

EUMETSAT Strategy for its Network of Satellite Application Facilities

SAF Strategy



Executive Summary

This document presents the updated EUMETSAT SAF Strategy as approved by EUMETSAT Council on 1 July 2025, building upon interactions with Member States through a comprehensive questionnaire and two dedicated workshops and upon discussions at the 86th, 87th, 88th and 89th PAC meetings as well as the 104th and 106th Council meeting. The updated SAF Strategy aims to address key challenges and opportunities facing the SAF Network, ensuring its continued relevance and adaptability in a rapidly changing operational and technological landscape. It will serve as a basis for the elaboration of the proposals for the next Continuous Development and Operations Phase of the SAF (CDOP 5), for which proposals will have to be submitted by fall 2025.

Seven key priorities emerged from the discussions at the second Workshop with Member States in July 2024, including the need for more robust product usage monitoring, the establishment of a SAF Innovation Layer, the increased ability for replanning and strategic adjustments during a CDOP phase, and the transition of SAF data processing to shared cloud infrastructures. In addition, the possibility to involve SAFs directly as implementors of EUMETSAT commitment towards EU was identified as a crucial element to ensure the continued relevance of the SAF Network in the European environment.

These priorities reflect the need for innovation and operational efficiency, ensuring that the SAF Network first remains aligned with both Member States' needs and then contribute to broader European initiatives.

Each of the identified priorities is addressed in the updated SAF Strategy, together with related aspects on their implementation.

The document also addresses the SAF funding strategy, emphasising the need for long-term financial stability while maintaining flexibility to support future innovation. The funding model balances the continued operation of the SAF Network under the MTG and EPS-SG programmes with new initiatives, such as the Innovation Layer, which is planned to be initially funded through the SAF allocation foreseen in the EPS-Sterna programme, and for which a sustained mechanism will have to be agreed with Member States at a later stage. The final funding decisions are expected by 2028 at the earliest, in the context of MTG and EPS-SG programme extensions.

Priorities for the SAF Network evolution

After more than 25 years since the establishment of the first SAFs, the EUMETSAT Satellite Application Facility Network now plays a critical role in supporting the operational services of Member States by delivering high-value products derived from satellite data. These products are essential for a wide range of applications, from weather forecasting and climate monitoring to environmental services that inform public safety and decision-making.

As the SAF Network evolves to meet new challenges, its success will increasingly be measured not only by the number and quality of the products delivered, but by their value to services and end users. This shift in focus underscores the importance of aligning SAF outputs with the needs of Member States and ensuring that SAF products are effectively integrated into the related operational applications and services.

The guiding principle of this updated SAF Strategy is therefore addressing the objective of the SAF Network in terms of the targeted applications:

The success of the SAF Network is defined by the value of SAF products for use in services provided by Member States and in direct use by end users in decision-making.

This overarching strategic statement forms the basis of the priorities described in the following sections, ensuring that the Network's primary objective is to enhance the impact and operational relevance of its products.

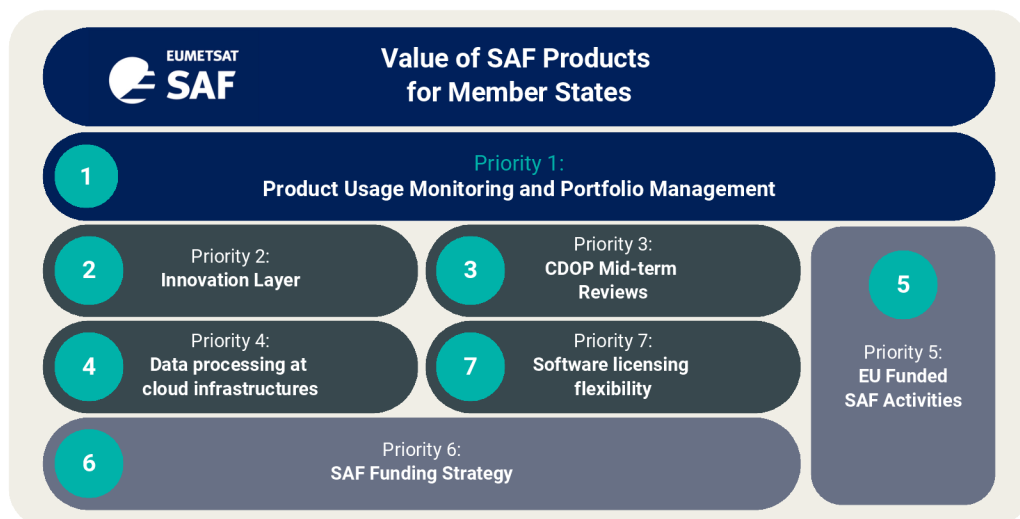


Figure 1: Graphical presentation of the priorities addressed in the 2025 SAF Strategy update

Priority 1: Products usage monitoring and portfolio management

It is necessary to define criteria for assessing the value of SAF products, aligned with the overall success criterion for the SAF Network being the value of SAF products in Member States' services and usage by end-users in decision making. Change management rules and procedures should be established to ensure the ongoing relevance of these products, so that the SAF products portfolio could evolve within the timeframe of one CDOP phase, considering also a reduction of products generated.

