



Copernicus Climate Change Service | Copernicus Atmosphere Monitoring Service

Open Call for CAMS & C3S use cases related to Public Health, Energy, UN SDGs & the Paris Agreement

Guide for Applicants

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Contributors

EARSC

T. Walker

C. Oligschläger

ALPHA Consult

Katarina Spasenovic



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1. Introduction

1.1 Purpose

This Guide for Applicants provides interested entities and organisations with an overview of the CJS2 Open Call for Use Cases and, in particular, how to apply for the first Open Call 1.

The Open Call for Use Cases is part of a 3-year project funded by the Copernicus Programme that aims to better understand the value and benefits of the data and services delivered by the Copernicus Atmosphere Monitoring Service (CAMS) and the Copernicus Climate Change Service (C3S), as well as understand in more depth their value proposition towards various types of users. Furthermore, the project seeks to better assess the societal value through the development of case studies in selected market areas.

With this Open Call for Use Cases, the project team on behalf of ECMWF (that implements the Copernicus Atmosphere Monitoring Service (CAMS) and Copernicus Climate Change Service (C3S) of the EU's Copernicus Programme) aims to systematically gather and showcase diverse applications that harness the substantial capabilities of CAMS and C3S data products and services. Through this initiative, the goals are as follows:

- 1) Methodically document and showcase the wide-ranging applications of CAMS and C3S data products and services across a number of domains, emphasising innovation and problem-solving.
- 2) Narrate storylines in the form of case studies around the use of CAMS and C3S data products and services for decision-making and solution development.
- 3) Highlight the versatility of Copernicus data in addressing real-world challenges, fostering sustainable practices, and driving positive outcomes across different sectors.

We invite your contributions to this collective endeavour, as we aim to compile a repository of impactful use cases that underscore the versatility and significance of CAMS and C3S data products and services in various fields.

1.2 EU Copernicus Programme

Copernicus is the Earth Observation component of the European Union's space programme, a groundbreaking Earth observation programme designed to provide a wealth of data for addressing global environmental challenges. Launched in 2014, Copernicus comprises a constellation of satellites and ground-based systems working seamlessly to monitor, collect, and disseminate crucial information about the Earth.

At its core, Copernicus aims to enhance our understanding of the planet's dynamics and support evidence-based decision-making across various sectors. The programme covers a broad spectrum of [operational services](#), including but not limited to climate change (C3S), atmospheric composition



monitoring (CAMS), land (CLMS) and marine environment monitoring (CMEMS), emergency management (CEMS), and security (CSS).

The Sentinel satellites, a key component of Copernicus, continuously capture high-quality imagery and data, offering an unprecedented view of Earth's surface, atmosphere, and oceans. These observations contribute to a comprehensive understanding of environmental changes, enabling scientists, policymakers, and businesses to respond effectively to emerging challenges.

1.3 ECMWF

A key partner in the implementation of the EU's Copernicus Programme is the European Centre for Medium-Range Weather Forecasts ([ECMWF](#)). It stands as a premier institution at the forefront of global weather prediction and climate research. Established with a commitment to advancing scientific knowledge in atmospheric sciences, ECMWF has become a cornerstone in the field of numerical weather prediction. Operating as an intergovernmental organisation supported by multiple European countries, ECMWF is renowned for its cutting-edge research, state-of-the-art forecasting models, and a mission dedicated to providing accurate and timely information for weather and climate-related decision-making. With a heritage spanning several decades, ECMWF continues to be a driving force in shaping our understanding of Earth's atmospheric processes and their implications for society at large.

1.4 CAMS and C3S

Within the broader Copernicus Programme, the European Commission entrusted ECMWF with the implementation of two of the six operational services that play pivotal roles in monitoring and understanding critical aspects of our environment: the Copernicus Atmosphere Monitoring Service (CAMS) and the Copernicus Climate Change Service (C3S).

[CAMS](#) is dedicated to observing and forecasting the Earth's atmospheric composition. By continuously monitoring air quality, tracking pollutants, greenhouse gases, and aerosols, CAMS provides essential data for addressing challenges related to public health, climate change, and air quality management. The service empowers decision-makers with accurate and timely information, facilitating responses to environmental threats and contributing to the development of sustainable policies.

[C3S](#) focuses on providing comprehensive climate information to support a wide range of applications. This service encompasses historical climate data, climate monitoring, and future climate projections. C3S data aids researchers, policymakers, and businesses in understanding climate trends, assessing risks, and developing strategies for climate change mitigation and adaptation. The service plays a crucial role in fostering resilience and sustainability across various sectors.

As we explore the applications and use of CAMS and C3S data products and services, it becomes evident that these services are indispensable tools for informed decision-making and innovative solutions.



This guide invites you to share your use cases, showcasing how CAMS and C3S data products and services can be leveraged to address specific challenges, promote sustainability, and drive positive change.

