and widely respected agency that enables intelligence-based situational awareness and increases the Union's strategic autonomy, functionally integrated into the EU's intelligence cycle. It is steered by the Political and Security Committee (PSC) and placed under the operational guidance of the HR/VP.

SatCen's Mission (Art. 2 of the Council Decision)

1. *SatCen supports the decision making and actions of the Union in the field of the CFSP and in particular the CSDP, including European Union crisis management missions and operations, by providing, at the request of the Council or the HR, products and services resulting from the exploitation of relevant space assets and collateral data, including satellite and aerial imagery, and related services.*
2. *In the framework of SatCen's mission, the HR shall also, upon request and if the capacity of SatCen so allows and without prejudice to its core tasks set out in paragraph 1, direct SatCen to provide products or services to: a Member State, the European External Action Service (EEAS), the third States having agreed to the provisions set out in the Annex on the association with SatCen's activities; if the request is relevant in the field of the CFSP, in particular of the CSDP, international organisations such as the United Nations, the Organisation for Security and Cooperation in Europe (OSCE) and the North Atlantic Treaty Organisation (NATO).*
3. *SatCen may also, without prejudice to its core tasks set out in paragraph 1, cooperate with the Commission and with Union agencies, bodies or Member States, with a view of maximising synergies and complementarity with other Union activities that have a bearing on SatCen and where SatCen's activities are relevant to those Union activities.*



Read more about the
Council Decision/2014/401/CFSP

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“ Congratulations on SatCen’s 30th anniversary. Thank you for your invaluable work in helping the EU defend and promote its interests. Your support to the EU’s intelligence communities is making Europe safer and more secure. ”

Mr Charles Michel,
President of the European Council,
30 June 2022



“ Today’s visit at SatCen was an interesting experience. Your achievements are impressive – your valuable, reliable analysis of satellite data is helping the European Union and its Member States to better face the current security challenges, especially in these difficult times. ”

H.E. Klaus Werner Iohannis,
President of Romania,
30 June 2022



“ The EU Satellite Centre provides essential services to European defence and security. Luxembourg’s voluntary contribution of 1.5 million euro testifies to our conviction that SatCen provides indispensable services, beyond just the military sector. Luxembourg stays committed to continuing its support in the years to come. ”

H.E. Mr François Bausch,
Deputy Prime Minister and Minister of Defence of Luxembourg,
31 August 2022

1.2 The Political Framework

SatGen's mission was reinforced by the Member States during the first ministerial Board held on 06 May 2021, who determined to strengthen SatGen and to enable it to continue fulfilling its key geospatial intelligence support mission for the benefit of the Union, of its Member States and in support of its partners.

Member States agreed on the Baseline Augmented Development Plan, an incremental development to enable the Centre to keep up with the EU level of ambition in the area of security and defence, growing CFSP user demand and fast-paced developments in space and information technologies.

However, during 2022 the European and international security environment became even more challenging and complex, as published in the Strategic Compass adopted by the Council in March 2022, reflecting the

even higher level of ambition of EU Member States for security and defence.

SatGen's operational work and its future development will thus need to be further adapted to these new objectives, with the Strategic Compass¹ expressly establishing the objective to 'strengthen the EU Satellite Centre to boost our autonomous geospatial intelligence capacity' by 2025. In the meantime, SatGen is orienting its capability to the requirements that arose from the updated EU Threat Analysis and the EU Space Strategy for Security and Defence.

Along with the regular SatGen Board meetings held in Brussels and at the Centre's headquarters, in 2022 France graciously hosted a SatGen Board away day in Salon-de-Provence, which allowed for an interactive reflection on SatGen's achievements, challenges and development perspectives.



SatGen Board away day, Salon-de-Provence, 03-05 May

¹ The Strategic Compass
<https://data.consilium.europa.eu/doc/document/ST-7371-2022-INIT/en/pdf>



“ On the occasion of the 30th anniversary of the EU Satellite Centre, I’m honoured to present my thankful appreciation for the work done. On behalf of the European men and women working under my command, operating ashore and with the workers off the coast of Libya, Thank You! (...) SatCen has the capability of providing support in all kinds of operations related to IRINI. ”

Rear Admiral Stefano Turchetto,
Operation Commander of EUNAVFOR MED IRINI,
12 May 2022



“ With 30 years of existence, the SatCen still shows the dynamism of youth, and proves on a daily basis that space is our future, as well as a community of passions. (...) SatCen will remain a key asset for protecting EU interests, security and citizens. Alongside European countries, France has always been a strong partner and supplier of SatCen. Happy birthday! ”

Major General Philippe Adam,
French Space Commander,
21 November 2022



HR/VP Josep Borrell and Heads of International Agencies in Spain at SatCen, 04 July 2022

1.3 New Security Challenges

The Russian war of aggression against Ukraine fundamentally affected the European and international security and defence landscape in 2022 and is expected to continue doing so for the foreseeable future. The new context has significantly increased demand for SatCen geospatial intelligence analysis products from EU Member States and EU institutions.

SatCen mastered the various challenges it faced following Russia’s unprovoked and unjustified invasion of Ukraine, demonstrating the solid foundation of the Centre’s development endeavour, based on the decisions taken at the 2021 ministerial level SatCen Board. At the same time, the new security context highlighted the need to further build on this foundation and enhance SatCen’s development, in order to sustain the significant increase in demand.

Already before the full-scale Russian invasion, SatCen resources were focused on improving the Union’s situational awareness on Ukraine and neighbouring countries.

Core activities, financed by Member States and the EEAS were mainly focused on regions of security concern to the EU.

In addition, the Copernicus Border Surveillance support to Frontex was increased, with the surveillance of Europe’s eastern frontiers, and Copernicus SEA was tasked with the surveillance of other border crossing points and other locations, such as nuclear power plants.

SatCen Vision

To be the EU hub for state-of-the-art security and defence services based on space assets, in support of the decision making and actions in CFSP/CSDP and relevant EU space and security policies, maximising synergies with relevant EU and Member State bodies.



Visit of Generale di Brigata, Luca Baione, of the Stato Maggiore Aeronautica Militare Italiana, 22 June 2022

Synergies and complementarities with other EU activities provided important leverage for SatCen activities. However, the continuing long delay in the finalisation of the new contribution agreement for Copernicus SEA and the depletion of the funding from the former Copernicus SEA Delegation Agreement resulted in a severe decline in associated activities and in an additional burden on the operational capacity. Furthermore, a big opportunity was missed to fully exploit the major synergies that arise from the close coordination of both operational streams. The, hopefully swift conclusion of the new contribution agreement in 2023 will open the way to recuperate over the upcoming period some of the opportunities missed in 2022.

An additional unforeseen impact was generated by the discontinuation of the mandate of the OSCE Special Monitoring Mission to Ukraine, for which SatCen was providing important geospatial analysis support, through the cost recovery mechanism funded via the European Commission's Service for Foreign Policy Instruments (FPI).

Following the discontinuation of this OSCE mission, the Centre held constructive discussions with the FPI regarding its support for SatCen activity on Ukraine's civilian needs.

In addition, the Centre received a significant voluntary financial contribution of EUR 1.5 million from Luxembourg, earmarked for the acquisition of satellite data and therefore directly supporting the Centre's operational work. On 31 August 2022, Deputy Prime Minister, Minister of Defence, François Bausch, visited SatCen to take note of its achievements and its cooperation with Luxembourg. In this context, an Administrative Arrangement was signed to finance a part of SatCen's satellite data acquisition.

In the words of Minister François Bausch: *"The EU Satellite Centre provides essential services to European defence and security, which I had the opportunity to witness first hand today. The tracking of last*

year's floods, of the impact of this summer's heat wave, of the forest fires but foremost the monitoring of military activity or irregular migration all attest to the importance of quality satellite imagery. Luxembourg's voluntary contribution of EUR 1.5 million testifies to our conviction that SatCen provides indispensable services, beyond just the military sector. In 2023, Luxembourg will launch its own Earth observation satellite, LUXEOSys, whose images will be provided to SatCen free of charge. Last but not least, I would like to congratulate the SatCen for its 30th anniversary and for all its accomplishments over these years. Luxembourg stays committed to continue its support in the years to come."



Signing of the Administrative Arrangement between SatCen and the Grand Duchy of Luxembourg, 31 August 2022



H.E. Ambassador Ms Katalin Tóth, Hungary,
07 March 2022



H.E. Ambassador Mr Robert Krmelj, Slovenia,
19 January 2022



H.E. Ambassador Ms Sari Rautio, Finland,
23 September 2022



Parliamentary Delegation of the Czech Republic,
08 June 2022



CS DP Orientation Course, organised by CESEDEN,
01 June 2022



Escuela de Técnicas Aeronáuticas, ESTAER, MoD Spain,
25 November 2022



ESA Delegation,
27 July 2022



L'Association des anciens de l'Institut des Hautes
Études de Défense Nationale, 26 October 2022



Mr Miguel Ángel Ballesteros, Director of the Department of National Security Cabinet of the Presidency of Government, 06 September 2022



Europe Direct Group, 29 November 2022



Visit to the Centre National d'Études Spatiales, CNES, 21 February 2022



SatCen receives the Conde de Latores Award for Humanitarian Work, 05 November 2022

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ore



Participation in the EEAS Open Day, 08 May 2022



Open Geospatial Consortium delegation, 16 June 2022



Visit to the Instituto Nacional de Técnica Aeroespacial, INTA, 21 March 2022



Mr Francisco Fontan, Director of the EEAS Crisis Response Centre, 28 October 2022

2 CONTINUING HIGH OPERATIONAL INTENSITY

2.1 The Annual Planning Process

The management of analysis operations at SatCen involves a very careful planning that starts before formal task requests start flowing in at the beginning of the year, and it involves carefully balancing several variables in order to obtain the best possible outcome. Everything starts by considering the information needs of our key users. These can be very varied and span many different security related topics all around the world, with a strong focus on our closer neighbourhood and critical events that may have a bigger impact on EU interests.

Since there are numerous users, it is quite common that many of these requests overlap with each other. Planners at SatCen and EEAS work very closely together to harmonise this initial set of requests, in order to eliminate redundancies and maximise syner-

gies. EEAS colleagues in the Space division prioritise the tasks. This is a complex process that is critical to the good performance of the tasking workflow and lies at the heart of the continuous efficiency gains that drive the Centre.

Another important variable to consider during this early planning phase is the aggregated structure of the SatCen budget, which consists of inputs from different sources, including Member States annual contributions, EEAS contributions, cost recovery paid by missions and operations, and multiannual European Commission projects. Therefore, the final output at the end of the year reflects somehow a similar share of user production, since the financial resources assigned to each line of tasking need to be properly balanced and aligned with operational needs.

EU Missions and Operations and Cooperation with International Organisations

Responsible Institution: **European Union**

- Operation EUNAVFOR MED IRINI (Mediterranean)
- EUNAVFOR ATALANTA (Horn of Africa)
- EUMM Georgia (Georgia)

Responsible Institution: **OSCE**

- SMM Ukraine (Ukraine)

Responsible Institution: **UN/OPCW**

- OPCW (Syria)

Responsible Institution: **UN**

- MINURSO (Western Sahara)

2.2 SatCen's Initial Plan for 2022

In summary, the preparation of the annual collection plan is the foundation of the efficient and smooth running of operations. It is a complex process that involves multiple variables and takes several months to prepare. However, regardless of how carefully contingency measures and risk management are incorporated, the plan always needs to be adjusted to unplanned events that sometimes have a significant impact.

In 2020, one such major event took place in the form of a global pandemic, which caused massive disruption at an unprecedented scale. Without time to recover from this, in 2022 Europe witnessed the development of another international crisis that has sent shock waves all around the world: Russia's full-scale unprovoked and unjustified invasion of Ukraine.

2.2.1 Russia's Unprovoked Invasion of Ukraine



European Commission President Ursula von der Leyen, HR/VP Josep Borrell and Ukraine's Prime Minister Denys Shmyhal visit the town of Bucha, Ukraine 08 April 2022 © Reuters/Janis Laizans Ukraine crisis

When Russia started its full-scale war of aggression against Ukraine on 24 February 2022, Europe's attention swiftly shifted to its eastern border. The SatCen operational plan, carefully crafted over the previous months, required redrafting at that very moment.

During the first weeks of war, SatCen experienced the highest peak in task requests in its history, most of them coming from SIAC.

The purpose of these initial requests was to provide EU decision-makers with situation awareness related to the war's evolution.

Shortly after, HR/VP Josep Borrell answered Ukraine's call for help by announcing a unanimous agreement of the Member States to start sharing geospatial intelligence with Ukraine via SatCen. The original collection plan for 2022 was immediately adapted to the new circumstances.

All reports were shared with SIAC and the Member States, thus not only contributing to providing situational awareness for decision-making on the ground, but also at the strategic level in Brussels and the different capitals.

2.2.2 Discontinuation of the OSCE SMMU

Another immediate collateral effect of the invasion of Ukraine on SatCen planning was the discontinuation of the OSCE Special Monitoring Mission in Ukraine (SMMU), which SatCen had supported since 2015. The impact was significant; the yearly share of SatCen production dedicated to OSCE stood at approximately 15%. However, as the tension continued to build up during the beginning of February, the OSCE started to pull out its person-

nel from the eastern city of Donetsk after several participating states warned about the increasing security risk.

On 31 March 2022, the mission was formally discontinued and all staff were withdrawn from the country. Consequently, SatCen discontinued the support it had provided over the past years, resulting in a decrease of the respective annual share to only 5%.

2.2.3 Continued Support to SIAC and Member States



Message from Brigadier General Radowlaw Jeżewski, Head of Intelligence Unit at the EUMS, in celebration of SatCen's 30th anniversary

Despite the tremendous impact that Russia's unprovoked and unjustified invasion of Ukraine had on SatCen's task management and the obvious shift of attention towards eastern Europe, SatCen did not neglect its core users. The total annual production in 2022 increase by 10% in nominal terms. The share dedicated to SIAC and the Member States reached 40%, reflecting SatCen's commitment to continuously support its main stakeholders.

The field of analysis covered a variety of topics related to general security awareness, monitoring of different types of activity, surveillance of critical infrastructures, non-proliferation of weapons of mass destruction and geospatial.

2.2.4 Continued Support to EU Missions and Operations



Message from Rear Admiral Stefano Turchetto, Operation IRINI Commander, in celebration of SatCen's 30th anniversary

The various EU missions and operations also remained important users of SatCen products and services. During 2022, SatCen was able to maintain the same high level of support as the previous year, thus consolidating an ambitious 16% of annual production.

The largest part of this share was dedicated to EU NAVFOR IRINI, which enforces the UN arms embargo on Libya. However, SatCen also supported EU NAVFOR ATALANTA off the coast of Somalia, as well as the EU monitoring mission in Georgia.

“On the occasion of the 30th anniversary of the EU Satellite Centre, I am honoured to present the thankful appreciation for the work done. On behalf of the European men and women under my command operating ashore and in the waters off the coast of Libya. Thank you!”

Rear Admiral Stefano Turchetto, Operation IRINI Commander, 12 May 2022



Frontex Operations 2023 © Frontex

2.2.5 Continued Support to Frontex

Twenty twenty-two saw further increases in irregular migration flows towards the EU, caused by Russia’s unprovoked and unjustified invasion of Ukraine, with an initial wave of more than 2 million displaced persons fleeing the country during the first weeks of the war. However, this sudden surge in the east was not connected with other patterns of irregular migration into the EU via different routes, predominantly from Africa and the Middle East.