A systematic process will be established for assessing and monitoring the usage of SAF products and their value within Member States' services. This process will be integrated into the SAF Operations Reviews (ORs), expanding their scope to include usage evaluations for all pre-operational, operational, and released SAF products.

A particular focus will be placed on "anniversary products", those that have reached three years of operational status. These products will undergo a detailed review to determine their continued relevance. For products with no or limited usage, recommendations for suspending product dissemination will be made.

These recommendations will be presented to the STG Operations Working Group for discussion and further action, ensuring that SAF products continue to align with Member States' needs and operational priorities.

The related data and information on product usage will be centralised and shared within EUMETSAT and made accessible to stakeholders (including users) as well. The SAF Operations Reviews objectives will include recommendations on the continuity of products being in operations for a certain time, involving the OPS Working Group and related Steering Groups, with the aim to identify and phase out obsolete products.

The challenges in implementing such an assessment process, particularly in managing the discontinuation of products will be addressed. A strong emphasis was placed on the need to balance the continuity of legacy products with the introduction of new, innovative products, ensuring that decisions are well-justified and aligned with Member States' priorities and needs.

EUMETSAT will establish a process for a systematic product usage monitoring and portfolio management to ensure that SAF products remain operationally relevant and effective. A centralised mechanism will be established to track the regular usage of products in services across the Member States, supporting periodic reviews and decision-making on the continuation, suspension or discontinuation of product dissemination.

This process will balance the need for innovation with the importance of product continuity, ensuring that legacy products remain available when critical, while making space for new developments. Engagement with users will be key, providing clarity on any product changes and offering alternatives where needed. This approach will enhance the adaptability, efficiency, and user satisfaction of the SAF portfolio. An expected consequence of this mechanism is that it would be easier to decide on the phasing out of some SAF products.

Implementation aspects

The implementation of the SAF product usage monitoring and portfolio management process will include the following elements to ensure SAF data products are continuously evaluated for their operational relevance and that decisions regarding their lifecycle are well-informed:

- Coherent product usage assessment procedure: a standardised procedure for assessing product usage will be developed and implemented. This procedure will define the methodology for regularly evaluating where and how SAF products are used by Member States' services as well as by end-users in decision making and their operational impact and value. The process will ensure consistency and transparency in product evaluation and is considered a common task of the SAFs and the EUMETSAT Secretariat;
- Review of product usage: for SAF products with "operational" status for more than three years, the regular SAF Operations Reviews (ORs) will explicitly address their ongoing operational and regular usage as well as their value and impact. The OR review board will generate recommendations based on these assessments, to decide whether the product dissemination should be continued, suspended, or discontinued. These reviews will take place as part of the existing review cycles for each SAF;
- Decision-making process for product status changes: recommendations to suspend or discontinue products will be presented to the EUMETSAT OPS Working Group in line with its mandate to *"monitor the use of the operationally available data, products and services [...] and [to] propose potential modifications as appropriate"*. The Steering Group of the related SAF will then make the final decision on the product's status, ensuring that any modifications are aligned with operational needs and strategic priorities;
- Introduction of product status category "suspended": a status category "suspended" will be introduced for SAF data products that are no longer disseminated e.g. due to lack of usage evidence. Products with this status will not be distributed operationally to users but will be maintained by the SAF in a state of readiness for resumption. If no new operational usage is identified within a specified period (e.g., six months), the product will be decommissioned. The suspension and final discontinuation of products will be accompanied by timely and clear communication to users, encouraging feedback and offering alternative solutions when available;
- Review and evaluation criteria: the usage assessment will also be considered in Requirements Reviews for new versions of SAF products as well as in the evaluation process for CDOP proposals.

The details of related processes will be described and maintained in "Implementation Procedures" intended to provide the necessary guidelines and workflows.

¹ Terms of reference of subsidiary bodies of the Council, last amended on 07 Dec 2022, <https://www.eumetsat.int/media/44251>

Priority 2: SAF innovation layer

The introduction of an additional layer of funded SAF activities on top of the current CDOP (Continuous Development and Operations Phase) follows a strong recommendation from Member States to facilitate innovation in the SAF Network and its uptake in operational activities of the SAFs. This "Innovation Layer" is designed to address emerging challenges, major transitions, and opportunities by supporting flexible, time-limited projects. This layer will facilitate innovative activities through temporary consortia and competitive project selection.

EUMETSAT will establish a flexible and dynamic element of funded SAF activities called "Innovation Layer" within the SAF Network to support time-limited projects that address emerging challenges and technological advancements. This layer will function as a complement to the core CDOP activities, enabling additional innovation to explore new approaches, technologies, and methods that can enhance the SAF Network's relevance and impact.

The Innovation Layer will encourage cross-collaboration between SAFs and with the Secretariat as well as temporary partnerships with external entities, promoting the exchange of knowledge and resources. It is designed as an instrument to address significant transformations within the SAF Network.

The primary objective of the Innovation Layer will be to provide a structured yet flexible space for experimentation and innovation, allowing for rapid development cycles and encouraging risk-taking initiatives. Successful projects will have the potential to transition into the CDOP framework. This approach will strengthen the SAF Network's adaptability and ensure it remains future-proof in the face of evolving user needs and technological advancements.

