

ECMWF Copernicus Procurement

Request for Proposal



Copernicus Climate Change Service

Development of mini-MOOCs to increase
the awareness and impact of C3S

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1 DEFINITIONS

Definitions common to all ECMWF Copernicus RFPs and used in other documents for this RFP are listed here:

“ECMWF”	means European Centre for Medium-Range Weather Forecasts
“C3S”	means Copernicus Climate Change Service
“Centre”	means ECMWF
“Copernicus”	means the European Commission project for which Services under this RFP will be procured
“Deliverable”	means something tangible or intangible which the Contractor agrees to produce and deliver or make accessible to ECMWF as part of the Services. A Deliverable could be a report, a document, a specific data set, a service upgrade or any other building block of an overall project. Deliverables can be defined as single instances or as being continuously updated (e.g., routine production of data sets, routine production of reports).
“KPI”	means Key Performance Indicator, a quantifiable measurement that reflects the critical success factors of an activity
“Milestone”	means a step used to mark specific points along the project timeline. These points may signal anchors such as a project start and end date, introduction of a new input data set, among others. A Milestone differs from a Deliverable in that a Milestone is a measurement of progress toward an output whereas the Deliverable is the result of the process.
“Performance Target”	the expected or predicted success level of an activity. The Performance Target can be assessed with Key Performance Indicators
“Proposal”	means a response to this RFP
“Proposer”	means a respondent to this RFP
“RFP”	means this request for proposal, comprising of a set associated documentation, which the Proposer must respond to in their submitted proposal
“Services”	means any of the services that are being procured by the ECMWF in this RFP
“Successful Proposer”	means a respondent to this RFP who is successfully chosen as a supplier and subsequently performs the Services

2 INSTRUCTIONS FOR PROPOSER

2.1 Introduction to the ECMWF & European Copernicus Programme

This Request for Proposal (RFP) has been prepared by the European Centre for Medium-Range Weather Forecasts, (governed by its Convention and associated Protocol on Privileges and Immunities which came into force on 1 November 1975 and was amended on 6 June 2010) ("ECMWF") for the purposes of obtaining proposals to design, develop and carry-out live runs of at least three mini-MOOCs on topics relevant to C3S over the course of Copernicus 2.0.

ECMWF is both a research institute and a 24/7 operational service, producing and disseminating numerical weather predictions to its Member States. This data is fully available to the national meteorological services in the Member States. The Centre also offers a catalogue of forecast data that can be purchased by businesses

worldwide and other commercial customers. The supercomputer facility (and associated data archive) at ECMWF is one of the largest of its type in Europe and Member States can use 25% of its capacity for their own purposes.

The organisation was established in 1975 and now employs around 450 staff from more than 35 countries.

A description of ECMWF's activities and infrastructure can be found at:

<http://www.ecmwf.int/en/about/what-we-do>

ECMWF is based in three locations: Reading (United Kingdom), Bologna (Italy) and Bonn (Germany).

The European Copernicus Programme is an EU-wide flagship programme that aims to support policymakers, businesses and citizens with enhanced environmental information. The programme reached operational status in 2014 and entered its second phase in 2021. For the period 2021-2028, a total budget of 5.3 B€ will be available to operate Copernicus, funding two main aspects: the space component (in particular the dedicated "Sentinel" satellite missions) and the services.

Copernicus also relies on strong satellite and ground-based observations, contributed to directly by European Member States as well as by international research networks. Copernicus contributes to and benefits from the building up of the Global Earth Observation System of Systems (GEOSS) and the World Meteorological Organization's Global Framework for Climate Services (GFCS). Copernicus contributes to the European Green Deal, which is the overarching guiding document for the EU's "climate action plan" – a new growth strategy that aims to transform the EU's economy to ensure a sustainable future. Through the European Green Deal, the European Union will become a resource-efficient and competitive economy where there are no net emissions of greenhouse gases by 2050, economic growth that is decoupled from resource use and where no person and no place is left behind.

Copernicus services provide information drawn from observational data sources and modelling capacities. They address six areas: three are thematic and refer to different components of the Earth-System (land, marine and atmosphere); the three others being "horizontal" or "cross-cutting" in scope (emergency management, security and climate change). The development of the services has relied on funding from the European R&D Framework Programmes 6 and 7, and Horizon 2020, as well as initially from the European Space Agency. Most services and their components are operational. However, there are new service elements, such as for instance the anthropogenic CO₂ emissions Monitoring and Verification Support capacity, which are currently still in the build-up phase supported by European R&D funding while ramping up as part of CAMS.

2.2 Background to the project

The background to this RFP is described in Annex 1.

2.3 Proposals are subject to these Conditions

The Proposer must read all RFP documents and comply with ECMWF's instructions with regard to the submission of their Proposal. The RFP documents comprise the following:

- This document, which includes Annex 1 (Specification of Requirements);
- Annex 2, which includes the Pricing Tables, Template for Proposer and Forms to complete, attached as separate documents;
- Annex 3, which includes the Terms and Conditions of the Agreement, attached as a separate document.

2.3.1 Eligibility

2.3.1.1 General eligibility

According to the Contribution Agreement between the European Union and ECMWF, participation in calls for tenders shall preferably be open to entities established in Member States of the European Union and to entities established in Copernicus participating states in accordance with the conditions laid down in the EU's Space Programme Regulation. The Regulation can be found at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L.2021.170.01.0069.01.ENG&toc=OJ%3AL%3A2021%3A170%3AFULL>

It is currently ECMWF's expectation that, in practice, entities established in other States may exceptionally be eligible and subject to specific scientific or other requirements (as specified in the tender documents) as well as express prior approval by an EU Procurement Board. This applies to both prime and subcontractors. Accordingly, ECMWF is required to reserve the right to exclude ineligible persons or entities from tenders at any point in time. The Proposer as well as their subcontractors must meet all eligibility criteria throughout the whole duration of the procurement exercise as well as their prospective contract.