In this context, SatCen support for the EU Border and Coast Guard Agency continued, with 20% of its 2022 production being for Frontex. This not only includes analysis of irregular migration activity, but also the fight against cross-border crime.

2.2.6 Continued Support to Copernicus SEA

The Copernicus SEA service delegated by the European Commission to the SatCen also played an important role vis-a-vis the Russian war of aggression against Ukraine. In the weeks preceding Russia’s unprovoked and unjustified invasion, SatCen worked intensively to answer numerous requests

to provide geospatial information in support to the evacuation of civilian personnel from different embassies and delegations in Kyiv. Further to this, part of the initial effort to monitor the humanitarian consequences of the invasion was made by SatCen’s Copernicus SEA Team.

2.2.7 Continued Support to OPCW

In line with the SLA signed by SatCen and the OPCW in March 2018, implementing Council Decision (CFSP) 2017/2303 supporting the OPCW Fact Finding Mission in Syria, the Centre continued its analysis support to OPCW.



Analysis produced by SatCen is meant to provide OPCW inspectors with a geospatial and temporal context in which they can frame their investigations. SatCen reports draw evidence from satellite imagery which can be fused with other sources of information to ascertain the use of forbidden chemical weapons in areas of conflict.



OPCW © 2023 Organisation for the Prohibition of Chemical Weapons

2.2.8 Continued Support to United Nations

In addition to the work being carried out for the EEAS (SIAC) and Operation IRINI, the Council also requested SatCen to support the mandate of the United Nations in Northern and Western Sahara.



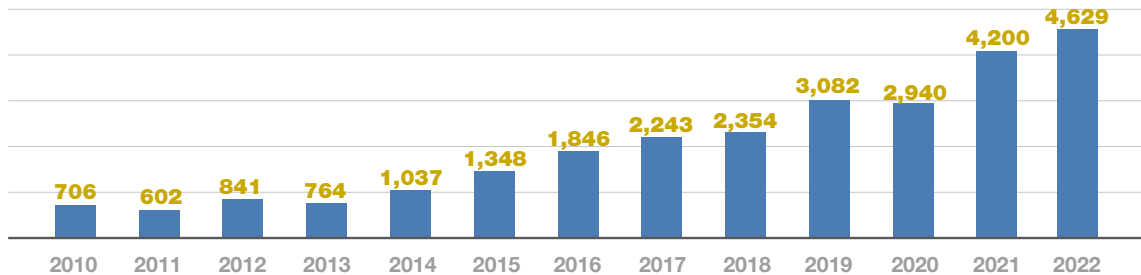
SatCen's accumulated experience over the past few years, enabled procedures to be streamlined and an optimisation of the data collection plan, in coordination with the UN personnel deployed in the area, thus improving the cost effectiveness of SatCen support. This also allowed for the creation of synergies with other operations that work in the same area and maximised the return on effort invested.

2.2.9 Overall Increase in Analysis Services Output

The total output of the Operations Division in 2022 increased by more than 400 reports relative to the previous year, which represents a growth of 10%.

This is a remarkable increase considering the challenges posed by Russia's war of aggression, with its significant impact on the whole planning process, as described above.

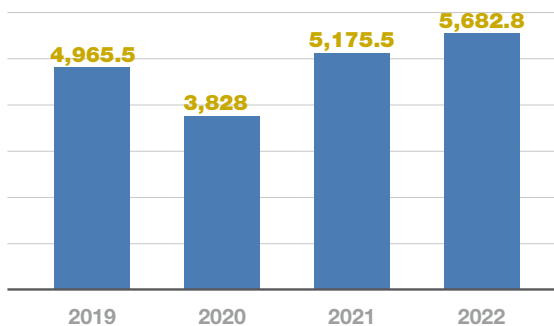
Annual Nominal Output of Geospatial Intelligence Products 2010-2022



The different types of product also posed a challenge in terms of production management and reporting, since they require different amounts of resources to produce. For this reason, in 2021 SatCen introduced a normalisation procedure to adjust this heterogeneity of products and thereby enable the provision of more comparable and coherent statistics.

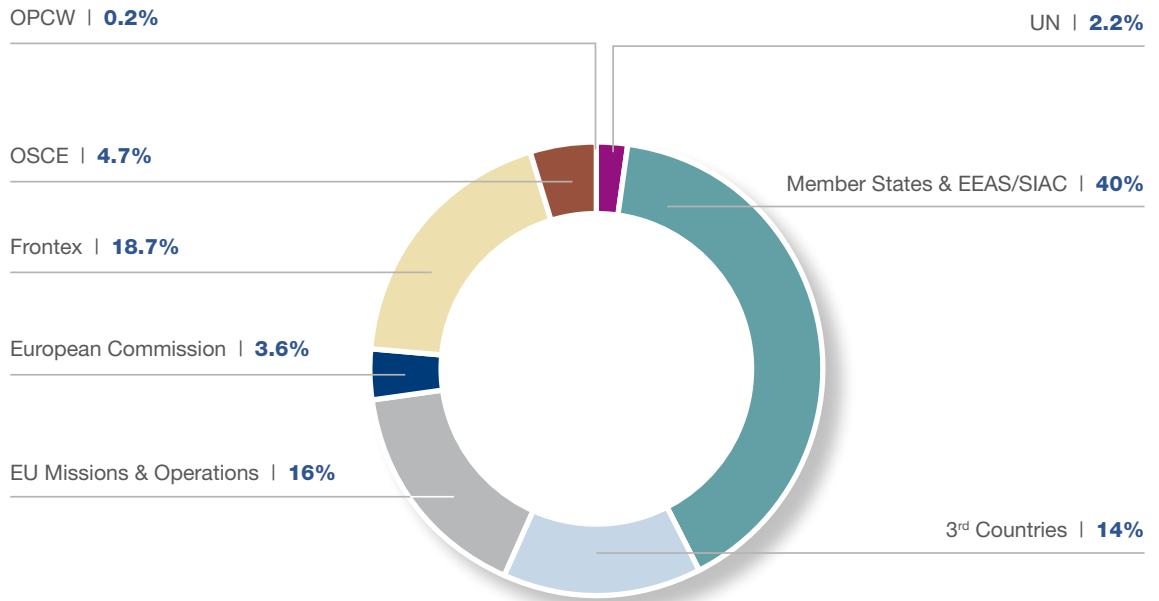
The normalisation coefficient intends to calibrate the amount of effort invested in the creation of each type of product by using the First Impression Report (FIR) as a unit of reference. Consequently, the Quick Report, which on average requires half the effort to produce as a FIR, counts as 0.5 rather than 1 in the production statistics.

SatCen Annual Normalised Production 2019-2022



Product	Applied Coef.
Flash TA	0.25
QuickRep	0.5
FIR	1
Briefing Note	2
DGI	5
Report	8
Dossier	15
Mapbook	15
GeoPortal	15

2022 Normalised Production Share



Several factors underpin this continued growth. In short, a key factor is the continuous process of improvement, through which all the different procedures involved in the production chain are gradually perfected through many iterations and subsequent calibrations.

This involves the choice of software architecture and applications, the data model, reporting templates, symbol libraries, automation tools, scripts, artificial intelligence (AI) algorithms and workflow procedures. Software-savvy analysts are able to develop new innovative concepts and rapidly code their own prototypes.

Once the proof of concept is approved, the proposal is passed over to SatCen's IT Division, whose developers are able to improve the code and test it before deploying it throughout the secure network. The immediate feedback that they get from the analysts who originally conceived it, results in a highly agile development cycle that facilitates the efficient debugging and refining of tailored applications. This development model has proven to be tremendously efficient for SatCen and continued to be so over the course of 2022.

2.3 Quality Team and Data Processing

The Operations Division's Quality Assurance and Service Development Team is responsible for driving innovation and guaranteeing the homogeneity of processes and methodologies across the division. This team was instrumental to the success of SatCen over 2022, with the different lessons learnt being steadily incorporated into the production process and feeding further improvements.

The Data Procurement and Processing Team is another critical team in the division. Once a task request is approved imagery needs to be made available to the analysts. Without the services of the Data Procurement and Processing Team, there can be no imagery analysis.

The accuracy of the analysis is ensured by the proper prior processing of the imagery (e.g. orthorectified, georeferenced and radiometrically enhanced). Timeliness is key, with analysts being able to meet their deadline thanks to the prompt processing of the Data Procurement and Processing Team. Furthermore, if imagery is purchased without cost-efficiency criteria, the Centre's data budget will be exhausted before the end of the year. The Data Team is therefore a pillar of SatCen's robust and efficient operations management system.

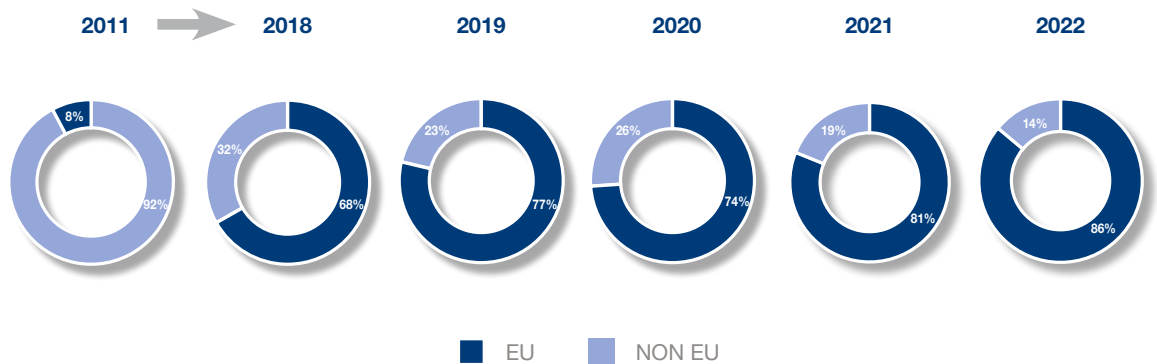


Space sensors and archive imagery accessible by SatCen.
 In red: governmental, blue: commercial, black: European © SatCen

Another important aspect of 2022 was the growing share of satellite data procured from EU providers. SatCen’s direct expenditure for data acquired from European commercial imagery providers increased significantly over recent years. EU providers represent over 80% of the total data expenditure in the last two years, compared to about 8% over a decade ago.

This growth can be attributed to the improvement in the quality of service offered by European providers, as well as the establishment of productive and efficient working relationships between SatCen and these providers.

Satellite Data Acquisition Expenses 2018-2022 Split by Provider Based on Sensor (EU/Non-EU)



NOTE

Over the last decade, the share of SatCen expenditure on satellite data from European providers increased from around 10% to more than 85%

3 IMPROVING CAPABILITIES AND COOPERATION

3.1 Capability Development and Cooperation in Space, Security and Defence

SatCen cooperates with the Commission, the Member States and organisations and institutions operating in space, security and defence in order to max-

imise synergies and complementarities, to improve situational awareness and to enhance the resilience and security of citizens.



3.1.1 Cooperation with the European Commission

The EU space programme provides the political framework for SatCen's cooperation with the European Commission. It covers the Centre's contribution to the operational implementation of the security component of the Copernicus programme, SST activities, cooperation with EU agencies and Directorate-Generals of the Commission and the involvement in several research and innovation (R&I) initiatives.

In 2022, SatCen continued its collaboration with the Directorate-General for Defence Industry and Space (DG DEFIS), mainly within the framework of the Copernicus Security Service - Support to EU External Action (CSS-SEA). It participated in the Copernicus governance bodies (i.e. Copernicus configuration of the EU Space Committee, Security Board and User Forum). The Centre also continued to work on establishing the basis for future cooper-

ation with the Commission under Copernicus 2.0, in view of ensuring full CSS-SEA service provision from 2023 onwards.

Under the framework of interagency cooperation and Copernicus Border Surveillance, SatCen continued its support to Frontex through the provision of services, and signed an extension of the Service Level Agreement (SLA) for 2022 onwards. In parallel, a working arrangement (WA) between the two agencies is planned. The WA will not replace or repeal the SLA but will be an overarching cooperation instrument aimed at enhancing the cooperation between SatCen and Frontex and exploring new areas of common interest.

In 2022, SatCen continued its dialogue with the EU Agency for the Space Programme (EUSPA), DG DEFIS and the SST Partnership on the transfer of the SST Front Desk function to EUSPA in the context of the EU space programme, following the Commission's Decision of 03 June 2022. Through the ENTRUSTED project, led by EUSPA, SatCen continued contributing to the shaping of the GOVSATCOM component of the space programme, coordinating the gathering of user requirements and use cases for future secure satellite communications services for governmental users in the EU. User uptake activities remained a regular part of the dialogue with EUSPA in the context of the implementation of the CSS-SEA.



SatCen Director Sorin Ducaru visits Mr Rodrigo da Costa, EUSPA Director, and team while, while on a visit to Prague, 29 April 2022

SatCen and the European Fisheries Control Agency (EFCA) are progressing towards reaching interagency cooperation, in particular in the area of actionable geospatial intelligence to support fisheries control, within the framework of Copernicus.



SatCen Deputy Director Louis Tillier visits EFCA, 30 March 2022

In addition, SatCen and the European Environmental Agency continue their interaction to gather data requirements and identify gaps regarding the needs of the CSS-SEA vis-à-vis Copernicus In Situ Data.

The Centre's involvement in DG MARE's Common Information Sharing Environment (CISE) initiative continued through its participation in the CISE Stakeholders Group, in close coordination with Member States and EU agencies, accompanying CISE's network development in achieving an operational framework.

Cooperation with DG RTD, DG CNECT and DG HOME continued in 2022 as part of the SatCen Research, Technology Development and Innovation (RTDI) activities.

Regarding participation in specific R&I EU-funded initiatives, SatCen continued and strengthened its engagement in the H2020 programme, began its participation in European Defence Fund (EDF) initiatives, as encouraged by Member States, and took part in a number of project proposals awarded in the new European Commission R&I framework programme, Horizon Europe. SatCen prioritised its in-

volvement in the areas of CSS-SEA Evolution, support to Frontex for CSS-BS Evolution, space traffic management (STM) and technology development.

Finally, as the entrusted entity for the implementation of Copernicus SEA, SatCen cooperates with DG DEFIS, DG JRC, Frontex and the European Maritime Safety Agency (EMSA) on the strategic research agenda aimed at identifying R&I objectives for the development of the Copernicus Security Service (CSS).

In summary, 2022 represented a key milestone in SatCen's cooperation with the Commission, shaping the development of the Copernicus SEA and Copernicus Border Surveillance (via support to Frontex) services and confirming the participation of SatCen in the new Horizon Europe programme. The outcomes of the various cooperation activities provided direct support and additional operational capacity to SatCen's services, benefiting all its users.



Ms Alessandra Ussorio, Responsible of the Copernicus SEA Service at SatCen, and Ms Arianna Traviglia, Coordinator of IIT Centre for Cultural Heritage Technology, at the RITHMS project kick-off © SatCen

3.1.2 Cooperation with Member States

SatCen cooperates closely with Member States on all levels and activities. In space situational awareness (SSA)/space surveillance and tracking (SST), activities aim to safeguard space infrastructure and assure a level of strategic autonomy in the domain. The newly created SST Partnership, composed of 15 Member States (AT, CZ, DE, DK, ES, FI, FR, GR, IT, LV, NL, PO, PT, RO, SE) is replacing the former SST Consortium.