Implementation aspects

The implementation of the Innovation Layer will involve the following steps to ensure that innovative projects are effectively managed and integrated into the SAF Network:

- Project funding and allocation: funds for projects within the Innovation Layer ("Innovation Projects") will be managed separately from the funds for the SAF CDOPs. The initial Innovation Projects could be funded with the SAF funding provision currently foreseen in the EPS-Sterna programme proposal. To maintain flexibility in resource distribution based on priorities and needs, these funds will not be pre-allocated to specific SAFs. A more permanent funding mechanism will have to be agreed with Member States at a later stage;
- Proposal solicitation and coordination: Innovation Project proposals will be solicited from the SAF Network. To ensure alignment with the broader SAF objectives and strategic priorities, each proposal must be coordinated or initiated by a SAF Leading Entity;

- Scope of Innovation Project calls: the initial call will be open-topic, inviting proposals on any relevant subject. Future calls may be more focused, issued as “strategic calls” targeting specific areas;
- Duration of Innovation Projects: the timeliness for Innovation Projects will be determined by the required activities and resource availability and should be independent from CDOP schedules;
- Light and flexible proposal selection process: a process for selecting Innovation Projects will be established, modeled on the flexible and lightweight approach used in EWC R&D calls. This process will involve Member States (Delegate Bodies representatives). Proposals will be evaluated based on their strategic relevance, innovation potential, feasibility and urgency. Projects will be selected in the order of a ranking and subject to the availability of funds, ensuring that the most impactful initiatives are pursued;
- Supervision and progress monitoring: The progress of the Innovation Projects will be monitored by the Steering Groups of the involved SAFs and more broadly by the relevant EUMETSAT Delegate Bodies;
- Integration of successful innovations: the outcome of successful Innovation Projects can be integrated into the CDOP framework following a structured review process (CDOP proposal evaluation or Mid-term Review). This ensures that innovative ideas are effectively transitioned into the SAF’s core activities where appropriate;
- Lessons-learned process: after the first round of Innovation Projects, a comprehensive “lessons-learned” process will be conducted to assess the effectiveness of the implementation, with recommendations for improving future rounds of Innovation Project calls.

Detailed guidelines and workflows for managing the Innovation Layer, including proposal solicitation, project selection, and the integration of successful innovations, will be documented and maintained in related "Implementation Procedures" to provide clear and consistent guidance across the SAF Network.

Priority 3: CDOP Mid-Term Reviews

In support of the objective to maintain the SAF Network's operational relevance and to foster innovation and adaptation, Mid-term Reviews will be introduced for the Continuous Development and Operations Phases (CDOPs) as a mechanism to enhance flexibility and adaptability within the SAF Network, while increasing visibility and accountability to Delegate Bodies. These reviews enable a more frequent way to allow for strategic re-assessments in addition to the 5-year cycle of CDOP evaluations, ensuring that the SAF Network remains responsive to evolving operational needs and priorities.

These CDOP Mid-Term Reviews (CMTRs) are also additional entry points for incorporating innovative projects or solutions during the CDOP cycle (rather than waiting for the next cycle) and offer regular checkpoints for evaluating the success of SAF activities and products. This will allow the SAF Network to react more swiftly to emerging technologies, changing user needs, and rapidly changing environments, while the five-year CDOP cycle remains crucial for ensuring financial predictability and operational stability.

EUMETSAT will introduce more frequent strategic re-assessments to enable timely integration of innovation opportunities, adaptation to changing needs environments, and more regular engagement with Delegate Bodies on broad strategic SAF objectives and portfolio changes.

This will be implemented through the introduction of CDOP Mid-Term Reviews, which will assess overall progress of activities, relevance and usage of products, innovative opportunities, and alignment with strategic goals beyond operational and product-specific issues. The alignments may lead to related adjustments for the remainder of the ongoing CDOP.

Implementation aspects

The implementation of CDOP Mid-Term Reviews will be structured to ensure that they effectively contribute to the strategic re-assessment and adjustment of the SAF Network's activities, while aligning with the ongoing CDOP phases. The following key elements will guide the implementation process:

- Timing of the Mid-Term Reviews: Mid-term reviews will take place approximately halfway between two full CDOP evaluation and decision processes, rather than in the middle of the CDOP phases. Given that CDOP phases typically start approximately 15 months after proposal evaluations, the Mid-Term Reviews will be scheduled at a time that allows for meaningful reassessment and adjustments, while still leaving sufficient time for any changes to be implemented within the ongoing CDOP cycle;

- Mid-Term Review Board Composition: the Steering Group of the respective SAF will serve as the Mid-Term Review Board. This board will be chaired by the STG/AFG representative in the Steering Group. The board will be responsible for assessing the progress, relevance, and alignment of SAF activities with strategic goals and will generate recommendations for any necessary replanning or portfolio adjustments;
- Review scope and recommendations: The Mid-term Reviews will focus on the following key areas:
 - Progress of activities: Assessing whether SAF activities are meeting their planned objectives and timeliness;
 - Product relevance and usage: Evaluating the overall operational usage of SAF products and their value in Member States' services;
 - Innovation opportunities: Identifying any potential for integrating new technologies, products, or services e.g. following successful Innovation Projects from the Innovation Layer;
 - Strategic alignment: Ensuring that ongoing activities remain aligned with the overall SAF strategy and evolving needs of the Member States;
- Outcome and approval process: The recommendations and outcomes of the Mid-term Reviews will be formally presented to STG for approval. The STG will review the proposed adjustments and provide the final decision on any changes to be made to the SAF portfolio or strategic direction;
- Complementarity to existing SAF Reviews: The Mid-Term Reviews will not repeat the more specific and detailed assessments done in the context of other product or operations related SAF reviews but will be based as much as possible on their findings and conclusions.