2.3.1.2 Eligibility of United Kingdom and Swiss entities

Switzerland (CH) was eligible for the first phase of the Copernicus Programme between 2014 and 2020. This has changed. For the avoidance of doubt, please note that, at present, CH is neither an EU Member State nor is it participating in the EU Space Programme. Thus, CH is currently considered a non-contributing country for the second phase of the Copernicus Programme (2021-2027).

During 2021-2023 the United Kingdom (UK) was also considered a non-contributing country for the second phase of the Copernicus Programme. However, on 4 December 2023 the UK and the European Commission signed an agreement finalising the UK's association to the Copernicus Programme (as well as to Horizon Europe). For the avoidance of doubt, from 1 January 2024 the UK is therefore eligible to benefit from Copernicus services and products in the same way as other participating countries. UK entities will have the same rights as entities from EU or other associated countries to bid for Copernicus contracts, both as prime and sub-contractors.

The UK is committing to participate in Copernicus for the remainder of the current multi-annual financial framework (2021-2027).

2.3.2 Early Detection and Exclusion System (EDES) Database

The purpose of the EDES is the protection of the European Union's financial interests. In particular, the EDES ensures:

- the early detection of persons or entities, which pose a risk to the Union's financial interests;
- the exclusion of persons or entities from receiving Union's funds (Article 135(1) of the Financial Regulation);
- the imposition of a financial penalty on a recipient (Article 138 of the Financial Regulation);
- the publication, in the most severe cases, on the Commission's internet site of information related to the exclusion and where applicable the financial penalty, in order to reinforce their deterrent effect (Articles 140 of the Financial Regulation).

The ECMWF makes use of the EDES to verify whether individuals or organisations are suitable entities to receive funding from the EU.

The grounds for exclusion are listed under article 136(1) of the EU Financial Regulation. They include:

- bankruptcy and insolvency situations;
- non-payment of taxes or social security contributions;
- grave professional misconduct;

- fraud, corruption, participation in a criminal organisation etc.;
- serious breach of contract.

The Proposer must confirm in its response that they and persons having powers of representation, decision-making or control in their organisation are NOT listed on the EDES database and must accept that the ECMWF will reject any Proposer who is so listed.

2.3.3 EU Restrictive Measures

Restrictive measures (sanctions) are the tool in the EU's common foreign and security policy (CFSP), through which the EU can intervene where necessary to prevent conflict or respond to emerging or current crises.

The obligation to ensure compliance with the EU restrictive measures applies:

- to the EU institutions and bodies and to all EU contracting partners;
- not only at the initial distribution of funds but also down to the level of final beneficiary.

ECMWF, as the entrusted entity for the implementation of Copernicus Atmosphere Monitoring and Climate Change Services, must ensure that there is no detection of a recommended Proposer (and any partners thereof) or grant applicant, co-applicants, affiliated entities in the list of EU restrictive measures, before signing a contract. Likewise, grant beneficiaries and contractors must ensure that there is no detection of subcontractors, natural persons (including recipients of financial support to third parties), in the lists of EU restrictive measures. This requirement is specifically detailed in clause 2.1.5, and clauses 2.8.2.2 (ii) and 2.8.5 of the Agreement for Copernicus Services.

As a minimum, using the www.sanctionsmap.eu website, the Proposer must undertake the following checks of their subcontractors, or any other third parties involved in delivering products goods or services to Copernicus:

- Country check (country of registration of bidding organisation / holding company);
- Organisation / Holding company check (using search function);
- Individual check (using search function).

The Proposer must complete the Restrictive Measures form as per the provided template for a minimum of four persons who have powers of representation, decision-making or control in their organisation, as well as confirming that they have undertaken checks on their subcontractors as detailed above.

The Proposer should note that, as this forms part of ECMWF's obligations to the EC, failure to complete and return this form may lead to exclusion from the tender process.

2.3.4 EU Conditionality Measures

Conditionality measures are additional protections for the EU budget when breaches of the rule of law principles affect or risk affecting EU financial interests introduced in 2021.

Conditionality measures may be put in place in the context of the general regime of conditionality for the protection of the EU budget established by [Regulation \(EU, Euratom\) 2020/2092 of the European Parliament and of the Council of 16 December 2020 on a general regime of conditionality for the protection of the Union budget](#).

This conditionality regime allows the EU to take measures – for example suspension of payments, suspension of implementation, termination or prohibitions on entering into new legal commitments with concerned entities – to protect the EU budget.

ECMWF, as the entrusted entity for the implementation of Copernicus Atmosphere Monitoring and Climate Change Services, is required to ensure conditionality measures are duly applied vis-à-vis concerned entities.

Further requirements with respect to conditionality measures are detailed in Annex 3 of the RFP documents, the Agreement for Copernicus Services.

The Proposer must confirm in its response and ensure during the lifetime of an Agreement that neither them nor any of the proposed subcontractors or entities that would receive payment in connection with the Services, are affected by the conditionality measures described above, and must accept that the ECMWF may reject any Proposer, subcontractor or other entity that are so affected.

2.3.5 Specific conditions

The procurement for the contract will be conducted in accordance with ECMWF's procedures as set out in ECMWF's RFP documents and no other procedures will apply.

ECMWF will only enter into a contract with a single legal person/entity. Due to the need to include performance and compliance obligations in the contract, ECMWF will contract only with a single legal person or entity which is competent to undertake and commit to these obligations.