SatCen cooperates with Member States in the analysis and adaptation of training requirements in relation to relevant IMINT and geospatial intel-

ligence topics. SatCen opens many of its internal courses to Member State participation and, specifically, to all seconded national experts (SNE) deployed at SatCen. Furthermore, when considered necessary, SatCen requests the participation of relevant specialised personnel in some of the courses. In addition, SatCen offers in situ courses to Member States and to the EU missions and operations on subjects related to IMINT and geospatial intelligence, deploying training staff to EU missions and Member States' premises two or three times a year.

3.1.3 Cooperation with the European Defence Agency

Since 2016, the EDA and SatCen have been cooperating to harmonise and synchronise their respective annual work programmes through a jointly agreed EDA - SATCEN Roadmap for Cooperation.

Space-based capabilities have become a critical part of all Member States and EU defence strategies, being an indispensable tool for any civil/military mission and operation, therefore EDA and SatCen are more and more committed to help Member States improve their capabilities in this domain.

In 2022, SatCen participated in the EDA Ad Hoc Working Group Space (AHWG), providing support on Earth observation (EO) data usage and applications for security and defence. The outcomes of this AHWG have been the Space Defence Strategic Research Agenda (SRA) and the constitution of the EDA CapTech Space at the end of 2022.

Furthermore, SatCen participated in the Project Team Satellite Based Earth Observation (PT SBEO), providing its expertise and representing the GISMO/GeohuB and MATRIX initiatives. In addition, the Centre participated in the Project Team Positioning, Navigation and Timing (PT PNT) in the context of the GEONAW project. Synergies between GEONAW (geospatial tool to support mission planning and operation in navwar scenarios) and RIP-TIDE (resilient PNT testing for defence) were discussed in the CapTech Guidance, Navigation and Control. Finally, SatCen participated in the discussions of the EUMS' Geospatial Capability Board in the context of the GISMO/GeohuB initiative.

In 2022, the GeohuB was successfully deployed at the Hellenic Operational Headquarters (OHQ) in Larissa, Greece. The Hellenic OHQ is the third EU OHQ being provided with the GeohuB following the

OHQ Operation IRINI and the OHQ Operation ATALANTA. In addition, also the EUMM Georgia OHQ and FHQs are using this system. The GeohuB is a Geospatial Content Manager System which enables headquarters' staff sections to share, display and cooperatively generate geospatial information in a user-friendly manner, contributing to performing situation analyses and achieving battlefield awareness.



The second phase of the GEONAW project focused on the development of three prototyping tools (PNT threat propagation, PNT threat localisation and GNSS availability) to translate a PNT denied scenario into a geospatial output ready for transversal integration in the operational planning. Due to the available resources, the existence of a stable version of GeohuB and the need to develop the processing core as a first step of the prototype tool development, GeonaW-II has been developed as an extension of the GeohuB.

It is to be underlined that the participation of SatCen in three GNSS Measurement- Campaigns organised

by the Austrian Armed Forces during the execution of the project have been key to test the use cases via field measurements, as well as to collect user feedback on the prototype software tool.

MATRIX is a SatCen-EDA initiative that represents one of SatCen's primary activities in setting up a common framework for fostering and integrating AI knowledge and applications for the security and defence community, with particular attention to the IMINT domain. A MATRIX dissemination event took place in December, representing the conclusive action of its first phase. The hybrid meeting, physically hosted at SatCen, counted with the participation of 40 attendees from 14 different Member States. The feedback from all participants and their expressions of interest confirmed the quality of the project's outcomes and identified relevant areas for future development.

During 2022, cooperation with MARSUR on maritime situational awareness and information sharing continued as part of EDA Category B project 'MARSUR Networking – Operational Support and Development (MARSUR III)' in line with the European Union maritime security strategy and its action plan. Synergies with other activities in the maritime domain such as CISE coordinated by EMSA were also strengthened.

The SatCen continued to support the REACT3 project on the enhanced use of SAR radar images. The user community includes Member States, Frontex and the SatCen itself.

Finally, the Centre made an important contribution to the EU SSI study (Shared Satellite Imagery), launched with a strategic consultation among the contributors (Member States, EU entities, SatCen).



On-stage discussion with Romanian Prime Minister Nicolae Ciucă at the Black Sea and Balkans Security Forum, 02 September 2022



Director Sorin Ducaru participated in an exchange of views at the SEDE meeting on 26 October 2022



SatCen Director Sorin Ducaru discussing with Josef Aschbacher, Director General of ESA on the security of space at the Munich Security Conference, 18-20 February 2022



Director Sorin Ducaru with Mr Stefano Sannino, Secretary General of the EEAS and Ms Carine Claeys, EU Special Envoy for Space, 14 July 2022



SatCen Director Amb. Sorin Ducaru participates in the annual Euroconsult World Satellite Business Week, 16 September 2022



Director Sorin Ducaru and Deputy Director Louis Tillier meet with Major General Michel Friedling, French Space Commander at the 14th Space Conference, 25-26 January 2022

3.1.4 Cooperation with the European Space Agency

Cooperation with the ESA, officially established through the Administrative Arrangement signed in January 2018, continued during 2022. It offers a formal and structured framework to invest joint effort in activities of common interest.

On 24 June, the annual ESA-SatCen Meeting at Directors level, provided for within the ESA-SatCen Administrative Arrangement, took place in Italy at ESA-ESRIN. SatCen and ESA EOP directors formally approved the joint 2022 work plan and agreed to continue cooperating on suitable activities within SatCen and ESA programmes, with the aim to enhance relevant capabilities on themes of mutual attention.

On 22 and 23 November, government ministers representing ESA Member States, associate states and cooperating states came together at the ESA Council Meeting on ministerial level, held in Paris. In his address to ministers, SatCen Director Sorin Ducaru discussed the need for joint undertakings to tackle today's collective challenges, expressing SatCen's readiness to go one step beyond the current collaboration with ESA, and cooperate on suitable priorities of the ESA Agenda 2025, namely strengthening and boosting of the EU space market for a green and digital Europe.



ESA Council Meeting on Ministerial Level, Paris, France, 22-23 November 2022 © ESA

One of the key joint initiatives, the ESA-SatCen Large-Scale Pilot on climate security, was mentioned in the ESA Council Meeting. This cooperative undertaking, with kick-off in December 2022, will exploit state-of-the-art space capacities in Europe to address the associated complex scenarios in which the security of citizens and societies is affected by climate change effects.

SatCen participated with a delegation in the ESA Living Planet Symposium 2022, organising and chairing a session entitled 'Climate Security - The key Role of R&I and Cooperation to Address Global Threats', including a presentation on 'Geospatial Intelligence Applications to Address Climate Security Issues'.

In the framework of the CSS-SEA, SatCen continued the strong interaction with ESA for the management of the quota of EO data and related activities (e.g. new user requirements, satisfaction survey, and transition activities) through the Copernicus Space Component Data Access mechanism. In addition, SatCen provided requirements and contributed to different activities related to the Copernicus Sentinels, such as S1 and S2 Yearly Mission Reviews and S2 Next Generation Ad Hoc Expert Group.



ESA meeting at Directors' Level, Frascati, Italy, 24 June 2022 © SatCen



3.1.5 Cooperation with the Group on Earth Observations

SatCen continued its participation in the Group on Earth Observations (GEO), being part of the European GEO High-Level Working Group and of the EuroGEO Coordination Group, thus maintaining a regular dialogue with EC DGs RTD and DEFIS as well as with other relevant EU entities and Member States participating in GEO.

The SatCen-led GEO Space and Security Community Activity, which is turning into a Pilot Initiative in 2023, finalized the flagship pilot project considered under its Implementation Plan 2020-2022.

The pilot project exploited SAR interferometry products to address the impact of uncontrolled underground water extraction in vulnerable regions. The approved Implementation Plan for 2023- 2025 will build on the results obtained within this pilot to consider other areas of interest and to extend the application using complementary data and other processing techniques.

3.1.6 Copernicus Security Service – Support to EU External Action (CSS-SEA)

On 15 May 2022, the Copernicus SEA service celebrated its fifth anniversary since it became operational. During these years, the service has demon-

strated flexibility and capability to evolve its offer to continuously meet emerging user needs.



During 2022, the Copernicus SEA provided assistance to authorised users, receiving more than 40 activations and delivering more than 80 products. 52% of activations were from the European Commission, 37% from Member States, 9% from EEAS and 2% from international organisations. SatCen capabilities and expertise make it possible to deliver, through Copernicus SEA, a European geospatial intelligence service that supports the European Union (EU) and its Member States in their operations and interests, improving situational awareness to ensure informed decision-making. It is worth to notice that due to the ongoing negotiation of the new contribution agreement with the Commission, the service continuity was ensured by SatCen personnel only (no industrial support available). All preparatory actions have been put in place to ensure that the service will go back to full regime in 2023.

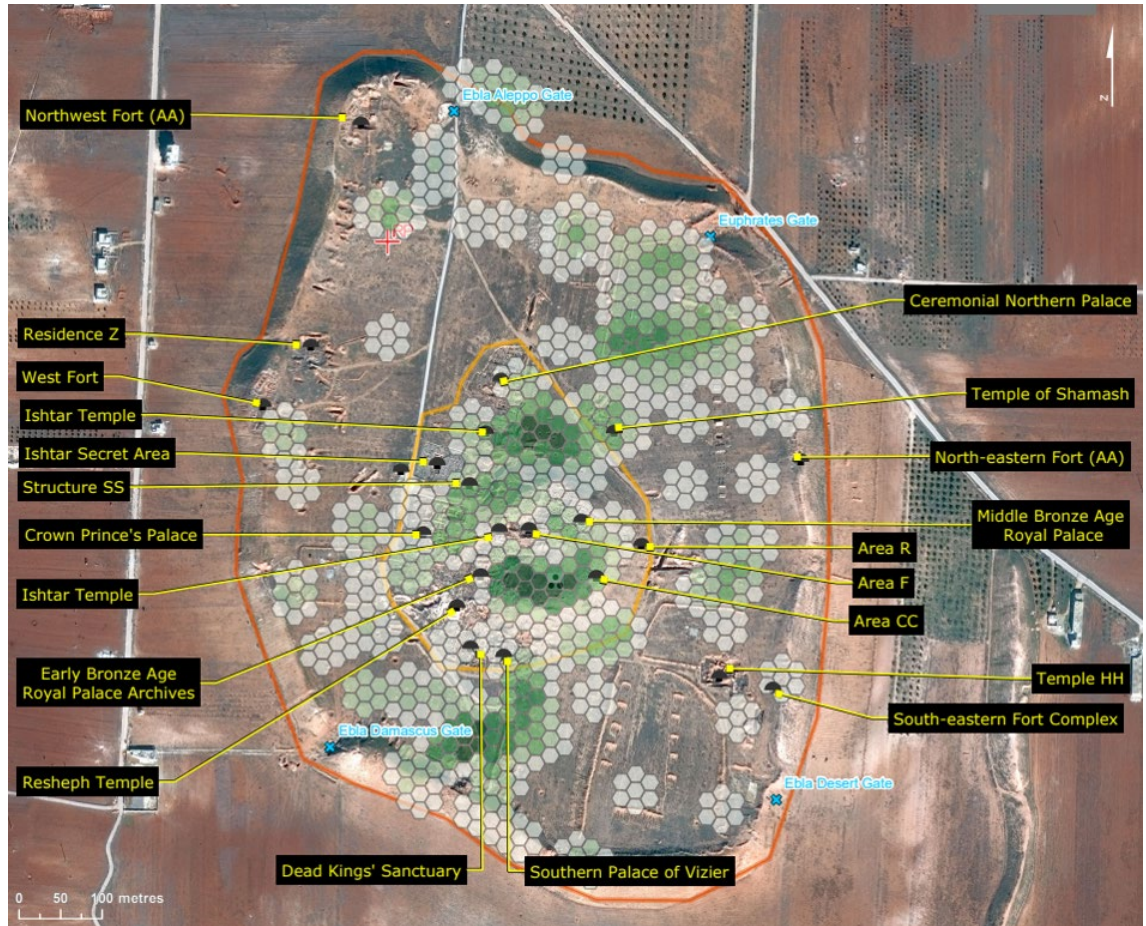


Copernicus SEA providing support to Evacuation Plans during the FIFA World Cup Qatar 2022. ©Qatar2022.qa

Supporting the security of EU citizens abroad and improving situational awareness during crises and conflicts is a pillar of EU External Action. Copernicus SEA products contributed by supporting evacuation plans in urban areas, analysing optimal routes between origins (such as diplomatic buildings or points of interest) and destinations (such as airports), and calculating distances and expected travel times.

The Copernicus SEA service assessed potential damages to cultural heritage sites over areas of difficult access for the international community, and provided supplemental information. During

this period, the service evaluated several sites, including in the analysis location, typology and density of the damages.



Looting Density Map., Ebla, Syria – © EU 2022. All rights reserved.

Earth observation has proven to be a valuable tool for monitoring the environmental and social impacts of mineral resource exploitations. In some mining sites in Africa, several artisanal deposits are opened on the perimeters of industrial mines with the support of community leaders.

Often, miners are forcibly evicted by defence and security forces, resulting in violent clashes. In this context, the Copernicus SEA performed analysis of human activities (e.g. excavations, surface materials, or works), allowing the monitoring of potential illegal actions in the context of mining.



Fekola mine, Mali – © EU 2022. All rights reserved.

In addition, SatCen has been working on the development of the SEA Service Management Infrastructure (SMI). The SMI is a cornerstone of SatCen Digital Platform consisting of a platform providing a broad set of functionalities and integrated tools, enabling the digitalisation and optimisation of all tasking and operational workflows of SatCen. Activities focused on integration, testing and deployment to the SatCen IT Infrastructure.

SatCen continued to inform decisionmakers through institutional visits to SatCen, info sessions with Member States, and training activities (for Member States and UN) on the benefits and opportunities that Copernicus SEA service provides.

3.1.7 Support to Frontex for Copernicus Security Service- Border Surveillance (CSS-BS)

SatCen provided timely, relevant and accurate geospatial intelligence products to Frontex as framed by the SLA signed between the agencies. The purpose of SatCen products is to deliver punctual analysis, monitoring of activity and change detection analysis of specific locations of interest identified through a risk analysis process undertaken by Frontex or related Member States.

In 2022, a total of 231 Task Requests were submitted by Frontex to SatCen. The production for those requests amounted to 953 products. The breakdown per product type was as follows: 620 First Impression Reports (FIR), 160 Quick Reports (QR), 152 Flash Text Assessments (FTA), 10 Digital Geospatial Information (DGI) packages, four Mapbooks, three Briefing Notes, two Multisource Analytical Assessments (MUSO) and one Report.



Support to Frontex for border security and migration analysis - © European Union 2022. All rights reserved.

Again, the yearly production in support to Frontex activities increased, with a total of 953 products in 2022.

It is expected that in 2023, SatCen support to Frontex will reach an all-time total of 5,000 products.