Detailed guidelines and workflows for managing the Mid-Term Reviews will be documented and maintained in related "Implementation Procedures" to provide clear and consistent guidance across the SAF Network.

Priority 4: SAF data processing at Shared Cloud Infrastructure

The original SAF concept was designed to leverage the distributed computing infrastructure available in Member States, enabling a decentralised approach to satellite data processing. However, with the increasing shift of National Meteorological Services towards cloud-based solutions, it is natural to adapt to this evolving technological landscape. Consequently, the SAF Network shall prioritise collaborative cloud infrastructures for their data processing, reducing the need for individual SAF partners in Member States to maintain their own servers and hardware for SAF data processing and storage.

The EUMETSAT Cloud Infrastructure / European Weather Cloud – and its planned evolution currently discussed under the EUMETSAT Digital Services strategy - is recognised as a strategic platform that could enhance SAF operations and resilience. Earlier initiatives, where SAFs were allocated computing quotas on EUMETSAT's cloud infrastructure, allowed SAFs to gain experience and foster collaboration through cloud-based resources.

The long-term goal is to gradually transition new and evolving data processing to such common and collaborative cloud infrastructures and associated cloud and data services, ensuring scalability, operational efficiency, and resource optimisation across the SAF Network.

The SAF Network will aim at progressively transition its data processing towards a common and collaborative cloud infrastructure solutions, such as the European Weather Cloud, to enhance scalability, resource efficiency, and collaboration across the SAF Network and EUMETSAT. This strategic shift will prioritise the use of such common and collaborative cloud-based infrastructure and its associated cloud and data services, enabling SAFs to process larger datasets, respond to evolving user needs, and standardise operations. This will be done in coherence with the proposed evolution of the EUMETSAT digital user solutions and services, creating valuable synergies.

The transition requires adjustments to SAF data processing and operational methods, such as optimising data handling, adapting algorithms for distributed cloud-native computing and ensuring secure, efficient data transfer, storage and dissemination. It also presents both a need and an opportunity to collaboratively develop and exchange the necessary expertise within the SAF Network and EUMETSAT.

Implementation aspects

- Coordination mechanisms: to ensure smooth scheduling, manage interdependencies, and allocate the necessary resources, strong coordination mechanisms between the SAF Network and the Secretariat will have to be established. These mechanisms will align schedules, resource needs, and interdependencies across the SAFs and the Secretariat, ensuring effective use of cloud infrastructure;

- Distribution of responsibilities: a clear distribution of responsibilities between the Secretariat and the SAFs will be essential for managing the transition. The Secretariat will oversee infrastructure management, security, and resource planning, while SAFs will focus on adapting their specific operational workflows to the cloud;
- Gradual adoption of cloud infrastructure and associated cloud and data services: existing operational chains at SAF institutes will not require a migration. However, all new and evolving data processing chains will be designed for cloud infrastructure to ensure alignment with the long-term strategy. No further investments should be made into non-cloud-based infrastructures unless strongly justified;
- Innovation Projects for cloud transition: the transition to cloud-based operational chains offers opportunities for Innovation Projects within the newly introduced SAF Innovation Layer that could involve also external partners. These projects could allow SAFs to explore cloud-native approaches and develop expertise in distributed computing and data handling in cloud environments;
- Resource planning and requirements: The Secretariat will ensure that SAF-specific resource requirements are factored into the planning of cloud computing resources. This includes managing quotas, forecasting demands, and ensuring that SAFs have access to the necessary infrastructure to support both operational needs and innovation;
- Applicability of EU legislation: The Secretariat will continue to centrally assess the applicability of relevant emerging and new EU legislation.

Detailed guidelines and workflows for managing the integration of SAF data processing in EUMETSAT's computing infrastructures will be documented and maintained in related "Implementation Procedures" to provide clear and consistent guidance across the SAF Network.

Priority 5: EU funded procurement from SAFs

At the 86th PAC meeting, the 1st SAF Strategy workshop and the subsequent 87th PAC meeting, Member States raised the potential of directly involving the SAF Network in EU-funded activities, particularly within the framework of EUMETSAT's increasing role and responsibilities in the implementation of European Union programmes such as Copernicus and Destination Earth.

EUMETSAT's SAF Network is recognised as a valuable EUMETSAT asset that is capable of contributing to EU objectives by providing specialised satellite data processing expertise and expanding the scope of SAF activities beyond its traditional operations. Involvement in EU-funded EUMETSAT activities is essential for the continued relevance of the SAF Network which should be directly and effectively integrated into EU-funded tasks entrusted to EUMETSAT using procurement mechanisms.

The objective is to assess how SAF activities could contribute to, and be funded by, EU programmes, with the objective to avoid duplication of activities between EUMETSAT and EU-funded programmes.