ECMWF recognises that some responses will involve a number of organisations which may wish to work together to deliver the contract requirements. In such cases, these organisations must identify a lead contractor who will sign the contract with ECMWF and who will be responsible for putting in place legal arrangements to ensure that it can guarantee that all other organisations will also meet the contract obligations. ECMWF will not enter into multiple contracts with individual members of consortia or groups of service providers.

2.3.6 Validity

The Proposal shall remain valid for a minimum of six months after the closing date for this RFP.

2.3.7 Expenses

ECMWF will not reimburse expenses incurred in connection with the preparation and submission of the Proposal. ECMWF accepts no liability whatsoever, whether in contract, tort or otherwise in relation to the RFP or in respect of any costs, damages or expenses incurred by the Proposer or any third party.

2.3.8 Language for Proposals

All proposal documentation, manuals and diagram labelling shall be written in English.

2.3.9 Status of submission

The submission of a Proposal in response to this RFP shall constitute an offer that may be accepted by ECMWF so as to become a binding contract. However, ECMWF is not bound to accept any Proposals. If ECMWF elects to accept a Proposal, subject to contract, the parties shall seek to execute a formal contract incorporating the Terms and Conditions contained in the RFP and any other agreed terms.

2.3.10 Right to negotiate

ECMWF reserves the right to negotiate with the Proposer before taking a decision on the placing of a contract.

2.3.11 Right to reject

ECMWF reserves the right to reject a Proposal that does not substantially comply with the conditions that are part of the RFP.

2.3.12 Confidentiality

ECMWF reserves the right to retain all documents submitted by the Proposer in response to the RFP. Any information in such documents that is proprietary and confidential to the Proposer will be handled

confidentially by ECMWF provided it is clearly and specifically identified as such. Such obligation shall not apply if such information is or was obtained from other sources that do not bind ECMWF as to confidentiality or if the information is in the public domain. ECMWF may make the Proposer's proposal available for evaluation purposes to authorised people including its governing body, committees, and professional external evaluators in addition to ECMWF's own personnel under the same conditions of confidentiality.

The contents of this RFP together with all other information, materials, specifications or other documents provided by ECMWF, or prepared by respondents specifically for ECMWF, shall be treated at all times as confidential by the Proposer. The Proposer shall not disclose any such information, materials, specifications or other documents to any third parties or to any other part of the respondents' group or use them for any purpose other than for the preparation and submission of a response to this RFP nor shall the Proposer publicise ECMWF's name or the project without the prior consent of ECMWF. ECMWF in turn confirms that it shall treat all information provided to it by the Proposer as confidential and further confirms that such information will not be disclosed by ECMWF to any third parties, other than its advisers and consultants.

The Proposer shall ensure that all third parties to whom disclosure is made shall keep any such information, materials, specifications or other documents confidential and not disclose them to any other third party except as set out above.

Please also note that all personally identifiable information (PII) processed by ECMWF will be treated in accordance with the ECMWF Policy on Personally Identifiable Information Protection (PIIP). It is available at <https://www.ecmwf.int/en/privacy>. ECMWF shall process all PII submitted by your response for the sole purposes of assessing your response. In doing so, ECMWF may share such PII with consultants or external advisors.

2.4 Enquiries and contact procedure

Any enquiries or requests for clarification of any matters arising from this RFP must be submitted in writing by e-mail as follows:

E-mail: procurement@ecmwf.int

The subject of the e-mail must be: **Clarification to RFP/2024/CJS2_156c**

Where ECMWF supplies further information it will make this information available to all recipients of this RFP who have indicated their intention to submit a response and provided ECMWF with an e-mail address for communication of additional information.

2.5 Timetable for this procurement

ECMWF envisages the following timetable for this procurement:

Issuance of RFP	15 February 2024
Last date for submission of clarification questions	08 March 2024 14:00 (CET)
Closing date/time	Thursday, 28 March 2024 18:00 (CET)
Evaluation	April 2024
Negotiation of service details with the successful bidder	May 2024 – Mid June 2024
Sign contract by	June 2024

2.6 Submission of proposals

The Proposer is requested to confirm to the email address shown in 2.4 above whether or not it will be submitting a response and shall provide a contact point and contact details to which all further information will be sent.

The response to this RFP must arrive at ECMWF no later than the closing time and date in section 2.5. The Proposer must submit its response to RFP_CJS2_156c@ecmwf.int as an email with attachments containing its complete response to this RFP including templates provided in Annex 2. The attachments must contain a printable version of the response in Microsoft Word format, Rich Text Format (RTF) or Adobe Portable Document Format (PDF) and in Microsoft Excel format for any spreadsheets. The e-mail should confirm that the response has been submitted by a duly authorised director or senior officer of the Proposer.

The subject of the e-mail must be: **Response to RFP/2024/CJS2_156c**

You will receive an automated receipt confirmation upon submission of your response. If you do not receive one, you should contact procurement@ecmwf.int immediately. You must NOT send or copy your response to the contact email address in 2.4 above.

Please note that ECMWF reserves the right to contact Proposers during the evaluation process in order to clarify points in their response, therefore the contact point should be monitored during this period.

2.7 Timeliness of response

ECMWF will not consider any late or partial responses to this RFP nor will it consider requests for extension of the time or date fixed for the submission of proposals. It may, however, at its own absolute discretion, extend the time or date fixed for submission and in such an event ECMWF will notify all Proposers who have provided ECMWF with an e-mail address for communication of additional information.