Presentation of SSA capabilities during the visit of Major General Philippe Adam, new French Space Commander, 21 November 2022 © SatCen

3.1.8 Space Situational Awareness

SatCen has been working for more than 10 years on SSA/SST, cooperating closely with the members of the SST Consortium, which has now evolved into a Partnership of 15 EU Member States (AT, CZ, DE, DK, ES, FI, FR, GR, IT, LV, NL, PO, PT, RO, SE), in the EU SST subcomponent of the EU space programme, managed by the European Commission.

Since 2016, the SST Consortium and SatCen have worked together to develop a European SST capability with the support of the EU under different funding lines (H2020, Galileo and Copernicus programmes), and formed the SST Cooperation.

As the EU SST Front Desk, SatCen developed a dedicated service provision interface for delivering SST services to SST users (the EU SST Portal, available at <https://portal.eusst.eu>) and operates the EU SST Helpdesk to support SST users. The EU SST Front Desk also leads the definition, monitoring and reporting of key performance indicators, together with communication and user interaction activities.

Space Situational Awareness

SSA and SST activities aim at protecting the safety and security of European economies, societies and citizens, which rely on space-based applications such as communication, navigation and Earth observation.

SST activities protect space-based assets from the risk of collision against other satellites or space debris, detect and characterise fragmentations in space, and predict the re-entry of space objects that may cause damage on the ground.



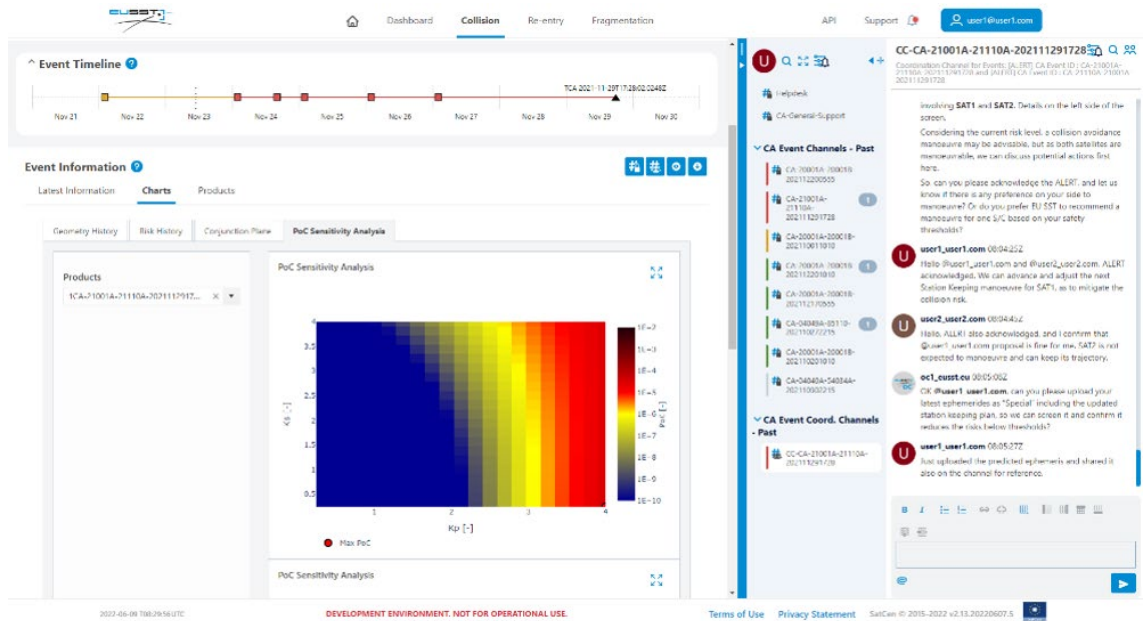
Read more

In 2022, more than 170 organisations received the SST services, including satellite operators, EU institutions and bodies, EU Member States and civil protection authorities and more than 300 European satellites were safeguarded from the risk of collision against space debris and other satellites.

SatCen launched the new Communication & Coordination Platform, available at the EU SST Portal in 2022. This platform allows users of the Collision Avoidance service to exchange and communicate more efficiently when potential collisions have been detected. Satellite operators can discuss proposed actions and recommendations among themselves and with the coordination and support of the various EU SST operations centres through dedicated channels.

Regarding user uptake, SatCen carried out the 4th EU SST User Feedback Campaign to assess the SST user satisfaction in relation to the services provided by EU SST. The Front Desk obtained a satisfaction score of 8.4 out of 10 and very positive comments on the support provided to users. SatCen also started the preparations for the 4th EU SST Webinar and refined the EU SST user uptake strategy and targets.

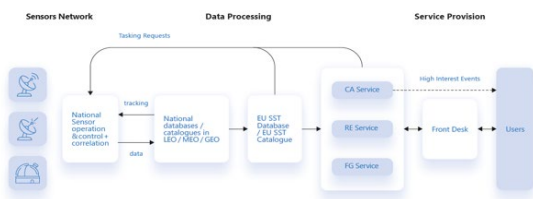
On communication, SatCen carried out a set of promotional campaigns to increase the outreach of EU SST and supported the European Commission on the organisation of STM related events, such as workshops related to the European industry and startups. The <https://www.eusst.eu/> website was also updated with several articles and new pages on EU SST, including a new FAQ page with questions and answers about EU SST, among others.



EU SST Communication & Coordination Platform © SatCen

The Centre also continued to develop its EU SST KPIs reporting platform, available to the SST Consortium and the European Commission. This tool reports on various KPIs that monitor the different SST functions, i.e. sensor, processing and services. The online platform allows an in-depth statistical analysis of the performance of the different system components and the resulting SST services provided.

Furthermore, within the SST Cooperation, SatCen coordinates the EU SST Taskforce to deal with scenarios associated with critical operations and high media interest events. During this period, four activations of the EU SST Taskforce took place, related to the re-entry of space objects into the Earth's atmosphere and close approaches between large pieces of debris. The two most relevant activations in 2022 were the monitoring of the re-entry of large space objects CZ-5B, one in July (2022-085B) and another one in November (2022-143B). These objects were the core stages of the rockets that launched Wentian and Mengtian, the second and third module of the Chinese large modular space station. The EU SST network of sensors observed the events closely, providing relevant information to different users and authorities. EU SST analysed the data and communicated the events to relevant stakeholders, such as the Commission or the EEAS, and to the public, when appropriate.



EU SST Architecture © SatCen 2022

Transfer to EUSPA

Finally, in 2022 SatCen continued the dialogue with EUSPA, DG DEFIS and the SST Partnership on the transfer of the SST Front Desk function to EUSPA in the context of the EU space programme, following the Commission's Decision of 03 June 2022.

In preparation of the transfer, which will take place on 01 July 2023, SatCen and EUSPA worked very closely during 2022 to ensure a smooth transition, including the design, procurement, validation and implementation of the necessary IT infrastructure, and the handover of the relevant operational information and related competencies.

The image shows a collage of social media posts from the account @EUSST. The top post, dated 30 Dec 2022, is a tweet summarizing 2022 achievements with a graphic titled "2022 in figures". The graphic lists the following statistics:

- 177 registered organisations
- 310 satellites safeguarded from the risk of collision
- 695 risky conjunctions*, 79 re-entries & 9 fragmentations monitored by EU SST
- 8.4/10 overall user satisfaction score¹
- 9,866 social media followers²

Below the graphic is a tweet from DG DEFIS dated 5 Dec 2022, highlighting the #EUSST Communication & Coordination Platform. The bottom part of the image shows a tweet from 4 Nov 2022 with a world map graphic, announcing that the re-entry window of #CZ5B has narrowed down to 2022-11-04 09:38:39 UTC ±111 min.

3.1.9 Research and Innovation

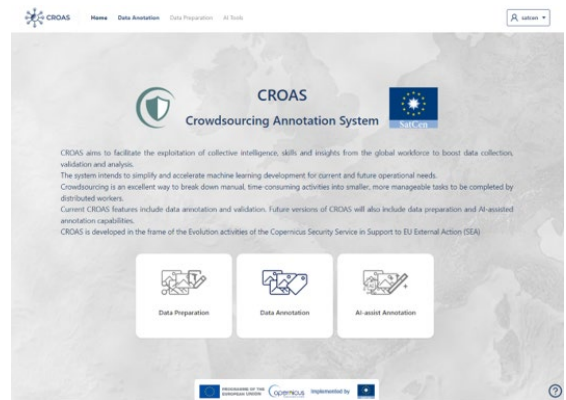
The security dimension of the geopolitical ecosystem gained in importance in 2022, caused by conflicts raised at international level and by global events with negative effect in societies and the ecosystem. The impact of the increasing number of critical issues at EU borders, climate change, and availability of resources increases the necessity to deal with traditional and new security scenarios, in order to be able to ensure the safety and security of citizens. EO data are a relevant tool to improve situational awareness in several cases, especially in combination with other diverse data sets like demographic data, conflicts or threats information. This way, 2022 has been a turning point to trigger actions to build a stronger EU, and this includes the investment and development of key technologies and capabilities to ensure EU autonomy.

Considering the above and the fact that one of the main objective of SatCen is to enhance its operational capabilities and service offer, the Centre prioritised during 2022 its involvement in R&I initiatives in the areas of CSS-SEA Evolution, support to Frontex for CSS-BS Evolution, STM and technology development.

CSS-SEA Evolution

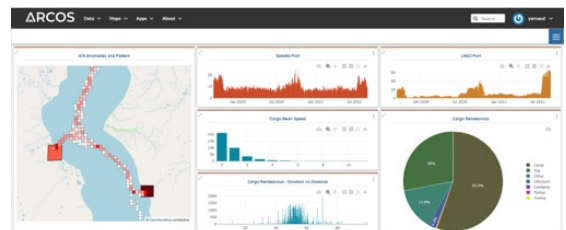
In the context of SEA R&I and service evolution initiatives, several pilot projects were co-designed and conducted in cooperation with users, expressing emerging or challenging needs, in the Environmental Crime Application Area, supporting different analyses for illegal crop irrigation, forest fires and forest logging.

Moreover, SEA continued its activities in identifying and implementing specific projects to optimise and improve the service. In 2022, different initiatives were completed, developing a crowdsourced dataset labelling tool in the context of AI activities (CROAS tool), evolving Online Demonstrator capabilities (e.g. GeohuB development) and enriching the Geospatial Production service portfolio in the context of the climate security chain (e.g. Climate Security Vulnerability Index).



CROAS - crowdsourced dataset labelling tool

Regarding the participation in specific Horizon 2020 EU-funded R&I projects for Copernicus SEA evolution, the Centre continued its participation in the ARCOS project.



ARCOS platform analytics and information

ARCOS' main objective is to design and implement an early warning system that continuously monitors the Arctic Region to detect and identify criticalities through near real-time innovative AI analysis techniques. ARCOS will offer analytics and information through customisable dashboards, hosting a series of products based on multiple satellite data. During 2022, the Centre presented expected outcomes in relevant fora, including the Copernicus Polar Workshop² and the ESA Science Collocation meeting.

In 2022, SatCen also strengthened its engagement to newly awarded Horizon Europe projects RITHMS and CENTAUR and the EDF project IntSen:

- **RITHMS** (Intelligence and Technology for Heritage and Market Security) project intends to strengthen the operational capacity of Police and Customs/Border Authorities in handling the increasingly organised and poly-criminal nature of trafficking in cultural goods. SatCen participation in the project follows the strong commitment of the EU to cultural heritage preservation as an integral part of its values and the acknowledgement of the risks associated with the deliberate plunder of historical and social patrimony.

It will enhance Copernicus SEA service in the cultural heritage application area, being SEA the framework for RITHMS operationalisation.

- **CENTAUR** (Copernicus Enhanced Tools for Anticipative Response to Climate Change in the Emergency and Security Domain) project will develop foresight and early warning tools based on water and food insecurity indicators as precursors of conflict. Its main objective is to respond to societal challenges deriving from climate change threats by developing and demonstrating new service components for the Copernicus SEA and Copernicus Emergency Management Services.
- **IntSen²** project aims at using AI to develop a concept of application for an IMINT service that fundamentally changes how IMINT is conceived, from a reactive service design to a proactive service design. It does so by basing the research and proposed solutions exclusively on European assets in order to strengthen EU operational autonomy.



SatCen participation in “Strategic Research Agenda for the Copernicus Security Service”, Ispra (Italy), November 2022

² <https://www.Copernicus.eu/en/events/events/Copernicus-polar-workshop>

As already mentioned, as Copernicus SEA entrusted entity, SatCen contributed to the strategic research agenda for the CSS and participated in a workshop organised by the Commission DG JRC and DG DEFIS aimed at identifying R&I objectives for the development of CSS. The integration of enlarged data sets for increased efficiency and data processing paradigms for EO and rapid action were addressed.

SatCen's contribution to the European Commission's efforts on its AI strategy continued during the first half of 2022 through various activities; As the entrusted entity for CSS-SEA, it maintained its direct participation in the European Artificial Intelligence Alliance and the support to the High-Level Expert Group on AI (AIHLEG). On June the 27th, SatCen participated in the "Bringing the AI Regulation Forward" online event, organised by the European Commission and the Government of Spain, to launch Spain's pilot for a Regulatory Sandbox on Artificial Intelligence. The event's objective was to connect competent authorities with companies developing AI and provide a common framework for discussing future obligations of the AI regulation and identifying best practices and guidelines.

Support to Frontex for CSS-BS Evolution

The MUSO service, included in the service portfolio of the SLA with Frontex, was redefined jointly by SatCen and Frontex, in order to enhance its quality and to better align the essence of the reports with a geospatial product. The new content distribution is designed to emphasise the geospatial component,

granting quality assurance and validation activities before product dissemination to the users.

Electronic Tasking Tool: SatCen and Frontex continue to develop the electronic tasking tool, aimed at further improving the interagency tasking interface and workflow. The electronic tasking will allow service managers, through a step-by-step interface, to complete and submit a new task request using an online application. Electronic tasking will allow for a faster tasking process cycle and provide a more powerful management and statistical tool. In the framework of R&I Horizon Europe activities, two new projects with SatCen participation were kicked-off:

- **PERIVALLON** aims to provide an improved and comprehensive intelligence picture of organised environmental crime and develop effective and efficient tools and solutions for detecting and preventing such types of criminal activities and for assessing their environmental impact based on geospatial intelligence, remote sensing, scanning, online monitoring, analysis, correlation, risk assessment, and predictive analytics technologies, by leveraging the latest advancements in AI in the fields of computer vision and multimodal analytics. SatCen's role is to identify user requirements and needs, identify and implement the use case for "Transnational Environmental Crime Smuggling Routes", validate the developed technical solutions, and to provide support in the assessment and validation of tools/services/infrastructures and their potential use for the development of SatCen services (including Copernicus BMS).

- **EURMARS'** ground-breaking vision is to expand the common risk assessment practices currently deployed by authorities to enable the development, deployment and evaluation of a secure multitasking surveillance platform that improves sensing capabilities for a wide range of security risks and threats in wider border areas by clustering high altitude platforms technology, satellite imagery, UxVs and ground-based sensors into a novel joint surveillance capability. SatCen plays a role in the identification of operational requirements for border and maritime security; data exploitation from the developed platform; enrolment on tasks related with Co-Design / User Requirements gathering; user requirements definition in order to increase surveillance capabilities; engagement with European and International EO actors.

The Centre's participation in this exercise aimed to test imagery analysis capabilities in predefined scenarios related to irregular migration and cross-border crime activities.