A critical step is to identify where SAFs' capabilities align with EU objectives (e.g. of the Copernicus Services) with possible impactful SAF contributions ("mapping exercise"). The result should be used in upcoming EUMETSAT – EC negotiations for new contribution agreements with the goal to fully consider the SAF expertise and avoid duplication of activities. The expected synergies between SAFs and EU-funded tasks entrusted to EUMETSAT will not only leverage the existing expertise of SAFs but also position them to actively contribute to European objectives while maintaining their core operational roles. Users would benefit from a more cohesive product delivery and user experience by consolidating product offerings and improving accessibility.

EUMETSAT will leverage the expertise and capabilities of its SAFs in satellite data processing and services as an integral asset within its commitments to EU funded programmes such as Copernicus and Destination Earth. The direct involvement of SAFs in EUMETSAT's EU funded activities will be instrumental to ensure the continued relevance of the SAF Network and the synergetic use of European resources. In doing so, the Secretariat will ensure that EUMETSAT funded activities remain independent from EU funded activities and mechanisms and that there is a clear distinction of the intellectual property rights generated under EUMETSAT funded and EU funded activities respectively.

Implementation aspects

- Identification of key SAF products capabilities for EU Programmes: a mapping exercise will be conducted to identify which SAF capabilities have the highest potential for contributing to EU programmes. This will help focus SAF efforts on areas where their expertise can deliver the most significant impact in achieving EU objectives and identify the potential synergies with EU-funded programmes;
- Integration of SAF expertise in EUMETSAT - EU Contribution Agreements: The Secretariat will include SAF capabilities and expertise in the negotiations for upcoming EU contribution agreements in the areas identified above, and in consultation with the European Commission. This will ensure that the SAF Network's capabilities are fully leveraged within EUMETSAT's commitments to the European Commission, enhancing the strategic value of SAFs and its synergy with its core activities;
- Mechanism for SAF involvement in EU commitments: a clear mechanism will be established to allow SAFs to act as implementors of EUMETSAT's commitments to EU programmes via procurements, if justified and agreed upon by the European Commission (EC) as eligible activities. This mechanism will be based on legal agreements between EUMETSAT and the Leading Entity of the related SAF, subject to approval of the European Commission, ensuring a formal and transparent process for procured activities;
- Separation of core and procured activities: a strict separation between core SAF activities funded by EUMETSAT and any activities procured with EU funds is necessary, due to different governance, contractual, legal, financial and reporting regulations, as well as the need to keep the independence between EUMETSAT funded and EU funded activities and ensure clear distinction of the intellectual property rights generated under EUMETSAT funded and EU funded activities respectively;
- Coordination mechanisms: effective coordination between SAFs, the Secretariat and EC stakeholders will be ensured through existing structures such as the Steering Groups and, for Copernicus, the Operational Coordination Working Group (OCWG) interfacing with the Copernicus services. These bodies will facilitate the alignment of SAF contributions to EU objectives with broader EUMETSAT objectives and ensure smooth operational collaboration;
- Streamlining processes between SAFs and EU initiatives: recognising that EUMETSAT SAFs and EU-funded programmes follow different approaches and procedures for satellite products development, validation, and operations, efforts will be made to streamline these processes where possible. This can be achieved either through mutual acceptance, where EU initiatives acknowledge the adequacy of SAF processes, even if they differ from their own requirements, or through adaptation, where flexibility is applied to adjust SAF processes to better align with the procedural requirements of EU-funded programmes. This alignment will help ensure smoother integration of SAFs into EU projects, improving efficiency and reducing administrative burdens.

Detailed guidelines and workflows for managing the interactions between SAF core activities and procured activities will be documented and maintained in related "Implementation Procedures" to provide clear and consistent guidance across the SAF Network.

Priority 6: SAF Funding Strategy

The long-term sustainability and operational success of the SAF Network are closely tied to a well-defined and adaptable funding strategy. As the SAF Network evolves to meet emerging challenges, such as increasing data volumes and the integration of innovative infrastructures, a robust funding approach is critical for maintaining the SAF Network's relevance and operational efficiency.

The funding of CDOP 5 (2027-2032) is financially covered as part of the EPS-SG programme, the funding level and mechanisms for supporting the SAFs beyond 2032 needs to be addressed. Council, at its 106th meeting², as part of the discussion on the evolution of the EUMETSAT budget structure, agreed that SAF activities should continue to be funded through EUMETSAT mandatory programmes.

Maintaining current funding levels would limit SAF growth, and an at least moderate increase would be needed to ensure that the network remains aligned with future satellite missions and user needs and the Secretariat is encouraged to seek opportunities to mobilise more resources for the SAF Network, within a limit affordable to Member States, particularly in the context of the planned extensions of EUMETSAT's mandatory programmes in the 2027-2028 timeframe.

A long-term approach for the funding of the SAFs will ensure financial predictability while maintaining the flexibility needed to adapt to evolving priorities and technological developments, ensuring that the SAF Network remains agile and future-proof. This discussion on the level of the SAF funding would however remain a sovereign Council decision, to be addressed in the context of the M4G and EPS-TG mandatory programmes preparation.

For the period after CDOP 5, EUMETSAT will continue to secure the funding for the SAF Network through the EUMETSAT Mandatory Programmes, equally shared between mandatory GEO and LEO programmes.

The existing gap between 2032 and the start of the Meteosat Fourth Generation (M4G) will be addressed in the context of the extension of the EPS-SG or MTG programmes, planned earlier in 2028, equally shared between the two programmes.