Technical failure, including of a computer, browser, e-mail system or internet connection, is not a valid reason for late or failed submission of a response, unless as a result of a failure of the ECMWF's IT systems, and in the case that there was no reasonable course of action the Proposer could have taken to submit the response on time. It is important that you do not leave the submission of your response to the last minute.

2.8 Evaluation method and selection criteria

ECMWF will evaluate the Proposal based on the Proposer's response to ECMWF's requirements (Annex 1 of this RFP) and the Proposer's compliance with ECMWF's instructions in this document. The Proposal will be evaluated against the following evaluation criteria.

Evaluation criteria	Default Weighting
Proposer's Financial & Legal organisation	5%
Price	15%
Track record	15%
Quality of Resources Deployed	15%
Technical Solution Proposed	30%
Management & Implementation	20%

2.9 Warnings/disclaimers

Nothing contained in this RFP or any other communication made between the respondent and ECMWF or its representatives shall constitute an agreement, contract or representation between ECMWF and any other party (except for a formal award of contract made in writing by ECMWF). Receipt by a respondent of this RFP does not imply the existence of a contract or commitment by or with ECMWF for any purpose.

ECMWF reserves the right to change any aspect of, or cease, the RFP at any time.

While ECMWF has taken all reasonable steps to ensure, as at the date of this document, that the facts which are contained in this RFP are true and accurate in all material respects, ECMWF does not make any representation or warranty as to the accuracy or completeness or otherwise of this RFP, or the reasonableness of any assumptions on which this document may be based. ECMWF accepts no liability to respondents whatsoever and however arising and whether resulting from the use of this RFP, or any omissions from or deficiencies in this document.

ECMWF may use the information included in a proposal for any reasonable purpose connected with this RFP.

3 SCOPE OF SERVICE REQUIREMENTS

See Annex 1 of this RFP.

4 REQUIRED INFORMATION

General guidelines for the Proposal are described in the Template for Proposer, attached as a separate file as part of Annex 2. General requirements to prepare the response for this particular RFP are described in the next sub-sections.

4.1 Forms to complete

The Proposer should provide, together with their response, the Legal Entity Form, Financial Identification Form, EU Restrictive Measures Form and the Declaration Form for Economic and Financial Capacity, as per provided templates, and complete and return the RFP Questionnaire.

4.2 Response to the Specification of Requirements

The Specification of Requirements can be found at Annex 1. The work should be divided into separate Work Packages (WPs). The number, content and structure of work packages is left to the discretion of the Proposer.

The response shall provide a description of how the Proposer proposes to address and implement each of the Work Packages, tasks and requirements of the Specification of Requirements in Annex 1. The response should include as a minimum the following information:

- A description of your understanding of the requirements
- A description of the technical solution
- A description of the work required
- A description of required resources
- List of deliverables, description of the deliverables and due dates for each WP
- Schedule details, start and due dates for each task and subtask, inputs required and outputs
- Details of the resources required to carry out the activities, workload assessment and associated manpower

4.3 Commercial arrangements

The Proposer should provide prices in the format of the Pricing Tables attached to this RFP as part of Annex 2. Prices shall be firm and fixed (FFP) and quoted in Euros (€) net of taxes and VAT.

The response shall include a proposed payment plan in the dedicated Tab of Annex 2 Pricing Tables and Deliverables template. Payments shall be linked to the completion of Work Package milestones and to the acceptance of the associated deliverables by ECMWF. In cases where a payment is proposed but no contractual deliverable is foreseen within the project schedule, the Proposer shall indicate by what means

the milestone achievement will be assessed by ECMWF (i.e., interim datasets delivery, progress review, validation reports, etc.).

Moreover, the response shall address how the proposed activities ensure best value for money for the delivery of the Service.

The contract price must not exceed 200,000.00 EUR for a duration not exceeding 3 years.

4.4 Terms and Conditions

The underlying Terms and Conditions applicable to any contract resulting from this RFP are at Annex 3. The Proposer should confirm that it accepts these terms and conditions or provide a list of reservations in its response. ECMWF reserves the right to negotiate the terms and conditions for any contract. The proposal submitted by the Proposer, clarified if necessary, will be part of the contract.

4.5 Additional matters

The Proposer should set out any additional information or other relevant matters which it thinks have not been adequately addressed in the RFP and/or merit further consideration in its response.

4.6 Diversity and inclusion

In the event that multiple bidders present equally qualified proposals (discrepancy lower than 1%), ECMWF will take into consideration the diversity and gender balance of each bidder's organisation as a tiebreaker when making the final decision. We recognise that diversity and collaborative environment are essential for advancing scientific discovery and innovation, and we are dedicated to creating a culture that encourages and supports the contributions of individuals from all backgrounds. As part of this commitment, we encourage bids from companies who share our values and demonstrate a commitment to diversity and inclusion in their own organisations. We believe that working with suppliers who support our efforts to create a more inclusive and diverse community is key to achieving our goals and driving progress forward in all our areas of activities. Therefore, the Centre encourages all potential bidders to take these values into consideration when submitting proposals.

ANNEX 1 SPECIFICATION OF REQUIREMENTS

5 The training programme of C3S

As an operational service, C3S offers training and knowledge transfer in the use of the data and tools that it offers. The aim of the C3S training programme is to provide guidance to existing and new users, to equip them with the necessary skills needed to make the most of all products and resources offered by C3S, and to encourage use of best practices. The training programme caters to a wide variety of user types and application domains as identified by targeted user segmentation activities. It also maintains flexibility to rapidly respond to evolving needs for training and knowledge transfer, and to take advantage of opportunities for collaboration as they may arise.