Support to Frontex and Member States during the implementation and operational phases of the Eurosur Fusion Services Operational Exercise, Portugal, 2022



EURMARS project official website, <https://eurmars-project.eu/>

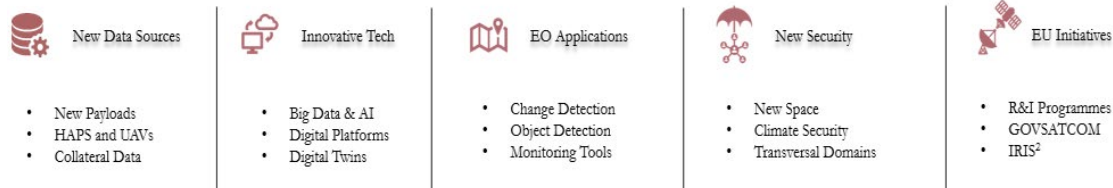
For the first time since the first SLA was signed between SatCen and Frontex in 2015, SatCen experts were present during the operational phase of a Eurosur Fusion Services Operational Exercise, in Lisbon (Portugal) from 19 to 21 September 2022.

SSA Evolution

In the context of STM and in the scope of the R&I H2020 Spaceways project, SatCen supported the organisation of two virtual workshops and a hybrid final conference, aimed at giving European stakeholders the opportunity to assess and consolidate recommendations proposed to the European Commission on STM policy, legal aspects, best practices and guidelines and SSA/SST developments. In the EUSTM H2020 project, SatCen led the data governance and security related activities, and contributed to the key stakeholder's consultation.

Research, Technology Development and Innovation

Exploiting satellite EO imagery and New Data Sources through Innovative Technologies, RTDI implements advanced EO Applications and addresses New Security scenarios while supporting relevant EU Initiatives.



RTDI R&I projects within the EC R&I framework programmes focus on highly innovative activities, aiming for an efficient technological response to the challenges posed by new security scenarios or even at anticipating challenges based on technology trends.

During 2022, on top of already ongoing H2020 projects, namely E-SHAPE, ENTRUSTED, GEM, PROMENADE and AI4COPERNICUS, Horizon Europe awarded three new projects to SatCen: ENEXA, ATLANTIS and SDG-EYES. These R&I projects contribute to the development and assessment of new solutions and capacities along the Centre's whole data value chain.

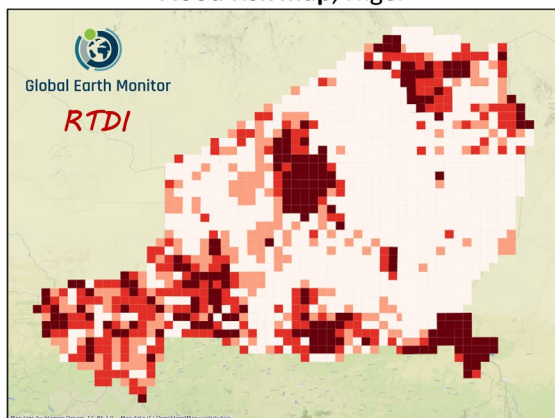
With the focus on new technologies, ENEXA and AI4COPERNICUS work with AI methods to improve the extraction of information from datasets.

In particular, ENEXA deals with usage of knowledge graphs to demonstrate the added value of explainable Machine Learning in different domains, including the geospatial one. AI4COPERNICUS,

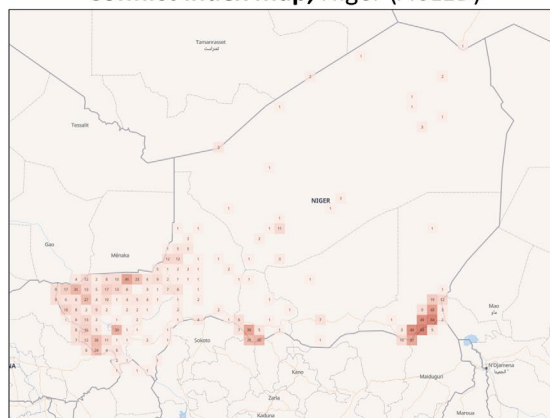
in turn, explores diverse AI-based methods to address challenges using EO data as main data source. Specifically, three security related AI-based EO applications were developed.

Even closer towards the users, E-SHAPE, GEM and SDG-EYES deal with the development of EO-based pilot applications (in combination with other datasets) to address complex scenarios of climate security. For instance, the Conflict Pre-Warning map application developed within GEM merges EO data (e.g. maps depicting vulnerabilities to natural disasters derived from Sentinel-2), meteorological data (e.g. precipitation and temperature patterns) and other relevant open sources of information (e.g. socio economic and conflicts data) result in a new security product that could enhance decision-making processes. Building on the know-how acquired in this project and in E-SHAPE, SDG-EYES will develop a cross-domain pilot focusing on the vulnerability of local communities due to climate change effects, supporting the achievement of identified UN Sustainable Development Goals indicators relevant for security.

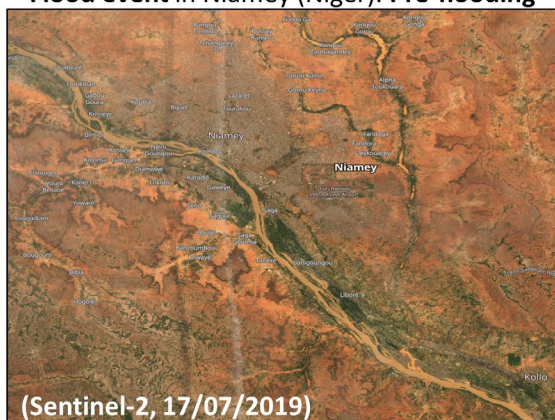
Flood risk map, Niger



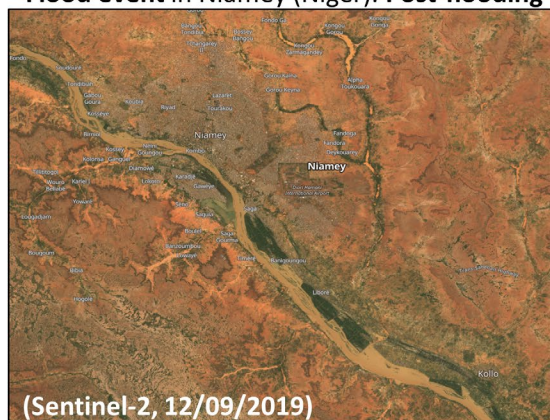
Conflict index map, Niger (ACLED)



Flood event in Niamey (Niger). Pre-flooding



Flood event in Niamey (Niger). Post-flooding



Integration of climate vulnerability, conflicts and EO data in GEM Conflict Pre-Warning pilot © SatCen

Apart from contributing to specific developments in the EO processing chain, RTDI also deals with projects dedicated to the enhancement of services for final users in more traditional security domains. PROMENADE and ATLANTIS aim at exploiting the use of EO data in the maritime domain and in critical infrastructure protection, respectively.

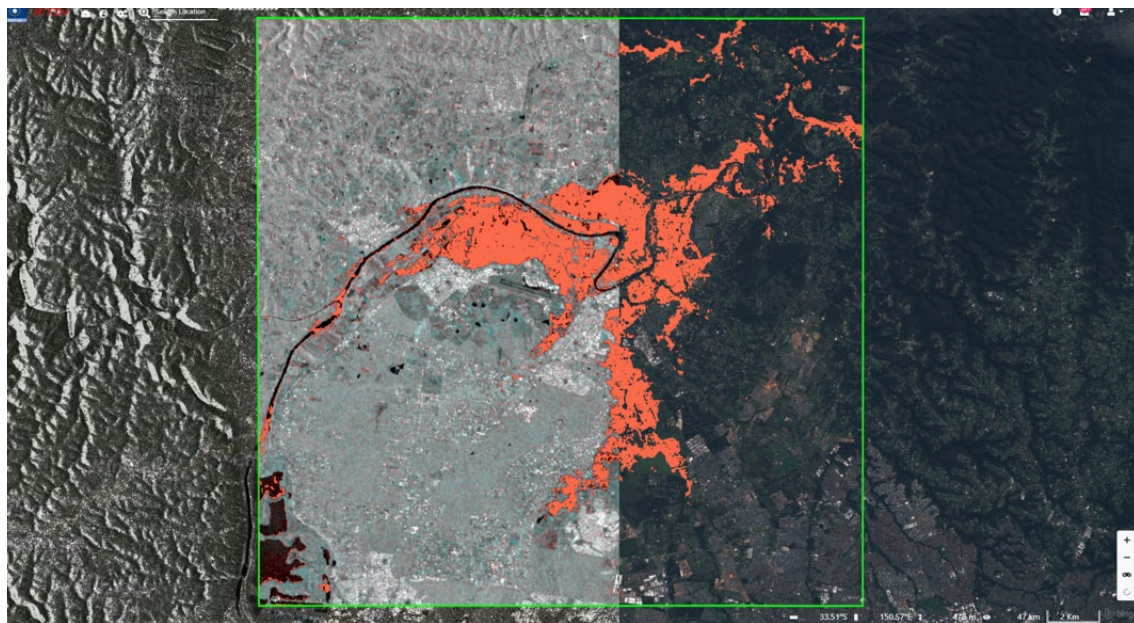
These two projects have also a strong component of interaction with final users, whose needs are translated into requirements and, later on, used to validate the results. In this respect, SatCen supports the transfer of user needs into requirements associated to the management of EO data, thus placing the users in the centre of attention.

Also related to the interaction with users, but in this occasion with the objective of providing new or enhanced capacity to governmental users, the ENTRUSTED project released in 2022 a first set of use cases and user requirements for future secure satellite communication services for governmental users. It thus provides the user perspective to the EU space programme component GOVSATCOM, and supports new space initiatives as IRIS².

All the outcomes of these projects intend to contribute to improving the SatCen capabilities, with a strong emphasis on continuous enhancement of the RTDI Geospatial Data Management Platform (GEO-DAMP). This EO platform integrates both EO and collateral data sources and associated pro-

cessing pipelines, allowing users to work with heterogeneous datasets, to configure and trigger processing pipelines that make it possible to monitor different scenarios directly from their web client.

This way, GEO-DAMP constitutes a building block of the future classified IT platform as well as a prototype of a Digital Twin Earth for Security and is a constantly evolving solution that looks at advancing in line with SatCen capabilities and needs. Apart from the integration of EO applications resulting from RTDI projects and cooperative initiatives (e.g. performed with ESA, EDA and GEO), the development of the platform also builds on dedicated contracts with industry to upgrade the platform itself.



Flooding map generated in GEO-DAMP by exploiting in-house algorithms using Sentinel-1 and Sentinel-2 images, Australia, 2021 © SatCen

The second stable version of GEO-DAMP was successfully deployed in 2022. In this second version, through the new GEO-DAMP dashboard, users can connect to the SatGen catalogue, which includes very high resolution data, to discover, access and process data, going a step forward in the demonstration of the wide potential of working in a web platform-based approach.

The development of the next upgrade of GEO-DAMP, started in 2022 and ending in 2023, focuses

on the integration of GEO-DAMP in the classified IT platform, which will enable a higher level of integration within SatGen infrastructure and more efficient interoperability with operational flows.

In summary, RTDI activities ensure SatGen's involvement in relevant initiatives in order to stay up-to-date in technological trends, and also support the ambition of developing breakthrough solutions like the Digital Twin Earth for Security.



The RTDI GEO-DAMP platform integrates heterogeneous data sources as well as processing pipelines, allowing users to integrate, configure, trigger and monitor these sources directly from their web client



SatCen training unit © EU 2022

3.2 Training

Training activities at SatCen cover an extensive range of subjects and skills, helping staff keep their highly specialised expertise up to date and at the cutting edge of new research, including the methodologies and techniques specific to daily tasks. A substantial part of this capability is also available to Member States and other institutions and agencies, who can benefit from a unique training environment.

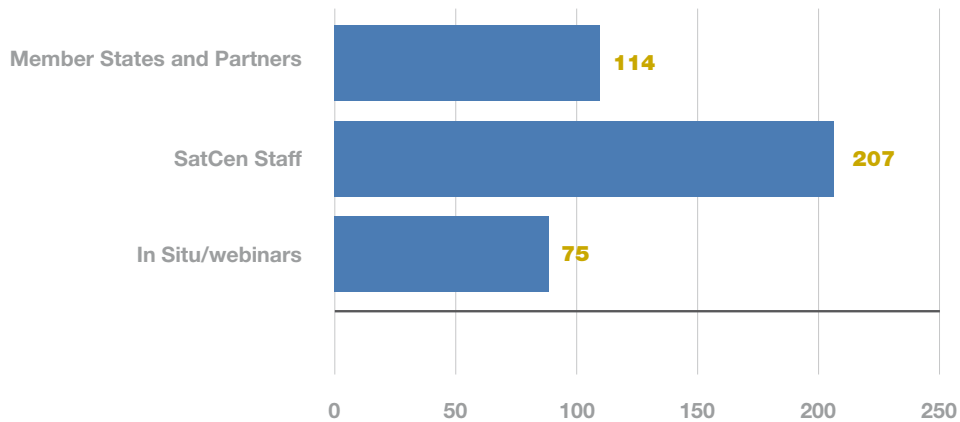
In 2022, the Centre offered the following courses on its premises that were open to external participants:

- The **SAR** course took place in January with attendees from users, Member States and SatCen;
- The **Nuclear Fuel Cycle** course, took place in February and was supported by two external instructors from the JRC and the International Atomic Energy Agency;
- The **IMINT** course, took place in June, with attendees from users, Member States and SatCen;
- The **Data Processing** course, took place in September with attendees from Member States and SatCen;
- The **Geospatial Intelligence** course, took place in October with participants from Member States and SatCen;
- The **Analysis Industrial Installations** course, took place in October, with attendees from Member States and from SatCen.

In addition to the above-mentioned courses, SatCen also supported its users and stakeholders with different training formats, such as the IMINT webinar course to Frontex in January 2022. This online course, like the Frontex Course at SatCen premises in October, trained Frontex in the usage of SatCen products and services developed specifically for their needs.

Other examples of tailored training offered by SatCen in 2022 are the Webinar to NATO Oberammergau Course on IMINT organised in March, Luxembourg in-situ IMINT Course in May and the Finland in-situ IMINT Course which commenced in September.