Recognising the growing demands driven by new satellite missions and the need for innovation, enhanced funding for the SAFs is desirable. This could be achieved through additional investments by Member States, reorganisation of activities or removal of obsolete product commitments. At the time of the extension of MTG and EPS-SG programmes, Member States will decide on an appropriate level of funding for SAF activities beyond CDOP 5.

In the meantime, it has been agreed to include some funding for SAF activities in the new programmes proposed to Member States; EPS-Sterna, EPS-Aeolus and EUMETSAT Altimetry.

² EUM/C/106/24/DOC/44 and EUM/C/106/24/LOD

Implementation aspects

- Formal decision on SAF funding beyond CDOP 5: the decisions on extending the MTG and EPS-SG programmes, expected in the 2028 timeframe, will formalise the SAF funding level for both the CDOP and Innovation Layer along with the related funding mechanism. The Secretariat proposes allocating half of the total SAF funding to each mandatory programme, and this hypothesis has already been agreed by Council and implemented for building the EUMETSAT Long-Term Financial Plan 2025-2044 presented to the 106th session of Council³;
- Funding of the SAF Innovation Layer: the provision for SAF funding in the EPS-Sterna programme proposal will be used to support the launch of the first Innovation Projects within the new SAF Innovation Layer. The balance between the funding for the SAF CDOP and the Innovation Layer will be carefully monitored, with potential adjustments to be addressed following the first round of Innovation Projects and a related lessons-learned process.

³ EUM/C/106/24/DOC/46

Priority 7: SAF software licenses

The current EUMETSAT Data Policy and SAF strategy define a SAF software licensing policy, according to which SAF software packages are provided free of charge under a proprietary EUMETSAT license that prohibits redistribution. These restrictions were originally aimed at controlling the number of users and software versions distributed. This context has changed significantly, with digital distribution replacing the physical media used in the past and open-source software licensing landscape now offering models that better safeguard an owner's intellectual property right compared to the past. Many projects within European programmes are increasingly favouring open-source software licensing approaches.

Broadening the SAF software licensing grants flexibility to applying the most appropriate licensing model (i.e. proprietary or open source) and related licence terms to the specificities of each operational SAF software.

Operational SAF software will be licensed under an open-source or proprietary licence, to be decided by Council on a case-by-case basis.

Implementation aspects

- Case-by-Case evaluation: the relevant SAF and the Secretariat will evaluate each existing/new operational SAF software individually to and recommend the most suitable software licensing model (proprietary or open source) and related licence to Council for approval⁴, taking into account factors such as security, export control, intellectual property rights, as well as the intended use of the software. The evaluation will apply testing procedures established in the Secretariat. Subsequent changes to the software licensing model or licence will require Council approval;
- Redistribution flexibility: Redistribution of SAF software will no longer generically be restricted. Where possible and adequate, restrictions will be removed to allow for broader distribution, promoting further development and collaboration on SAF software by third parties.

Detailed guidelines and workflows related to licenses for SAF software deliverables, including evaluation of options and change management will be documented and maintained in related "Implementation Procedures" to provide clear and consistent guidance across the SAF Network.

⁴ Via the appropriate subsidiary bodies, including the STG Operations Working Group

Annex SAF concept and implementation guidelines

This annex recalls the SAF Concept and Implementation Guidelines of the 2009 SAF Strategy adapted with minor adaptations in line with the priorities identified in 2025.

I.1 The SAF concept

I.1.1 Objectives of the SAF Network

The overall objective of a SAF is the provision of operational services, in the context of a cost-effective and synergetic balance between the central and distributed services. The SAF services are an integral part of the overall EUMETSAT operational services.

In line with this objective, the establishment of a SAF shall be to undertake on a distributed basis such necessary research, development and operational activities that can be carried out in a more effective way than at the EUMETSAT central facility. The primary role foreseen for the SAFs is to develop and deliver services and products aimed at enhancing the value and use of data for applications considered to be a common need of all, or the least a majority, of Member States.

All operational relevant satellites can be considered by the SAFs, but the primary focus is on EUMETSAT satellites. Research Satellite can be considered as well, to the extent this supports development of products relying on future operational systems. In terms of deliverables and services, a SAF could develop activities that focus either on core meteorological requirements or wider climate/environmental activities within the framework of the EUMETSAT strategy and the EUMETSAT Convention.

I.1.2 Key factors in the SAF concept

- Improve the ability of EUMETSAT Member States to exploit the satellite data;
- Encourage the utilisation of the existing skills and infrastructure in Member States for developing geophysical data products and services;
- Facilitate cost effective exploitation by ensuring services are distributed in the most appropriate way;
- Ensure the most cost-effective balance between the EUMETSAT central services and distributed services provided through National Meteorological Services and other governmental institutions;
- Be a possible tool to develop cooperation within Member States, non-Member States and other organisations;
- Facilitate usage of SAF products and deliveries through adequate training activities for the relevant users.

The SAF Network is also an asset of the European Meteorological Infrastructure (EMI), relying on reuse of infrastructures and skills available in the NMHSs of a EUMETSAT Member.

I.2 Life cycle and general Policy Elements

I.2.1 SAF Themes

The procedure for identifying a SAF opportunity is based on the Council agreement to establish SAFs adopted at its 21st meeting in November 1992 a Resolution (EUM/C/92/Res. V) on which basis eight SAF Themes were agreed.