C3S training activities have included training courses, webinars, the development of Jupyter notebook tutorials and e-learning resources, and contribution to Massive Open Online Courses (MOOCs). These activities have often taken place in collaboration with other entities. All training resources and activities can be found in the C3S training landing page: <https://climate.copernicus.eu/user-learning-services>.

C3S intends to enhance its training portfolio by offering a number of mini-MOOCs, which is the subject of this RFP. The aim is to reach out to a wider and more general audience and increase the awareness and impact of C3S. This follows the recent first and very successful experience of ECMWF's MOOC on Machine Learning for Weather and Climate (<https://learning.ecmwf.int/course/index.php?categoryid=1>), which achieved a very high and positive impact.

6 Technical requirements

6.1 Summary of requirements

The successful tenderer shall propose three or more mini-MOOCs, including topics and schedules. These shall be discussed and agreed with ECMWF during contract negotiation and implementation phases. Following ECMWF approval, the successful tenderer shall proceed with the design and development of the mini-MOOCs, in close collaboration with ECMWF. The successful tenderer shall manage all aspects related to the live run of these mini-MOOCs over the next few years of Copernicus phase 2.0, which is due to run until 2027, and shall report to ECMWF comprehensive evaluation and feedback of each mini-MOOC following each live run.

The scope of 'mini-MOOCs' differs from that of traditional 'MOOCs'. Each mini-MOOC is more targeted and the live runs are of a shorter duration.

The mini-MOOCs shall not only present and promote the products, tools and services of C3S, but shall also clearly illustrate to broad target audience the role of C3S in the climate data value chain, how C3S collaborates with partner organisations and users, and the overall societal benefit demonstrated through use cases.

The mini-MOOCs shall be targeted to a broad community to achieve the highest possible impact. This may include downstream climate data user communities in different sectors and with various roles ranging from scientific and technical to communication and policy-making. The mini-MOOCs should therefore not be too technical and avoid specific scientific terminology.

The successful tenderer shall manage all aspects related to the creation of materials, which shall remain the property of C3S and be available through the C3S website after the end of the live runs and after the end of the contract. The successful tenderer shall also manage all aspects related to the live runs, including registrations, use of platforms and tools, mini-MOOC moderation and interaction with participants, and all other relevant activities. Providing the input on content and a graphical design for promotion of the mini-

MOOCs prior to the live runs shall be the responsibility of the successful tenderer. ECMWF will use this input to promote the mini-MOOCs via its Copernicus communication channels. The successful tenderer shall collect participant feedback and evaluation following the live runs.

6.2 Aim and learning objectives of the mini-MOOCs

The overall aim of the mini-MOOCs is to maximise the impact of C3S through knowledge transfer and skills development to help as wide as possible a community of prospective users and stakeholders to appreciate what C3S offers and how it contributes to societal benefit. This shall be achieved through didactical, engaging and attractive learning materials.

The mini-MOOCs shall promote and reduce barriers in the uptake and use of the products, tools and services that C3S offers. These include the various climate data products available in the Climate Data Store (CDS) comprising observations, reanalysis datasets, seasonal forecasts, climate projections, climate indices and other products. It also includes the tools (such as earthkit), the interactive applications, graphical products, climate intelligence outputs such as the monthly bulletins and European State of the Climate (ESOTC) reports, and all other C3S service elements.

Active involvement from selected C3S users and external stakeholders shall be sought and links with existing ECMWF Contractors shall be established, facilitated by ECMWF, for information on user testimonials.

The mini-MOOCs shall also draw attention to external reports, tools, activities and events in which C3S contributes, such as IPCC atlas, reports such as BAMS state of the climate, IPCC and WMO reports, participation in international conferences and events such as EGU, EMS, UNFCCC COPs, and others.

A key aim of the mini-MOOCs is to clearly illustrate the “big picture” of where C3S fits in the overall climate data value chain, the importance of quality assured and operational climate data and the high societal impact it achieves. The mini-MOOCs shall shed light on the role of partner organisations, downstream services, end users and other key stakeholders and collaborations that are essential in the C3S operational workflow. Some of these include the following:

- WMO and other UN organisations, EC-DGs and other European, regional and national entities acting as core C3S users and partners. Examples include EEA, EIB, regional organisations such as UfM, sectoral entities such as ENTSO-E and others.
- C3S contractors essential for operating the various service elements.
- Private businesses and entities delivering added value services further down the climate data value chain.
- Partner entities such as ESA & EUMETSAT, who play a key role for example in R&D of Essential Climate Variables (ECVs)
- Researchers, policy-makers, journalists, citizens and other end users of C3S for whom a measurable impact can be demonstrated through case studies, statistics and other evidence.

6.3 Target audience

To achieve a high impact and high participation rate, the mini-MOOCs shall be addressed to a broad community. Nonetheless, to avoid a high drop-out rate, there should still be a clear focus and a clearly identified target audience. The successful tenderer may propose a sufficiently wide target audience for each mini-MOOC, to be agreed with C3S, ranging from people active in scientific and technical to communication and policy-making fields. The mini-MOOCs should not be too technical and avoid specific scientific terminology and be understandable at least to undergraduate level (BSc or BA) participants or equivalent and with a variety of academic backgrounds relevant to climate change, including physics, earth and environmental sciences and engineering, economics and social sciences.

The geographic coverage of the target audience shall be as wide as possible, ideally not limited to Europe. Gender balance and diversity is important to ECMWF, and this shall also be a consideration in the selected speakers and use case examples covered in the mini-MOOCs.

6.4 Mini-MOOC topics and titles

Tenderers shall propose in their bid suggestions on topics and titles of three or more mini-MOOCs focused on increasing the awareness and impact of selected aspects of C3S data and services.