Attendees to SatCen Courses in 2022

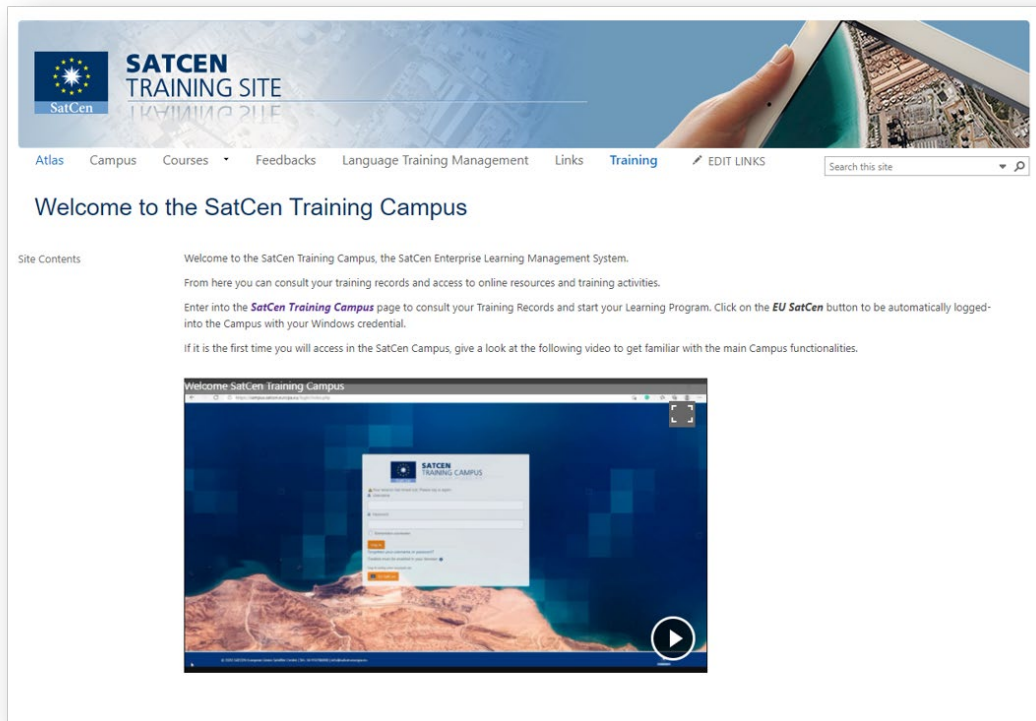


The training unit also organised additional, SatCen-specific training on subjects such as AI and automation, mining activities, SatCen web services, and the IMINT Foundations online Programme,

available in the SatCen Training Campus for SatCen newcomers who work with IMINT and geospatial intelligence.

SatCen training activities also included training delivered by other organisations and institutions, such as the European Security and Defence Col-

lege, as well as training in project management (PRINCE2), key performance indicators, data protection, specific software and languages.



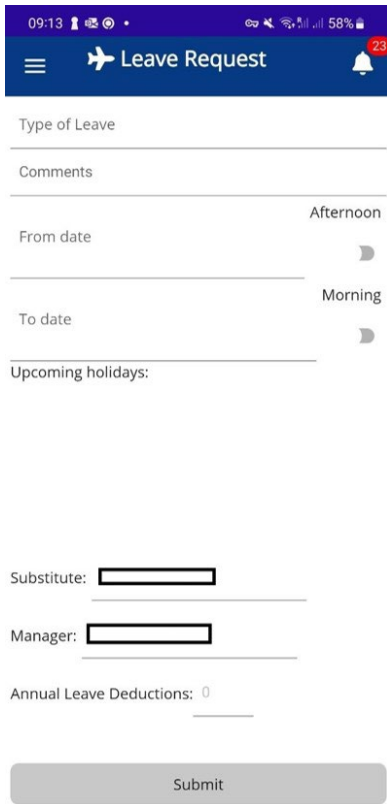
The SatCen Training Campus Website

3.3 Secure IT Infrastructure

After two years of exceptional circumstances caused by COVID-19 and lessons learnt on how to operate optimally in hybrid mode, precise teleworking rules have been implemented with new checking processes for a normal working context.

It was therefore necessary to redevelop part of the administrative software to integrate these rules and develop new ones to streamline administrative interactions between teleworking staff and SatCen.

Notably, a mobile application has been developed and deployed offering an immediate visibility of the situation of staff and simplifying the administrative workflow.

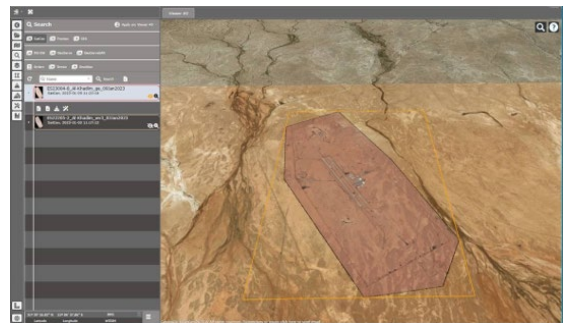


SatCen Mobile Application

Optimisation of operational processes through automatic ingestion and processing of geospatial data was at the core of new developments in 2022. Notably a new alert system was put in place taking advantage of SatCen’s worldwide commercial imagery catalogue. This system immediately informs analysts of newly acquired commercial imagery over their areas of interest, reducing acquisition costs and delays.

To accelerate the production of geospatial intelligence products, various mechanisms were developed to automatically ingest open source data and external vectors, transform them for the SatCen data model and present them to analysts via web services. These include OpenStreetMap, Here vectors and others.

A new advanced version of the 3D catalogue was developed, enabling analysts to view and process heterogeneous geospatial data in a common simplified interface. Furthermore, this tool allows analysts to work collaboratively on specific areas in a web environment. It will constitute one of the main services provided by the classified IT platform.



SatCen's 3D Catalogue

The classified IT platform, a classified cloud based infrastructure for intelligence services, has made significant progress, in line with the SatCen Baseline Augmented Development Plan. The platform prototype has obtained the EU Secret accreditation level, making it the first EU classified cloud infrastructure. This accreditation was obtained after a thorough inspection from SatCen's security authority, a Member State's national security agency. This inspection checked technical hardening measures, processes and documentation. It was then validated by the EEAS Security Accreditation Board composed of all Member States' security agencies.

Following the accreditation, the platform moved from a prototype status to being operational, triggering the ramping up of services. In parallel, all development and deployment processes have been aligned to ensure they follow DevSecOps and GitOps principles.

Significant efforts were made to guarantee end users' access to the classified IT platform services through EU OPS WAN, the only operational EU Secret network. SatCen's services which so far have been only accessible in test mode and to a selected number of users, have now progressed to the stage of adding users via specific onboarding processes.

4 RESOURCE MANAGEMENT

4.1 Administration

4.1.1 Staff

SatCen's most valuable asset is its staff. Therefore, excellence in administration and human resource management is paramount. SatCen strives to continuously improve in this area, with the goal of attracting and retaining the best professionals, not only in the Operations, Capability Development and IT Divisions, but across the organisation.

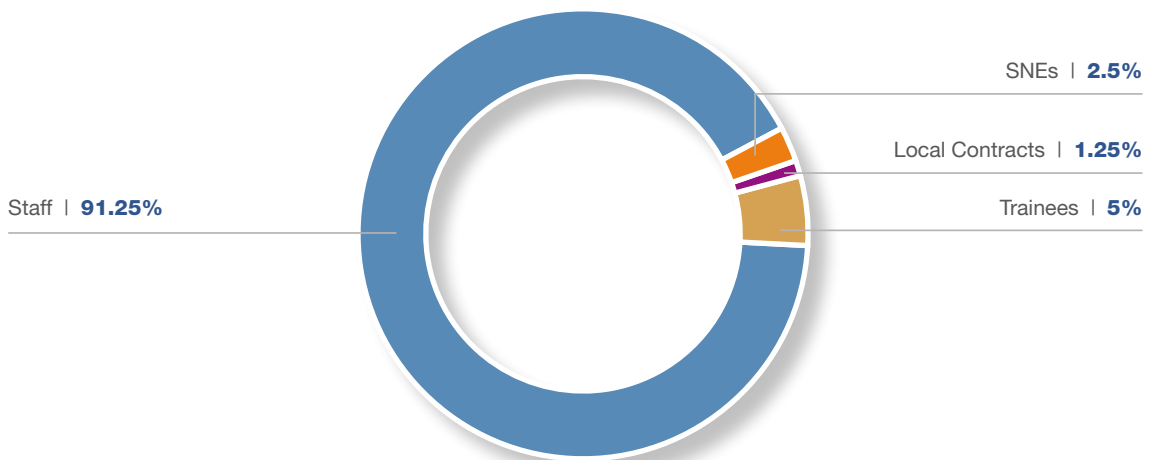
At the end of 2022, SatCen counted on 146 highly professional, motivated and committed staff members: 90 of them occupied permanent positions and 56 of them occupied temporary positions.

Furthermore, SatCen increased the number of seconded national experts (SNE) that Member States sent to SatCen from 2 to 4 over the course of 2022.

These SNEs came from Slovenia, Romania, Poland and Hungary. SNEs are important because they complement the pool of imagery analysts and nurture the mutual exchange of expertise, in line with HR/VP recommendations. They also help spread awareness of SatCen capabilities and strengthen operational ties with Member States.

In the first quarter of the year, SatCen also approved a new traineeship programme, which resulted in a record of eight trainees who learnt from and contributed to SatCen's endeavour. Two local staff members complete the HR picture for 2022.

Composition of SatCen Personnel by Type of Post



In 2022, SatCen staff represented 18 EU nationalities across five different age groups, reflecting the high level of diversity among both permanent and temporary staff. As for gender, the picture slightly improved: 118 men and 42 women, who now represent slightly more than a quarter of colleagues (26%), well above the space and defence industry average (around 20%). SatCen will strive to continue attracting more women into its workforce.

Updated recruitment rules, a new onboarding policy and mentorship programme, as well as a new

and comprehensive dissemination plan for vacancy notices, all adopted in mid-2022, aim to further increase SatCen's attractiveness as an employer and to enlarge the diversity of its personnel, in particular regarding geographical balance and gender.

The implementation of a new Diversity and Inclusion Strategy (D&I) and Action Plan³, adopted at the beginning of 2022, is well underway and complements these efforts. The same goes for the appointment of a new D&I coordinator, as well as for the renewed team of Confidential Counsellors and their coordinator.

Composition of Staff by Gender and Nationality



Belgium	4	
Bulgaria	1	
Czech Republic	1	
Germany	5	
Denmark	1	
Spain	74	
France	19	
Greece	5	
Croatia	2	
Hungary	3	
Ireland	1	
Italy	18	
Latvia	1	
Netherlands	3	
Poland	2	
Portugal	11	
Romania	8	
Sweden	1	

³ Diversity and inclusion strategy and 2022 Action Plan:
<https://www.satcen.europa.eu/keydocuments/Diversity%20and%20Inclusion%20Strategy%202022-2023620ce64c3172450001c26508.pdf>

Taking all internal and external recruitment procedures into account (staff, trainees and SNEs combined), 25 new colleagues entered into service, while a total of 18 colleagues left SatCen.

The incorporation of the new Head of Administration in March 2022 brought the SatCen Management Team back to full capacity and eased the pressure on its other members, notably the Director and Deputy Director.

Apart from the draft of new and updated HR rules mentioned above, SatCen also approved new post-pandemic teleworking rules, after extensive consultations with the SatCen Staff Committee.

Their implementation was a success and a review in the first half of 2023 will determine whether amendments are necessary.

In terms of staff-wellbeing, and health and safety, the Staff Committee re-instated a wide range of social events and (sports) activities. SatCen management continued to closely monitor the situation around COVID-19 and generously applied its new teleworking rules for pandemic related or suspected sickness, with the clear objective of minimising the risk to staff and guaranteeing business continuity.

As in pre-pandemic years, all staff were offered seasonal flu vaccinations to complement their COVID-19 vaccines.

4.1.2 Legal, Procurement and Registry

The SatCen legal team continued their work on legal cases, including requests for public access to documents.

One notable case concerned a request for access to a SatCen product, which was declined by the Centre. This was appealed by the requester before the EU Ombudsman, who fully supported SatCen's decision and rejected any claim of maladministration.

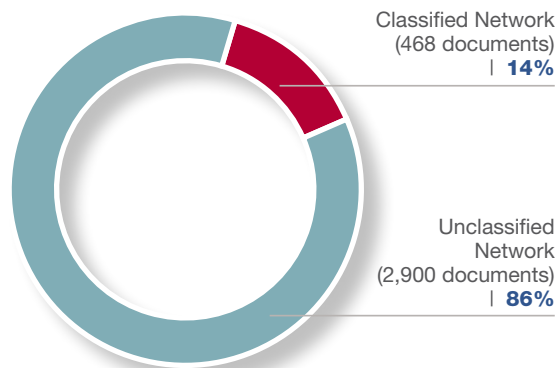
In terms of data protection, SatCen adopted a new Data Protection Impact Assessment Methodology for all processing activities, a Third Parties Methodology Assessment on compliance with data protection regulations, as well as a new policy on the processing of audiovisual coverage of Staff and Visitors. SatCen Data Protection Team attended a number of meetings and provided DP-related internal training for staff.

Procurement continues to be a crucial part of SatCen's work, enabling the Centre to successfully deliver on its mission, objectives and tasks.

In this context, the SatCen procurement manual and the practical guidelines were updated in order to implement auditors' recommendations and align both texts with applicable legislation. During 2022, a total of 26 procurement procedures were initiated.

In March 2022, SatCen's Registry team completed the upgrade of SatCen's electronic registry system (e-registry), which now also covers the classified network. As a consequence, the workload on operations was considerably decreased, with a considerable increase in the number of documents registered in the new system, reaching a combined total of 3,368 documents over the course of the year on both networks. The share of documents on the classified network continued to increase, representing 14% of the yearly total and 18% in the last quarter.

Registry Documents Handled in 2022



4.1.3 Communication Activities

Leveraging EU Ambitions

In 2022, the SatGen Communications Team continued to promote awareness and increase visibility of the Centre's work, in support of key EU ambitions in CFSP and CSDP. These objectives were doublefolded, on the one hand to align with the HR/VP Josep Borrell's interest to improve general awareness of the Centre's mission and activities; and, on the other, to celebrate an important milestone for the Centre: its 30th anniversary of operational activity.

Celebrating SatGen's 30th Anniversary

The 30th anniversary milestone was an opportunity to reflect on achievements and to discuss the future development of the Centre. A series of events were organised to mark the occasion, including a ribbon-cutting ceremony conducted under the auspices of H.E. Pedro Sánchez, President of the Government of Spain, represented by H.E. Margarita Robles, Minister of Defence and H.E. HR/VP Josep Borrell. An exhibition and roundtable discussion at the European Council under the auspices of the Czech Presidency of the Council of the EU and the HR/VP Josep Borrell and an internal event for SatGen's growing workforce were other highlights in a busy calendar.

Key Visits

As well as participating in events, SatGen hosted a wide variety of visits, highlighting its growing relevance and increasing visibility. Some of the notable visits included H.E. Charles Michel, President of the European Council, H.E. Klaus Iohannis, President of Romania, H.E. François Bausch, Deputy Prime Minister and Minister of Defence of Luxembourg, Rear Admiral Stefano Turchetto, Operation Commander of EUNAVFOR MED IRINI and General Philippe Adam, French Space Commander, among others.



Digital Communication

Various digital activities were carried out under the umbrella campaign of #SatCen30. For example, digital initiatives included #AnniversaryVoices, a compilation of video testimonials from SatCen users and partners, and the #SatCenExhibitionQuiz, an interactive digital display of SatCen analysis work.

A tailor-made 30th anniversary landing page⁴ was created to better showcase the history of the Centre and its activities over the past three decades. The dedicated website also included a digital adaptation of the SatCen exhibition in Brussels.

SatCen also joined the Network of EU Agencies in communicating key dates such as EU Diversity Month, International Men's Day, or International Day of Persons with Disabilities.

Event Participation

As part of SatCen's professional outreach and communication efforts, the Centre participated in various events in 2022, ranging from the political to the operational level. These events provided a platform for SatCen to showcase its role and activities in geospatial analysis for EU decision-making, as well as to engage in knowledge exchange and personal networking. Key events included participation at the 14th European Space Conference (Brussels), 58th Munich Security Conference, World Satellite Business Week (Paris), Shaping Civilian CSDP for the future (Brussels), the Black Sea and Balkans Security Conference (Bucharest) and Defending European Interests in Space (Prague).