2. Open Calls – General Information

During the course of the project, at least two open calls are organised to collect use cases in selected market areas. The process will be structured in two phases:

- 1) Open Call for Use Cases
- 2) Development of Case Studies

2.1 Open Call – “Call for Use Cases”

Interested parties must apply online (using the link in section 3.2.2.1) during the first phase of the open call and answer a number of questions related to their use case and how they are making use of CAMS and/or C3S data products and services that will facilitate the subsequent evaluation process to be accepted for the second stage activities, the development of case studies.

The Open Call 1 for Use Cases is centring on the following sectors (more details in section 3.1):

- Public Health
- Energy
- UN SDGs
- Paris Agreement

Service providers may be from the private sector, public sector or a research organisation, but the service must be at least at TRL 6¹ with a clear identifiable end user organisation and value chain to determine the value and benefits of using C3S and CAMS data products and services.

2.2 Second Stage – “Development of Case Studies”

After an evaluation and selection process by a jury consisting of one ECMWF representative and two representatives of the project team, a maximum of 10 applicants with applications of an adequate standard will be invited to participate in the development of case studies. Thus, a maximum of 10 case studies will be developed in collaboration with the service providers. The service providers must actively support the case study development by participating in a series of interviews with the project team, support the narrative and provide information on the use cases to enable the project team to write the 10 case studies.

¹ TRL6 definition for a software: “Beta version of the software functionalities tested by selected end user under a control mode.” <https://horizoneuropencportal.eu/sites/default/files/2022-11/trl-assessment-tool.pdf>



2.3 Support & promotion activities

The case studies will be promoted through the various communication and marketing channels of the project partners to **increase the visibility of the solutions** and support the **marketing activities** of the service providers.

EARSC, in coordination with the ECMWF communications team, will promote the case studies through its communication channels, including its website, its monthly report, the knowledge platform EOwiki, as well as through its social media channels such as LinkedIn.

ECMWF will support the promotion of the case studies through its own internal and external communication and dissemination resources, its website and social media channels such as LinkedIn and Facebook. In addition, the case studies might be featured in its quarterly newsletter and the story of the month feature depending on current circumstances.

Finally, the project partners ALPHA Consult, EOXPLORE and Terranea, in coordination with the ECMWF communications team, will use their networks and communication channels to support the dissemination of the case studies.

The case studies developed during the second phase of activities will be used in the future by ECMWF to showcase and highlight the benefits of CAMS and C3S data products and services. The service providers will, in turn, be free to use the case studies in its own communication and marketing activities, so long as the reference to CAMS/C3S and ECMWF is explicitly maintained.



3. Open Call 1 – “Call for Use Cases”

Entities interested in taking part in the open calls should check their eligibility and follow the application process outlined in the following sections.

3.1 Eligibility

3.1.1 Definition of eligible organisations

Entities wanting to submit a use case must come from the private sector, public sector or research organisations.

3.1.2 Definition of target sectors

The Open Call seeks to gather use cases of CAMS & C3S data products and services primarily for the sectors of Public Health, Energy, UN SDGs & the Paris Agreement. However, innovative uses in other sectors will also be considered. The table on the right displays the specific sub-sectors for which we are seeking use cases:

Table 1 – target sectors

Public Health	Air quality, pollen, UV, heat and cold waves, vector borne diseases, COVID
Energy	Green Deal renewable energy targets, planning, investments, maintenance, CH4emissions
UN SDGs	SDG2 (Zero Hunger), SDG3 (Good Health & Well-Being), SDG6 (Clean Water & Sanitation), SDG7 (Affordable & Clean Energy), SDG9 (Industry, Innovation & Infrastructure), SDG11 (Sustainable Cities & Communities), SDG12 (Responsible Consumption & Production), SDG13 + Mission 1.5C (Climate Action), SDG14 (Life Below Water), SDG15 (Life on Land), SDG17 (Partnerships for the Goals)
Paris Agreement	Use cases in support to the objectives of the Paris Agreement

3.1.3 Geographic scope

The scope of the first open call is global, both in terms of where the service provider and end user organisation are based, and in terms of the geographical scope of the data products and services used (CAMS/C3S global data products and services are included).

3.2 Open Call 1 - Submission & Evaluation Process

3.2.1 Important dates

- 12 March 2024: launch of Open Call 1 for CAMS & C3S use cases. The Open Call 1 will be open tentatively for about 1 month.
- 15 April 2024 at 18:00 CEST (updated): deadline for submitting a use case to the Open Call 1.



- April and May 2024: evaluation and selection of uses cases to develop case studies. The evaluation phases will tentatively take two months depending on the amount of submissions.

3.2.2 Application process

3.2.2.1 Application form

The application form to submit the use cases is available from the ECMWF and EARSC websites here:

https://ec.europa.eu/eusurvey/runner/OpenCall_CAMS_C3S_2024

The form is composed of three sections:

- General information: entity information and contact points.
- Description of CAMS/C3S use case: which CAMS/C3S data products and services are used, in which market sector, for what (solution/product description), etc.
- Targeted questions: series of questions that aim to further assess the value and benefit of the data and services (see below for further details).
- Document upload: possibility to upload any relevant documentation.