Topics shall link to the policy context in Europe, and beyond, for which C3S presents a particular impact in serving user needs as an operational climate change service. This may be focused on specific C3S datasets, applications and services or a combination.

The titles of each mini-MOOC shall be chosen to capture the interest of their intended target audiences and shall accurately reflect the topics covered. Acronyms shall be avoided wherever possible.

At the start of the contract, the successful tenderer shall organise a workshop with the C3S management team to refine and add different suggestions. This shall include an outline on the expected audiences, impacts and efforts. Upon this workshop, ECMWF shall decide on the mini-MOOC topics for implementation. Throughout the contract, topics for the upcoming mini-MOOCs may be further refined.

6.5 Programme, schedule and format

Tenderers shall propose a draft, high level programme for each mini-MOOC. The Successful tenderer shall be expected to further develop more detailed programmes in close collaboration with C3S.

The programme of the mini-MOOCs shall ideally be distributed in time and modular, with an emphasis on self-paced study. For each mini-MOOC, tenderers shall state how many hours of study shall be included overall and in each week.

For scalability, peer learning techniques shall be encouraged, whilst maintaining sufficient interaction between learners and trainers.

The first mini-MOOC shall be launched no later than end of 2024 and the last mini-MOOC shall be launched no later than end of 2026.

6.6 Learning materials

Tenderers shall state in their bids the learning materials that shall be included in each mini-MOOC. These may comprise for example short and engaging videos (possibly interactive videos), commuter friendly podcasts, e-learning modules with embedded quizzes and potentially interactive apps, and other materials. The materials shall be engaging and attractive and learner retention shall be stimulated through approaches such as gamification.

Wherever appropriate, use can be made of existing learning materials developed for C3S. These can be found here: <https://climate.copernicus.eu/user-learning-services>. The successful tenderer shall collaborate with parallel C3S training activities to avoid overlap and ensure synergies in the development of learning resources.

All material developed for the mini-MOOCs shall be freely and indefinitely available on the ECMWF website.

6.7 Contributors

Tenderers shall propose speakers, trainers, forum moderators and authors of learning materials (collectively referred to as “contributors”) for each mini-MOOC. The final selection of all contributors shall be made in close collaboration with C3S.

Contributors shall reflect as broadly as possible the wide range of C3S partners, users and other stakeholders as described in section 6.2.

Tenderers shall endeavour to achieve good gender balance amongst contributors. Diversity in geographic country of origin, ethnicity, age and other characteristics is also encouraged of contributors.

Tenderers shall propose a budget for consultancy support from contributors.

The selected tenderer shall overlook the management of the tasks of the selected contributors and ensure that their inputs are provided in line with the proposed implementation plan.

6.8 Platform

ECMWF already possesses a Moodle based Learning Management System (LMS) (<https://learning.ecmwf.int/>), which has been used to run a MOOC on Machine Learning in Weather and Climate. The intention would be for all learning material associated with the mini-MOOCs to eventually be available via this LMS. However, tenderers are free to propose alternate solutions for platforms to run the mini-MOOCs if they deem appropriate, provided the material can eventually be transferred onto the ECMWF Moodle based LMS. The platform shall include a forum and tools to facilitate interaction between trainers and learners, and between learners.

6.9 Communication and publicity

Tenderers shall propose a promotion plan for each mini-MOOC. The successful tenderer shall provide all relevant inputs to ECMWF in order to be able to promote the mini-MOOC through various channels and events.

The successful tenderer shall produce a video trailer and shall provide inputs to social media promotion, articles and other forms of promotion during the term of the contract, to support ECMWF in publicising and promoting the mini-MOOCs through its websites, social media and other channels.

All communication activity must be agreed with the ECMWF Copernicus Communication team in advance. This includes, but not exhaustively, communication planning, branding and visual style, media outreach, website and social media activity, externally facing written and graphic content and events. Agreed activity would also need to be evaluated and reported on once complete so that success measures and KPIs could be provided to the European Commission. (cf. Clause 2.4.4 of the Agreement for Copernicus Services).

6.10 Certification and grading

Tenderers shall propose an approach to certification and grading. Certificates may be awarded digitally and automatically upon completing each mini-MOOC, and possibly based upon successful completion of the various quizzes or tests.

The possibility of offering ECTS (European Credit Transfer and Accumulation System) credits shall be explored, but is not a strong requirement.

6.11 Evaluation and feedback

An evaluation shall be carried out by the successful tenderer following each mini-MOOC and delivered to C3S in a report. For each mini-MOOC, the successful tenderer shall be expected to gather information on at least the following:

- Information on participants, such as country of origin, affiliation, sector, etc.
- Number of registrations, statistics on webinar attendance, completion of materials, overall course completions, retention rates, and other key statistics.
- Quantitative and qualitative feedback from participants.

6.12 Language

The language of the mini-MOOCs shall be English.

6.13 Costs to participants

Participation of learners in the mini-MOOCs shall be free of charge to learners.

6.14 Quality assurance and control

Tenderers shall propose a quality assurance mechanism to ensure high quality of the training, learning materials, speakers, platform and tools, and all aspects related to each mini-MOOC. The quality assurance mechanism shall ensure that the mini-MOOCs shall match or exceed benchmark standards, and achieve value for money. It shall include a clearly defined evaluation approach for both the target audience and for C3S.

The quality assurance mechanism of the successful tenderer shall include a peer-review by independent external experts in addition to a review by C3S. All project reports and other documents shall be produced in English. The quality of these shall also be equivalent to the standard of peer-reviewed publications. The timely delivery as well as final quality check of the deliverables shall be ensured by the prime contractor (in terms of content, use of ECMWF reporting templates for deliverables and reports (Microsoft Word), format, deliverable numbering and naming, typos...); all reports in this project shall be in English. Unless otherwise specified the specific contract Deliverables shall be made available to ECMWF in electronic format.