Furthermore, on 05 November 2022, the Conde de Latores Award for Humanitarian Work was awarded to SatCen, given the important work carried out in support of humanitarian activities and missions and its essential services to the EU and its security.

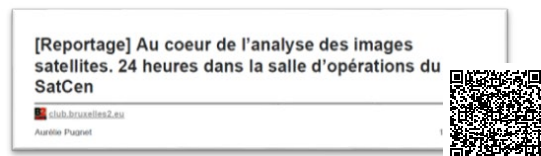
Public Relations

SatCen continued to engage, when appropriate, with the media, providing them with accurate and timely information on the agency's role and work. In



Amb. Wolfgang Ischinger, Chair of the Munich Security Conference, presenting "The Art of Diplomacy", with a contribution from Director Ducaru

2022, SatCen Director Sorin Ducaru provided three tailored interviews to El Mundo (Spain), Bruxelles2 (Belgium) and The European (UK based).



Overall, 2022 was a significant year from a communications perspective, with SatCen celebrating its 30th anniversary and maintaining a high tempo of engagement and visibility. SatCen expects to continue its communications efforts in the future, building on the momentum generated in 2022.

Key facts

8,832 new followers gained across both platforms

467k + impressions across both platforms



⁴ <http://30years.satcen.europa.eu>

4.2 General Budget

The 134th SatCen Board on 25 November 2021 approved the SatCen Budget 2022, with a 22.15% increase in expenditure and a 44% increase in income, resulting in a 5.75% combined increase in Member States' contributions to the SatCen General and Pensions Budgets.

The 2022 budget was shaped by very specific political and strategic conditions for SatCen and its further development. In particular, by the first ministerial level SatCen Board meeting on 06 May 2021, chaired by the HR/VP. The Member States expressed their appreciation, as well as providing political guidance and a higher level of ambition for the Centre's future, as reflected in the approval of the Baseline Augmented Development Plan.

Beyond these political and strategic developments, a number of other important contextual factors affected the SatCen Budget of 2022, including:

- The continuous increase in SatCen user demand, in particular as a consequence of the Russian war of aggression in Ukraine.
- The challenges posed by the still ongoing COVID-19 pandemic, although with a lower intensity level.
- The preparatory actions and the start of the implementation of the Baseline Augmented Development Plan (the creation of the Baseline Augmented CAPEX Fund).
- The actions needed to achieve the objectives in the SatCen work programme, in particular the development of the prototype future classified IT platform, as well as the production of new operational AI-based tools and datasets in support

of geospatial analysis and accessible to Member States.

- The enhancement of training capabilities.
- The completion of SatCen's building extension and the equipment of the new premises.
- The negotiations with the Commission for a new contribution agreement on Copernicus SEA, as well as a WA and a SLA with Frontex.
- SatCen's 30th anniversary.
- The inflationary impact caused by the pandemic and energy crisis following Russia's unprovoked and unjustified invasion of Ukraine.
- The expected growth in SatCen operational output of 7%-10% compared to 2021, in line with the new KPI approach, which benchmarks different kinds of SatCen geospatial intelligence products in terms of 'unit products'.

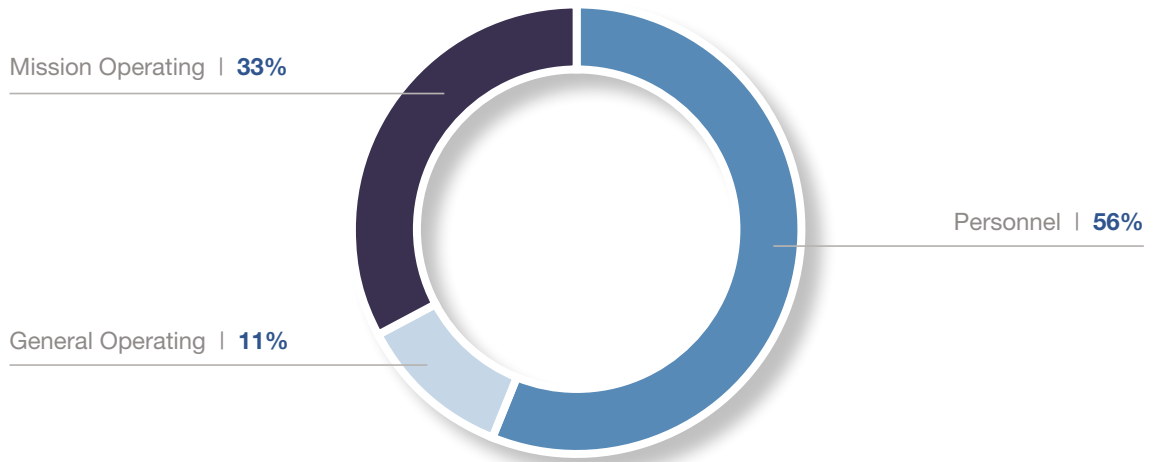
The Centre managed to handle the continuous increase in operational workload and in customers on the basis of a moderate increase of contributions from Member States. This was possible mainly through the growing share of activities funded via cost recovery.

However, cost recovery assumptions in 2002 could not be met due to the unforeseen impact of Russia's unprovoked and unjustified invasion of Ukraine. In 2022, cost recovery income was EUR 5,752,121.35, compared with the assumption of EUR 6,600,000, before Russia's war aggression. This was mainly caused by the unexpected discontinuation of SatCen's previously intense support for OSCE, following the discontinuation of its Special Monitoring Mission's mandate in Ukraine.

The following chart illustrates SatGen's general budget for 2022 by expenditure chapters. The graph shows the importance of investing in staff.

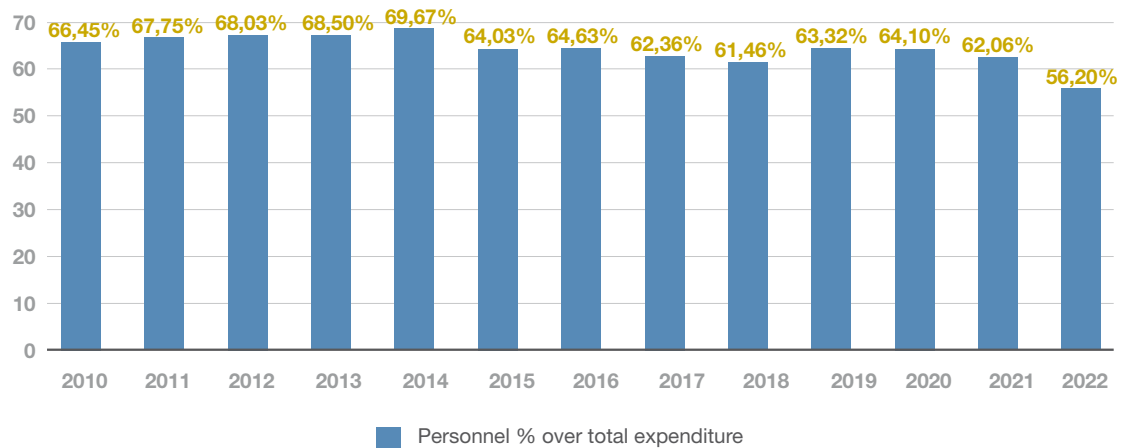
Being personnel-centred, SatGen's excellence is based on its cutting edge expertise and the professional commitment of its staff.

Expenditure Distribution 2022

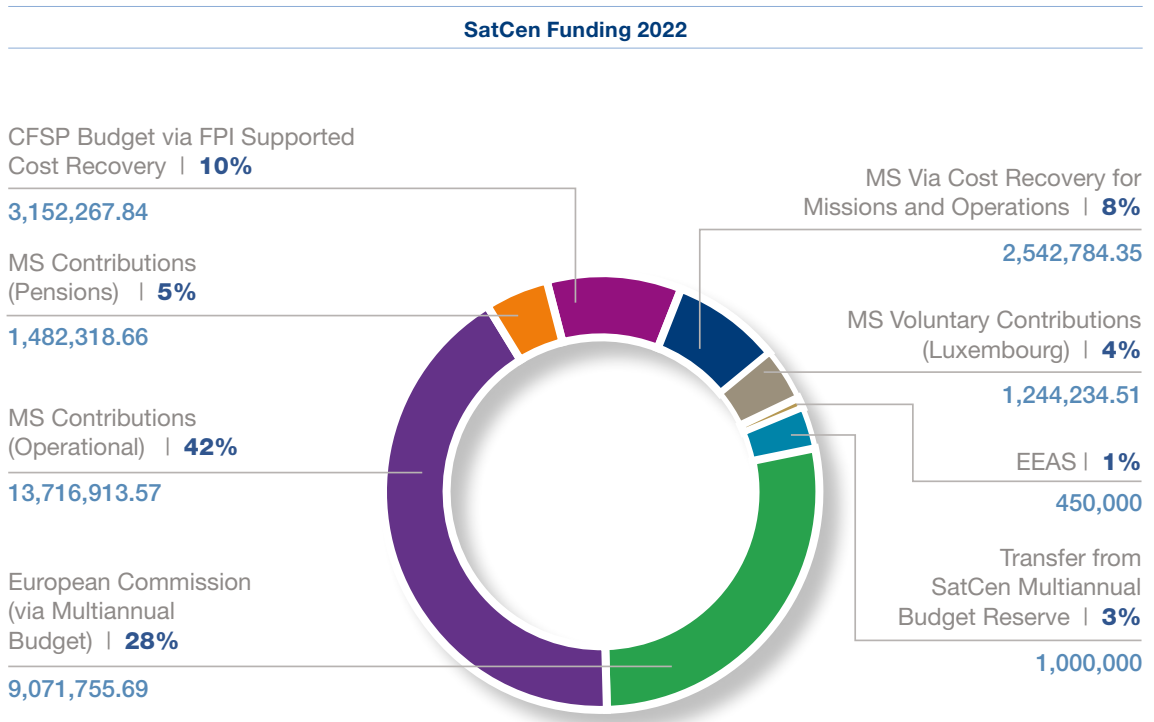


The following chart displays the cost of personnel over total expenditure:

Personnel over Total Expenditure % Evolution 2010-2022



The income sources of the SatGen Budget 2022 are depicted below:



Following its approval in December 2020 and full application in 2021, the Implementation Manual of SatGen Financial Rules was updated in 2022.

During 2022, the 2021 Closing Accounts review of the College of Auditors (CoA) concluded with a positive auditor’s report. Following seven years of incomplete composition, the CoA was again fully staffed with three members. This is of great value for its compliance with the financial rules, at length requested by the CoA itself, but also in response to the concern raised by European Commission auditors under their Pillar Assessment of SatGen.

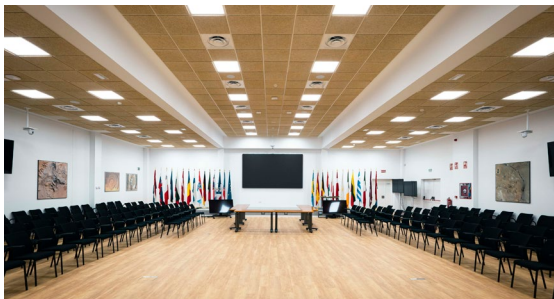
The College concluded that the final accounts fairly present, in accordance with the corresponding rules, the financial position and performance of the EU Satellite Centre as of 31 December 2021.

Furthermore, the transactions and information reflected in the final accounts are in material terms in compliance with applicable rules.

5 BUILDING EXTENSION



Overview of new SatCen building extension



Overview of the new and modern aula, as well as the Copernicus wing in the new extension

The finalisation and integration of the new building, on time and on budget, was an outstanding achievement. It enabled the timely use of the new spaces, not least the new auditorium, for the various in-house and high-level 30th anniversary events.

A prime example being the high-level inauguration of the new premises and 30th anniversary event under the auspices of the President of the Government of Spain and the HR/VP Josep Borrell, as well as the Spanish Minister of Defence, Margarita Robles. Furthermore, two work areas were fully furnished, enabling SatCen's Copernicus team to move in.

Facilities Upgrading and Environmental Policy

Other important maintenance works and upgrades were also completed in 2022. Examples include repairs to the fire panel damaged by a storm and the complex replacement and updating of the UPS system, its batteries and the main electrical panels in September 2022. Due to the complexity of the work, two full shutdowns of all SatGen systems were necessary, carried out over two consecutive weekends and in full compliance with the continuity of crucial services.

The environmental audit carried out at the beginning of the year confirmed that SatGen's environmental performance stands out as best practice. For example, the electrical consumption of SatGen during 2022 was 5% lower than 2021 thanks to the implementation of a range of energy efficiency improvement measures.

This improvement is even more significant considering that over the same period, SatGen has grown both in the number of staff as well as in workspace, with the extended headquarters gradually being occupied by various teams and the new aula entering into full operation.



Celebrating the Building Extension Handover Ceremony, February 2022

The event marked the end of the construction phase and reflected the operational growth of the Centre, as well as the increased EU level of ambition in space, security and defence



New Building Extension

CENTRO SATELITES U.E.



6 LOOKING INTO THE FUTURE

SatCen's 30th anniversary is not just an opportunity to recall past achievements, but actually an inflection point, reflecting the drive and direction of its future development. The Centre's recently extended and high-tech enabled HQ indeed symbolises the link to the future.

In the current highly dynamic and complex security environment, there are three key driving forces for SatCen's development, which are worth highlighting. Firstly, the need for continuous alignment with the growing EU high level of ambition in the fields of defence, security and space. Secondly, the dynamic requirements of user demand, in terms of higher volume, complexity, speed and exigence. Thirdly, the opportunities offered by the technological 'gold-rush' in the digital and space domains.

The capacity to timely and effectively respond to high tempo operational requirements in the new security context determined by Russia's war of aggression against Ukraine and the increasingly complex strategic environment have proven, once again, SatCen's unique value added, along with its flexibility, adaptability and versatility. However, the Centre stretched its resources to the limit in 2022. The key lesson learnt is the need for an enhanced development plan, aimed at addressing the operational and administrative sustainability aspects in the context of increased user demand, in both qualitative and quantitative terms.

At the same time, SatCen's evolution is characterised by the continuous alignment with relevant EU and Member States strategic objectives. The Centre's first ministerial level Board Meeting held in 2021 was marked by the commitment of Member States to *'strengthen SatCen to continue fulfilling its key geospatial intelligence support mission for the benefit of the Union and of its Member States, as well as for the benefit of its partners'*. This commitment was followed by the adoption of an incremental development plan, which included the core element of the classified IT platform, currently undergoing implementation.

The Centre's development will be further aligned with the key provisions and objectives of the Strategic Compass adopted in 2022, in which EU Member States commit *'to boost our autonomous geospatial intelligence capacity.'* Another important provision in the Strategic Compass with relevance for SatCen is the reinforcement of the EU-UN Cooperation including *'the provision of satellite imagery [analysis] through the EU Satellite Centre'*.

Further strategic direction for SatCen's development will be drawn from the EU Space Strategy for Security and Defence, recently made public and which highlights SatCen as a *'unique geospatial intelligence analysis capability to support high-level decision-making and action of the EU and its Member States, and [...] EU policies.'*

In this context, the space strategy points to SatCen’s role and contribution to the development of Copernicus services: ‘The SatCen will play a key role in contributing to the identification of user needs in geospatial intelligence and in disseminating sensitive products and services.’