Additional SAF Themes may be proposed by Members States to the STG/AFG for recommendation to Council. For newly proposed themes, the Council may wish to proceed with preliminary studies to address the feasibility with respect to available and planned satellite data sources, as well as to define a scientific/technical framework for a new SAF, before taking a decision.

The implementation of a new SAF involves a Development Phase followed by Continuous Development and Operations Phases (or an Initial Operations Phase if necessary) subject to distinct formal decisions by Council.

I.2.2 Development Phase

Once a new SAF Project is approved by the Council, it undertakes a Development Phase, typically lasting 5 years, with the objective of defining the intended products, develop the necessary product generation and service infrastructures, and engineering the products. This Development Phase shall end with a clear assessment of the readiness to start the operational distribution of available products.

During the Development Phase, the SAFs shall ensure that:

- The project is properly organised at management, financial, scientific, and technical level;
- Plans are established at the start and covering the whole duration of the project;
- The SAF requirements are properly consolidated and documented, taking into account the need of traceability with respect to relevant EUMETSAT Programme End-User Requirement Documents (EURD), established for any new mandatory programme.

I.2.3 Transition to Continuous Development and Operations

The Development Phase is followed by Continuous Development and Operations Phases (CDOPs).

If the necessary conditions are not in place to start the CDOP, in terms of:

- Full availability of intended satellite data for the CDOP period;
- Need to further consolidate the development baseline (for products or infrastructure/services) prior to start operational distribution of products.

the Council may either consider extending the development phase, to enable completion of the related development work, and/or to wait for availability of satellite data, or agree to authorise the start of a time-limited Initial Operations Phase (IOP).

The transition from the development phase to a CDOP or IOP shall require a formal decision by Council. This decision shall be based on the evaluation of a SAF Proposal. This proposal will in principle cover all operational services, as well as research and development support deemed necessary to expand and enhance services in line with evolving user requirements and needs of new EUMETSAT Programmes. It will address all technical, operational and cost implications and, in principle, will cover again a 5-year period.

When Council approves the SAF proposal, a leading entity is selected for the SAF and the Director-General is tasked to negotiate with the SAF leading entity a SAF agreement and after Council approval he/she is given authority to sign the SAF agreement with the SAF leading entity.

I.3 SAF Development and IOP

I.3.1 Policy Elements for the SAF Development and IOP

Each SAF shall be located within the NMHS of a Member State, or other agreed entity linked to a user community. Each SAF consortium shall have a lead organisation responsible for the interface with EUMETSAT but may be a consortium of organisations from any Member and Cooperating State.

The main criteria in the decision to transition from development to operations shall be relevance with respect to user requirements, value for money, and affordability. Implementation options will be traded off as necessary and practicable to ensure cost efficiency and synergy with the overall EUMETSAT services.

SAF activities are to be undertaken within the framework of agreements between EUMETSAT and the individual SAF. The agreements shall preserve EUMETSAT control and responsibility and, in particular, shall ensure that all the resulting products, intellectual property and proprietary technical data rights, including all algorithms and software shall belong to EUMETSAT and be available at no cost to NMHSs in Member and Cooperating States.

All agreed SAF activities shall be undertaken on a shared cost basis between EUMETSAT and the SAF with EUMETSAT contribution being limited to 50% for development activities and 75% for operational activities. SAF are staffed entirely by the SAF consortium (i.e. no EUMETSAT staff). SAF Project interactions with the EUMETSAT Secretariat Teams and Programmes are however encouraged to ensure a proper coordination between developments at SAF level and evolution of the EUMETSAT Central Facilities at the Secretariat. Additionally there may be visiting scientists paid from EUMETSAT resources, and trainees seconded from other Member State NMHSs or other institutes.

The EUMETSAT Secretariat coordinates and monitors the development and operations of the entire SAF Network, based on the EUMETSAT standards, guidelines, and procedures. It provides information and support as regards interfaces with the Central Facilities, EUMETSAT satellite input data, and proposes harmonisation measures when appropriate.

I.3.2 Sharing of Responsibilities Other Policy Guidelines for Development and IOP

The following principles provide a common baseline to all SAFs, in their development phase

- One entity acts as the SAF host institute (or leading entity, in IOP) and takes responsibility for the overall management of the project, according to the proposal approved by the Council;
- In the framework of a SAF agreement each SAF host has contractual relations with EUMETSAT covering the period specified in the SAF agreement;
- Cooperation with other consortium participants shall be the responsibility of the SAF host institute (or leading entity), and consistent with the established SAF agreement;
- The progress of the development is monitored and directed by a Steering Group (SG) chaired by the SAF host institute (or leading entity), and involving representatives of the consortium, the Secretariat and appropriate Delegate Bodies. The EUMETSAT Delegate Bodies will have full visibility on the development of all SAFs through formal reporting and dedicated information fora;
- Each SAF is developed/operated under the responsibility of the SAF host institute/leading entity, in accordance with a Project Plan derived from the approved proposal. The plan and revisions agreed by the SG shall form the basis for evaluating the progress of the activities;
- STG and AFG will as appropriate review the progress of the development and operations activities;
- Deliverables and services shall be developed in a way that does not prejudice the selection of the mechanism for operational activities.