6.15 User support

If end users are involved and user support is needed, the successful tenderer will need to agree with the ECMWF Data Support team in the area of how support will be provided. ECMWF has established procedures for support management including support activities provided by contractors. User support KPIs are monitored by ECMWF and are reported to the European Commission on a regular basis.

6.16 Contract management, reporting and communication with ECMWF

Cost allocated to managing this contract shall be limited to 7-10% of the total contract value. Tenderers are expected to carry-out internal quality control, allocate appropriate resources for planning and put in place appropriate mitigation actions on potential risks.

The successful tenderer shall have regular meetings with ECMWF and at least should foresee a kick-off meeting, monthly review meetings, and a meeting shortly after the end of each mini-MOOC with an evaluation. In case of problems, more regular meetings should be foreseen.

For more information, please see section 6.19.3 of this document, which includes all management and coordination aspects that shall be described in the technical proposal.

6.17 Key Performance Indicators

The service shall be delivered in iterative cycles. At the end of each iteration, a service readiness review shall take place that will include assessment of a set of Key Performance Indicators (KPIs). The KPIs shall be designed to quantify different aspects of quality of service against the requirements described in this document.

As part of their bid, Tenderers shall specify a proposed set of KPIs to ensure appropriate service delivery. The proposed KPIs shall be SMART (specific, measurable, actionable, realistic and time bound). These may include a minimum number of participants for each mini-MOOC, a minimum number of course completions, retention rates, user support, user satisfaction, etc. These KPIs may be refined, in agreement with C3S, during the lifetime of the contract. Finally, the Contractor shall also report to ECMWF on these KPIs as part of the Quarterly and Annual Implementation Reports.

6.18 Budget

The maximum budget for the work described in this Request for Proposal is 200,000.00 Euros. This amount shall not be exceeded in the proposal of the tenderer.

6.19 Work Packages

A high level description of work packages (WP) with associated deliverables and milestones is described here. These include WP related to all mini-MOOCs and WP connected with individual mini-MOOCs. WP associated with individual mini-MOOCs are prefixed with 'X', which refers to the mini-MOOC number.

6.19.1 Work Package 1 (WP1): Programme Definition

WP1 tasks include gathering requirements, organising a workshop and defining the number of mini-MOOCs, together with their topics, schedules, expected audiences and impacts. These shall all be discussed with ECMWF during a workshop that the successful tenderer shall organise at the beginning of the contract with the C3S management team.

During the workshop, ECMWF shall decide on the mini-MOOC topics for implementation. Throughout the contract, topics for the upcoming mini-MOOCs may be further refined.

WP1 Deliverables			
Deliverable #	Nature	Title	Due
D156c.1.1.1	Agenda	Mini-MOOCs programme workshop agenda	Month 1
D156c.1.1.2	Minutes	Mini-MOOCs programme workshop report. This shall be submitted after the workshop and shall include minutes of all discussions.	Month 3 at milestone M156c.1.1.1
D156c.1.1.3	Report	Proposal for mini-MOOCs. This report shall propose the topics, schedules and expected audiences of the mini-MOOCs reflecting accurately all that was agreed during the mini-MOOC programme workshop.	Month 3 at milestone M156c.1.1.1

WP1 Milestones			
Milestone #	Title	Means of verification	Due
M156c.1.1.1	Requirements definition	D156c.1.1.2 and D156c.1.1.3	Month 3

6.19.2 Work Package X (WPX): Development, Deployment and Evaluation of Mini-MOOC X

Each mini-MOOC will have a corresponding WPX. Tasks for this work package include the following:

- Developing the programme for the mini-MOOC in close collaboration with C3S, presenting proposed programme to ECMWF in a workshop for approval before proceeding.
- Developing the content of the mini-MOOC in close collaboration with C3S.
- Managing and interacting with experts and all contributors to the MOOC.

- Managing registrations and queries from participants.
- Developing promotional material in close collaboration with ECMWF Copernicus Communications.
- Developing the mini-MOOC platform and all relevant tools.
- Deploying the mini-MOOC, moderating the forum and any live webinars, interacting with participants and speakers.
- Collecting evaluation and feedback following the live run and submitting these in a report to ECMWF.

WPX Deliverables for <u>each</u> mini MOOC			
Deliverable #	Nature	Title	Due
D156c.X.1.1	Programme	Mini-MOOC detailed programme	At milestone M156c.X.1.1
D156c.X.1.2	Content	Deliverables related to mini-MOOC content	At milestone M156c.X.1.2
D156c.X.1.3	Tools	Deliverables related to the development or configuration of any tools (, such as mini-MOOC platform, online applications, games, quizzes, etc.)	At milestone M156c.X.1.2
D156c.X.1.4	Promotional material	Deliverables related to promotional materials (including mini-MOOC video trailer, social media graphics, web stories and others).	At milestone M156c.X.1.2
D156c.X.1.5	Evaluation report	Final report including statistics (e.g. number of registrations, participants, completion rate, etc.) and participant feedback (see section 6.11).	At milestone M156c.X.1.5

WPX Milestones for <u>each</u> mini MOOC			
Milestone #	Title	Means of verification	Due
M156c.X.1.1	Programme definition	D156c.X.1.1	To be proposed by the bidders and agreed during contract negotiation
M156c.X.1.2	Mini-MOOC readiness review	D156c.X.1.2, D156c.X.1.3, D156c.X.1.4	To be proposed by the bidders and agreed during contract negotiation
M156c.X.1.3	Mini-MOOC launch	D156c.X.1.2, D156c.X.1.3, D156c.X.1.4	To be proposed by the bidders and agreed during contract negotiation
M156c.X.1.4	Mini-MOOC end		To be proposed by the bidders and agreed during contract negotiation
M156c.X.1.5	Feedback and evaluation	D156c.X.1.5	To be proposed by the bidders and agreed during contract negotiation