These driving forces will challenge the Centre, pushing it out of any comfort zone, but will also offer opportunities to be harnessed in order to achieve ambitious objectives, such as:

- increased quality, complexity, speed and volume of analysis;
- increased real-time interaction with accredited users through a secure IT ecosystem;
- higher reactivity combined with proactivity and anticipation;
- extending thematic analysis to other areas of key relevance, such as the impact of climate change on security;
- further empowering human expertise with modern information technology and AI tools;
- continued maximisation of synergies and complementarities with the other relevant EU actors.

Ministers agreed in 2021 to meet again, at SatCen headquarters, following the Centre’s 30th anniversary, to assess the achievements and set SatCen’s future development. We are looking forward to this in 2023. The objectives and level of expectation from this high-level event are significant. Firstly, it is imperative to closely align the level of ambition for SatCen, its

activities and developments, to the key orientations provided by the Strategic Compass and the European space strategy for security and defence.

Secondly, it is important to link this level of ambition and the highly dynamic user demand, caused by the complex and challenging security environment, with sustainable resourcing. Thirdly, building on its generous legacy, SatCen should continue to stay at the cutting edge of technological development, and support and sustain continuous development of human expertise and innovation. This will enable the highly professional and dedicated SatCen team to continue raising the bar, with the support of SatCen stakeholders, in responding to growing requirements and fulfilling SatCen’s mission to the benefit of the EU, its Member States and its citizens.



ANNIVERSARY VOICES

SATCEN - CELEBRATING 30 YEARS

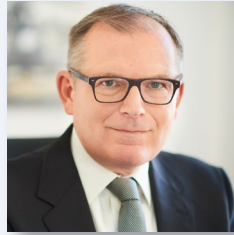


Nathalie Loiseau
Chair of the SEDE Committee

Never before has there been such a need for satellite imagery. Whether it's because of environmental disasters, and we saw that with the forest fires this summer, whether it's to protect the sea and those who sail on it, to fight against trafficking on the oceans and elsewhere, to help our military missions and operations ... of course this concerns me more directly ... and then since the war in Ukraine, to have our own capacity to see and understand what is going on, the SatCen has never been more important. And those who work there or with the SatCen know it: it is an effective tool for our strategic autonomy. We talk about this strategic autonomy all the time, but the SatCen embodies it in reality. So from the bottom of my heart, and on behalf of the European Parliament's Subcommittee on Security and Defence, I wish the SatCen a Happy Birthday!



SCAN ME
to see the full statement



Jiří Šedivý
Chief Executive, EDA

On the occasion of your 30th anniversary, allow me to wish you, on behalf of the whole EDA team, many future successes and excellent work ahead. EDA and SatCen have been positively working together in the security and space domain since EDA's inception in 2004. We have jointly delivered a number of successful projects for our Member States in the area of Earth observation, imagery exploitation and geospatial intelligence from the well-known maritime surveillance project (MARSUR), to GISMO, METEOR and REACT. SatCen has been a valuable asset for our defence community and a reliable and trusted partner to EDA. I am looking forward to an even stronger cooperation in the years to come. And indeed, happy anniversary!



SCAN ME
to see the full statement



Josef Aschbacher
ESA Director General

Dear partners, colleagues and friends at SatCen, I would like to convey my anniversary greetings for the EU Satellite Centre. For 30 years the EU Satellite Centre has been providing fast and reliable analysis of satellite data in order to face current security challenges. This is a prime example of bringing the benefits of space to decision-makers and citizens. The domain of safety and security is also spelled out in ESA's Agenda 2025. In fact, the EU Satellite Centre and ESA have a long and successful history of cooperation. I am sure that our partnership will continue and produce many more excellent results. Happy birthday EU Satellite Centre!



SCAN ME
to see the full statement

ANNIVERSARY VOICES

SATCEN - CELEBRATING 30 YEARS



Maja Markovčić Kostelac
Executive Director, EMSA

Dear SatCen colleagues, it is a great pleasure to wish a heartfelt happy birthday to one of our most established partners. Congratulations! SatCen has been at our side for over a decade and a half, collaborating on so many projects like Copernicus, and more recently CISE. Over the past three decades, your work has made a significant contribution to the security of the European Union and to the protection of our fellow citizens. As our two agencies both move forward into the future, let me say that I hope our collaboration and cooperation continue to increase. 30 years of growth, development and success is a huge milestone, and one of which you should all be very proud of. From all your friends here at EMSA, Happy Birthday SatCen!



SCAN ME
to see the full statement



Rodrigo da Costa
Executive Director, EUSPA

To our partners at the EU Satellite Centre, I want to wish you a happy birthday and a lot of opportunities for collaboration with EUSPA in the future.



SCAN ME
to see the full statement



VA José M. Núñez Torrente
EU NAVFOR ATALANTA
Operational Commander

On behalf of all EU NAVFOR Atalanta members, we warmly congratulate SatCen on its 30th anniversary. Your contribution to this European Union operation is invaluable, providing us with information from the area of operations in a timely and efficient way. We look forward to a long-term partnership. Happy anniversary!



SCAN ME
to see the full statement



Susan Steele
Executive Director, EFCA

Happy birthday SatCen! The European Fisheries Control Agency wishes you a fantastic celebration of a wonderful 30 years and success for not just the next 30 years, but for onwards and beyond that. We've been working with you since 2010 and are very proud that our relationship has been growing closer and closer and are looking forward to formalising the working relationship between us.



SCAN ME
to see the full statement

ANNEX 1. ABBREVIATIONS

AI	Artificial intelligence
ARCOS	ARCtic Observatory for Copernicus SEA Security Service
CESEDEN	Centro Superior de Estudios de la Defensa Nacional
CFSP	Common Foreign and Security Policy
CISE	Common Information Sharing Environment
CoA	College of Auditors
CPCC	Civilian Planning and Conduct Capability
CROAS	Crowdsourcing Annotation System
CSDP	Common Security and Defence Policy
CSS	Copernicus Security Service
DG CNECT	Directorate-General for Communications Networks, Content and Technology
DG DEFIS	Directorate-General for Defence Industry and Space
DG HOME	Directorate-General of Migration and Home Affairs
DG MARE	Directorate-General for Maritime Affairs and Fisheries
DG RTD	Directorate-General for Research and Innovation
DGI	Digital Geospatial Information
DP	Data Protection
EC	European Commission
EDA	European Defence Agency
EDF	European Defence Fund
EEAS	European External Action Service
EFCA	European Fisheries Control Agency
ENEXA	Efficient Explainable Learning on Knowledge Graphs
EO	Earth observation
ESA	European Space Agency
E-SHAPE	EuroGEO showcases: applications powered by Europe
ENTRUSTED	European Networking for Satellite Telecommunication Roadmap for the Governmental Users Requiring Secure, Interoperable, Innovative and Standardised Services
ESTAER	Escuela de Técnicas Aeronáuticas
EU F	Expert User Forum
EUMM	European Union Monitoring Mission
EUMS	European Union Military Staff
EU OPS WAN	Classified EU Operations Network
EU SSI	European Union Shared Satellite Imagery
EU ISS	EU Institute for Security Studies
EURMARS	An advanced platform to improve the EUROpean Multi Authority Border Security efficiency and cooperation
EUSPA	EU Agency for the Space Programme

FHQ	Force Headquarters
FPI	Foreign Policy Instrument
FRONTEX	European Border and Coast Guard Agency
GEO	Group on Earth Observation
GEO-DAMP	Geospatial data Management Platform
GEOINT	Geospatial Intelligence
GEM	Global Earth Monitor
GEONAW	Geospatial Tool to Support Mission Planning and Operations in NAVWAR Scenarios
GISMO	Geospatial Information to Support decision Making in Operations
GNSS	Global Navigation Satellite System
GOVSATCOM	European Union Governmental Satellite Communications
HR/VP	High Representative of the Union for Foreign Affairs and Security Policy/Vice President of the European Commission
IMINT	Imagery Intelligence
INTA	Instituto Nacional de Técnica Aeroespacial
INTCEN	Intelligence and Situation Centre
JRC	Joined Research Centre
MARSUR	Maritime surveillance
MATRIX	Machine-based Algorithms and Tools for enRiched IMINT eXploitation
MINURSO	United Nations Mission for the Referendum in Western Sahara
MPCC	Military Planning and Conduct Capability
MUSO	Multisource Analytical Assessments
NATO	North Atlantic Treaty Organization
NAVFOR	Naval force(s)
NAVWAR	Navigation warfare
OHQ	Operational headquarters
OPCW	Organisation for the Prohibition of Chemical Weapons
OSCE	Organization for Security and Cooperation in Europe
PSC	Political and Security Committee
PT SBEO	Project Team Satellite Based Earth Observation
REACT	Radar Imagery Applications Supporting Actionable Intelligence
RIPTIDE	Resilient PNT Testing for Defence
RITHMS	Research, Intelligence and Technology for Heritage and Market Security
RTDI	Research, Technology Development and Innovation

SAR	Synthetic Aperture Radar
SDG-EYES	Sustainable Development Goals – Enhanced monitoring through the family of copErnicus Services
SEA	Support to EU External Action (Copernicus)
SEDE	Subcommittee on Security and Defence
SIAC	Single Intelligence Analysis Capacity
SLA	Service-Level Agreement
SMI	Copernicus Service Management Infrastructure
SMM	Special Monitoring Mission
SNE	Seconded National Expert
SRA	Strategic Research Agenda
SSA	Space Situational Awareness
SST	Space Surveillance and Tracking
<hr/>	
TWG	Technical Working Group
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UN	United Nations
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WA	Working Agreement
WEU	Western European Union
WMD	Weapons of Mass Destruction
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ANNEX 2. MEETINGS AND EVENTS

The Centre received and organised the following key visits and meetings in 2022:

17 January	Participation at the Heads of Service Conference, Brussels
25-28 January	Participation at the 14th European Space Conference, Brussels 135 th SatCen Board
26 January	Meeting with Ms Elodie Viau, ESA Director of Telecommunications and Integrated Applications
26 January	Meeting with Amb. Delphine Pronk, PSC Chair
26 January	Meeting with Amb. Jitka Látal Znamenáčková, Czech PSC
03 February	Meeting with Mrs. Aurora Mejía, Director of the Office for the Coordination of the Spanish Presidency of the European Union, Madrid
16 February	Meeting with Amb. Federico Torres, Director General de Política de Defensa, Madrid
17-20 February	Munich Security Conference, participation in the Town-Hall meeting on Space and Security
21-22 February	Mission Paris // EU Seminar on Space, Meetings with M. Baptiste (CNES President) and DRM
04 March	Mission // VIP Day to close exercise AsterX, Toulouse
23 March	Technical Working Group, SatCen
24 March	Expert Users Forum, SatCen
04 April	OPCW Steering Committee and SLA signing at SatCen
05 April	Visit of Lieutenant General Marian Sima, Director Romanian Ministry of National Defence
06 April	Visit of Brigadier General Danilo Morando, Intelligence and Security Department (RIS) of the Italian Ministry of Defence
27-29 April	Mission Brussels // SatCen Board Meeting & Presentation at PSC
04 May	SatCen Board Away Day, Marseille
12 May	Visit of Rear Admiral Stefano Turchetto, Commander of EUNAVFOR MED Operation IRINI
24 May	Attendance at the High Level Conference on “Shaping Civilian CSDP for the future”, Brussels
24 May	Meeting with Mr. Timo Pesonen, DEFIS Director General, Brussels Meeting with Major General Robert Brieger, Chairman of EUMC, Brussels

20 June	Meetings in Berlin // Mr. Dominik Mutter, Security Advisor of the German Government and responsible for SatCen in the Foreign Ministry & Markus Wölke, HoUnit EU CSDP
22 June	Visit of General Luca Baione, IT Airforce
23-24 June	Meetings in Rome // 1. Meeting with Gen. B.A. Danilo Morando, IT MoD 2. Meeting with Ms. Simonetta Cheli, Director of Earth Observation Programmes and Head of ESA/ESRIN 3. Speaker during the visit of the NATO Defense College Delegation at ESA/ESRIN
30 June	Visit of Mr. Charles Michel, President of the European Council
30 June	Visit of H.E. Mr. Klaus Iohannis, President of Romania
04 July	Visit of H.E. Mr. Josep Borrell and Heads of EU Agencies in Spain
26 July	Visit of ESA Delegation
31 August	Visit of H.E. Mr. François Bausch, Deputy Prime Minister, Minister of Defence and Luxembourg Delegation
06 September	Visit of Mr. Miguel Ángel Ballesteros, Director del Departamento de Seguridad Nacional, Gabinete de la Presidencia de Gobierno
13-15 September	Speaker at the World Satellite Business Week, Paris
23 September	Visit of H.E. Sari Rautio, Ambassador of Finland in Spain, and Finnish course on National Defence
26 September	SatCen's 30 th Anniversary and Inauguration of its Extended Headquarters
19-20 October	138 th SatCen Board, Torrejón
26 October	Participation at SEDE Committee "Hybrid war: the consequences of Russian military activities in the Baltic sea and the sabotage of critical infrastructure", Brussels
26 October	Meeting with Mr. Tomat, Managing Director – Civilian Planning and Conduct Capability (MD-CPCC)/ Civilian Operations Commander, Brussels
27 October	Participation at State of Europe High-Level Roundtable, Brussels
27 October	Working Dinner with PSC ambassadors of Spain, Netherlands, Belgium, Romania, Luxembourg organized by Amb. Elena Gómez Castro, PSC of Spain, Brussels
28 October	Meeting with Mr. Francisco Fontan, Director for the Crisis Response Centre and Mr. Matyas Szilvasi Political Advisor, Brussels
28 October	Meeting with Ms. Paraskevi Papantoniou, Director for Space (acting) and Mr. Mauro Facchini, Head of Earth Observation Unit, Brussels
05 November	Collection of the Prize "Conde de Latores" delivered to SatCen by El Real Cuerpo de la Nobleza del Principado de Asturias, Oviedo, Spain

07 November	Opening of 30th Anniversary SatCen Exhibition, Brussels
08 November	Meeting with Mr. Holger Osterrieder, Head of the European Security and Defence College (ESDC)
08 November	Meeting with Joanneke Balfort, Director SECDEFPOL DMD – Security and Defence Policy
08 November	Lunch with Timo Pesonen Director General DG DEFIS, EC
14 November	Participation at dinner-debate on “Germany, Spain and the EU in the post-war order” with Norbert Röttgen, Organized by the European Council on Foreign Relations, Madrid
21 November	Visit of Général de division Philippe Adam, Commandant de l’Espace, France
22 November	Observer at the ESA Council Meeting at Ministerial Level, Paris
30 November	Speaker at the seminar “Defending European Interests in Space”, Prague, Czech Republic
14 December	Visit of the Director of Romanian Foreign Intelligence Service

Catalogue number QO-AA-23-001-EN-N ISSN 2443-6399
European Union Satellite Centre
Luxembourg: Publications Office of the European Union 2023 - 88 pp. –
18,5 x 24 cm
ISBN 978-92-95034-24-2
doi 10.2820/00882



Publications Office



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SATELLITE CENTRE

Analysis for decision making

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28850 Torrejón de Ardoz
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00-AA-23-01-EN-N ISSN 2413-6389