I.4 SAF Continuous Development and Operations (CDOP)

I.4.1 Policy Elements for the SAF CDOP

The policy elements defined for the Development Phase and IOP apply to the CDOP as well, and in particular:

- The main criteria in the decision for the transition from development (or IOP) to CDOP shall be value for money and affordability;
- All processes established by the SAFs during the development phase shall be maintained and improved as necessary to meet the requirements of the CDOP;
- Continuous review of products against evolving user requirements;
- Properly defined processes for Operational release of new/improved products and retirement of obsolete products (or products not having an adequate basis of user requirements) from operational distribution;

- Preservation of the EUMETSAT control and responsibility and, in particular assurance that all the CDOP resulting products, intellectual property and proprietary technical data rights, including all algorithms and software shall belong to EUMETSAT and be available at no cost to NMHSs in Member and Cooperating States;
- Shared cost basis between EUMETSAT and the SAF for CDOP activities, with EUMETSAT contribution being limited to 75 %.

In addition, towards the end of each CDOP slice, a Lesson Learnt process will be established with the EUMETSAT Secretariat to assess the experience gained during the CDOP with the objective to improve processes and products. Workshops involving all SAFs may be organised by EUMETSAT to support this process.

1.4.2 Sharing of Responsibilities and other Policy Guidelines for SAF CDOP

The following principles could be regarded as the common baseline to all SAFs, in their operational activities:

- In CDOP slices, one entity acts as the SAF leading entity and takes responsibility for the overall management of the activities agreed under the CDOP proposal approved by Council;
- In the framework of a cooperation agreement each SAF leading entity has contractual relations with EUMETSAT covering in principle 5 years;
- Cooperation with other consortium participants shall be the responsibility of the SAF leading entity, and consistent with the SAF agreement between EUMETSAT and the SAF operations leading entity;
- The implementation of the SAF agreement is monitored and directed by a Steering Group co-chaired by the SAF leading entity and the Secretariat and involving other representatives of the consortium, the Secretariat and appropriate Delegate Bodies;
- In addition or complement to SAF Project Managers, a SAF Operations Management role shall be identified by the SAF leading entity and be responsible for day to day management of overall SAF operations and interactions with a counterpart manager designated by the Secretariat;
- The Management, Financial, Technical, Quality, and Operations processes established during the development phase (and IOP as relevant) shall be maintained and improved as necessary to meet the CDOP needs;
- The EUMETSAT Secretariat organises regular SAF Network level workshop to address issues of interest to all SAFs and harmonisation of approaches within the overall Application Ground Segment;

- Operational readiness shall be assessed in dedicated Operational Readiness Reviews organised with the EUMETSAT Secretariat, and support the Steering Group to determine the achieved operational status (pre-operational or operational), in line with EUMETSAT Standards for product distribution;
- Regular Operations Reviews shall be conducted, with maximum involvement of users, to assess the quality and level of services provided by the SAFs in CDOP and the usage and usability of the SAF products;
- Regular CDOP Mid-term Reviews shall be conducted under the leadership of the STG/AFG representative in the Steering Group to assess the overall progress, the need for strategic re-alignment and need for re-planning.
- Adequate mechanisms shall be setup with EUMETSAT to assess the improvements and enhancements of operational products, including product consolidation reviews as necessary;
- Development in CDOP slices of new operational chains shall follow the processes defined and implemented during the development phase, with necessary improvements and optimisations to be agreed with the EUMETSAT Secretariat;
- Technical interactions with the Secretariat will be in accordance with an Operational Interface Control Document (OICD) and a set of Joint Operations Procedures (JOP) agreed by the Secretariat and the SAF Operations leading entity and maintained by the Secretariat.
- The SAF Steering Groups have the authority to decide on:
 - Changes affecting SAF Products, but not impacting the commitments taken vis a vis Council;
 - Changes in the SAF Product Requirements Document;
 - Changes in the SAF operations Service Specification.
- Operations shall be compliant with EUMETSAT operational standards and data policy, along with documentation, configuration control and quality control of deliverables, services and agreed enhancements;
- The agreed approach for the monitoring of the quality and relevance of services to users shall be implemented under the responsibility of the SAF leading entity and supervised by the SAF Steering Group;
- The introduction and promotion of the SAF deliveries should be organised by the relevant SAF throughout the operational activities, in coordination with EUMETSAT and preserving the identity of the SAF Network and the SAF Data Policy implementation;

- The SAFs are responsible for the interactions with the users of their operational products and shall setup all necessary mechanisms to support these interactions (involvement of beta-testers and beta-users, users training, users support services, gathering of evolving user requirements, assessment of user's feedback, etc.);
- The EUMETSAT Delegate Bodies will have full visibility on the operations of all SAF projects through formal standard reporting by the Secretariat based on SAF inputs, and make formal decisions e.g. on new operational SAF products.

The baseline management procedures and organisation applicable to the operations of each SAF within the EUMETSAT Applications Ground Segment will be compliant with these guidelines.

Further harmonisation of approaches and processes between SAFs and the Central Facilities is a goal; mechanisms (including dedicated SAF Network Level / Secretariat meetings and Workshops) will be put in place to regularly monitor and assess achieved results and reporting the outcomes to delegations.