6.19.3 Work Package 0 (WPO): Management and Coordination

The following management and coordination aspects shall be described in the technical proposal:

- **Meetings:**
 - Kick-off meeting
 - Regular progress review meetings (by videoconference).
 - ECMWF organises annual C3S General Assembly. The Contractor is expected to attend this meeting and contribute to discussions related to the topic of this RFP.
- **Quality assurance and control:** cf. section 6.14 of this document
- **Communication management** cf. section 6.9 of this document
- **Set of Key Performance Indicators (KPIs):** cf. section 6.17 of this document
- **Risk Management:** The proposal shall include a risk register that describes identified risks for each work package, along with a mitigation strategy for each of the identified risks. This mitigation strategy shall be composed of both preventive and corrective measures. The risk register shall be updated regularly by the Contractor, and any update (related to new risks, likelihood or impact) shall be reported during the progress review meeting, as well as part of the quarterly and annual implementation reports.
- **Resources planning** and tracking using the appropriate tools.
- **Subcontractor management**, including conflict resolution, e.g. the prime contractor is responsible for settling disagreements, although advice/approval from ECMWF may be sought on the subject. A list of subcontractors describing their contribution and key personnel shall be provided, as well as backup names for all key positions in the contract. Tenderers shall describe how the Agreement; in particular Clause 2.8 on Sub-contracting has been flowed down to all their subcontractors.
- **Management of personal data** and how this meets the requirements of Clause 2.7 on Personal Data Protection and Annex 5 of the Agreement.

The required deliverables under WPO include the implementation reports to be delivered on quarterly and annual basis, an annual implementation plan for the coming year, as well as the final report to be delivered at the end of the contract. In particular:

- Annual implementation plans include the objectives and highlights expected in the coming year, overview of planned technical activities, overview of communication and outreach activities, as well as overview of management activities, such as risk management approach, indicative resource planning, quality control activities, etc. Deliverables to be submitted and milestones to be reached shall also be included.
- The Quarterly Implementation Reports shall describe the progress made in the performance of the project/services, covering programmatic, technical, and contractual aspects, such as Key Performance Indicators, the status of the risk register, statistics on the implementation actions, listing of deliverables and milestones, potential deviations from the foreseen schedules and/or budgeted limits, as well as conclusions and lessons learnt. In addition, the Quarterly Implementation Reports prepared by the Contractor for the second quarter for each year shall include all financial information for the previous two quarters of the year.
- Annual implementation reports shall provide a summary description of implementation of the services/project and the use of the funds, covering technical, schedule and financial aspects of the previous year. This should include in particular a summary dashboard of all Key Performance Indicators, a table listing the status of all Milestones, summary of risk controls carried out in relation to Sub-contractors, an updated version of the risk register ranking all identified risks, as well as lessons learnt.
- Final implementation report shall contain comprehensive information on the implementation of the project/service throughout its term, including description of results generated and achievements. It shall also contain all the financial information of the project/services, including ex-post audits and recoveries.

For all the above-mentioned deliverables, the Contractor shall use specific templates, which will be provided by ECMWF in due time ahead of the delivery due date.

WPO Deliverables		
<i>Deliverable#</i>	<i>Title</i>	<i>Due</i>
D156c.0.1.1.QX	Quarterly Report QQ YYYY; QQ YYYY being the previous quarter	Quarterly on 15/04, 15/07 and 15/10
D156c.0.1.2.YYYY	Annual Report YYYY [Part 1]; YYYY being the Year n-1 This includes: 1) Quarterly implementation Report for the previous quarter Q4 YYYY 2) Preliminary financial information form for the previous year	Annually on 15/01
D156c.0.1.3.YYYY	Annual Report YYYY [Part 2]; YYYY being the Year n-1	Annually on 28/02
D156c.0.1.4	Final implementation report	End date of the contract
D156c.0.1.5.YYYY	Annual Implementation Plan YYYY; YYYY being the Year n+1	Annually on 30/09
D156c.0.1.6	Copy of prime contractor's general financial statements and audit report YYYY; YYYY being the Year n-1 (no price shall be associated to this deliverable)	Annually

WPO Milestones			
<i>Milestone#</i>	<i>Title</i>	<i>Means of verification</i>	<i>Due</i>
M156c.0.1.1	Kick off meeting	Minutes of meeting	Month 1
M156c.0.1.2.MX	Progress Review meeting with ECMWF	Minutes of meeting	Monthly
M156c.0.2.1	Updated KPIs (list, targets...) after review with ECMWF	Technical note	One year after start of contract

ANNEX 2 PRICING TABLES AND TEMPLATE FOR PROPOSER

See the following separate documents attached to this RFP:

- “Annex 2 – RFP Questionnaire.xlsx”
- “Annex 2 – Forms to complete.zip”
- “Annex 2 – Template for Proposer.docx”;
- “Annex 2 – Template Pricing Tables and Deliverables.xlsx”.

The Proposer is requested to complete these documents and submit them as part of their response.

ANNEX 3 TERMS AND CONDITIONS OF THE AGREEMENT

See separate document attached to this RFP: "Annex 3 - Agreement for Copernicus Services.pdf".

The Proposer must review and accept the terms and conditions of the Agreement and, if there are any reservations, these must be identified as part of their response.