Targeted questions addressed to applicants:

- 1) What is the value chain behind your usage of CAMS or C3S data products and services? What are the benefits for the whole value chain from the service provider, primary user, secondary users/beneficiaries all the way to the citizen and general public? Think of economic, environmental, regulatory, innovation & entrepreneurship, scientific and societal benefits.
- 2) In support of upscaling, did you analyse and identify other user sectors and/or markets? Did you identify other geographic regions where you could offer/have offered your service? Please elaborate.
- 3) Do you see a potential to expand your activities and collaborate with ECMWF more closely in the future? Please elaborate.
- 4) Do you follow any data management standards and / or interoperability practices or guidelines?
- 5) What in-house expertise do you have currently in relation to the use of CAMS and/or C3S data products and services?
- 6) Please demonstrate/explain that your EO service/product is at least at [TRL 6](#). What are your next plans to get to the next TRL?

3.2.2.2 Language

All applications must be submitted in English. Applications submitted in other languages will not be taken into account.



3.2.2.3 Number of applications per entity

The applicant should submit one form per use case, i.e., per product or service developed. For example, if an entity develops a product/service that uses both C3S and CAMS for an “Energy” and/or Public Health application, they should fill out one application for that product/service. If the same entity develops another relevant product/service (for a same or different market sector), they should fill out a separate application form for that second product/service.

3.2.3 Evaluation Criteria & Process

The evaluation will be conducted by a jury composed of one ECMWF representative and two representatives from the project team.

The evaluation will be based on the following criteria:

- Benefits for the whole value chain from the service provider, primary user organisation, secondary user(s)/beneficiaries all the way down to citizens/general public.
- Demonstrated potential and willingness to upscale, e.g., through means of entering new markets, means to increase the number of users.
- Strengthening and promotion of links with and between ECMWF and Service providers, e.g. as user and/or contributor to platforms, or active participation in research projects and/or initiatives.
- Robustness of utilized infrastructure, e.g., in relation to data management standards or interoperability.
- Advanced in handling of CAMS/C3S data products and services, i.e. demonstrated skills and degree of innovative use.
- Demonstration of at least TRL 6 and clarity of plans to advance to the next TRL.

3.2.4 Checklist

In order to make sure you have filled in all information correctly and provided the right documents for your application to be taken into account, please make sure you check the following points:

- Is your proposal eligible? The eligibility criteria are given in section 3.1.
- Have you checked that the Application form is properly completed?
- Have you submitted your application form before the deadline? It is strongly recommended not to wait until the last minute to submit your application. Failure of the application to arrive in time for any reason, including network communications delays, is not acceptable as an extenuating circumstance. The time of receipt of the message as recorded by EUSurvey will be definitive.



3.2.5 Additional information

3.2.5.1 Legal issues

ECMWF and the project team reserve the right to exclude from the call, and take relevant legal action, any applicant who intentionally damages the reputation of ECMWF, CAMS or C3S.

3.2.5.2 Ownership

All applications and resultant case studies reports made as part of this open call remain the property of the European Centre for Medium-Range Weather Forecasts (ECMWF).

ECMWF retains all intellectual property rights, including but not limited to copyright, trademark, patent, and any other proprietary rights, associated with the applications.

By submitting your work, you grant ECMWF a non-exclusive, irrevocable, royalty-free license to use, reproduce, modify, adapt, publish, translate, create derivative works from, distribute, and display the case studies worldwide in any media.

Your participation in the open call and submission of materials do not transfer any ownership rights or intellectual property rights to you.

ECMWF and the project team may use the applications for the purpose of evaluating the open call, selecting participants, and promoting the open call or related activities.

Do not submit any confidential or proprietary information that you do not want to be disclosed to ECMWF or the project team. ECMWF and the project team are not responsible for maintaining the confidentiality of any information submitted as part of the open call.

You represent and warrant that your application does not infringe upon the intellectual property rights or other rights of any third party and comply with all applicable laws.

3.2.5.3 Promotion & visibility obligations

When communicating regarding the Open Call or the subsequent Development of Case Studies, the entity must correctly display the relevant logos and information related to ECMWF, CAMS and/or C3S, Copernicus and the European Commission.

Any publicity made by the entity regarding the Open Call, in whatever form and on, or by, whatever medium, must specify that it reflects only the author's views and that neither the ECMWF nor the project team are liable for any use that may be made of the information contained therein.

In turn, the project team and ECMWF will be entitled to publish, in whatever form and on, or by, whatever medium, the following information:

- the name of the entity and the contact point therein (where relevant).



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- information regarding the entity's use of CAMS/C3S data products and services and benefits it provides as included in the case studies produced following the Open Call and subsequent Development of Case Studies.
 - any pictures, audiovisual or web material provided to the project team and ECMWF in the framework of the Open Call.

Point of Contact

The project team can be contacted regarding questions about this Call for CAMS and C3S Use Cases by writing to christopher.oligschlaeger@earsc.org.



ECMWF - Robert-Schuman-Platz 3, 53175 Bonn, Germany

Contact: <https://support.ecmwf.int/>