2023 Call for Projects

SCO France / European Union nations / ESA

Sponsored by SCO France and its European partners

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CLOSING DATE

15 NOVEMBER 2022

RESULTS ANNOUNCED

MARCH 2023

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CONTEXT FOR SCO EUROPE 2023 CALL FOR PROJECTS

The Space for Climate Observatory (SCO) is an international initiative that grew out of the One Planet Summit, and was officially launched by President Emmanuel Macron in June 2019. The SCO is open to all public and private entities working in the field of Earth observation, and its members are space agencies from all over the world and regional and international organizations (ESA, UNDP, UNEP, UNOOSA). It seeks to develop projects aimed at helping local decision-makers and the wider public to better understand, monitor and cope with climate change. Projects monitor the local impacts of climate change, leveraging satellite and in-situ data combined with local socio-economic information. The SCO is aligned with the Paris Agreement on climate, the UN Agenda 2030 for Sustainable Development and the UN Framework Convention on Climate Change (UNFCCC), and with the strategies established by the Global Climate Observing System (GCOS). It is also a Participating Organization of the Group on Earth Observations (GEO) and works closely with the European Centre for Medium-range Weather Forecasts (ECMWF) and Copernicus services.

SCO France[1] is the French offshoot of this international initiative. It is a national network designed to federate the scientific community, government bodies and firms in pursuit of the SCO's goals. It seeks in particular to support projects matching the SCO's criteria, selected through calls for projects like this one and led by French stakeholders within dedicated consortia.

The SCO's prime goal is to offer decision-support tools for observing, assessing and anticipating the impacts of climate change. Such tools are built around historical data analysis, impact scenarios, projections on how territories are likely to evolve and how populations will be affected to help decision-makers meet the challenge of devising adaptation strategies. Based on the

[1] An inter-agency committee of 23 public institutions: ADEME, AFD, BRGM, CEA, CEREMA, CIRAD, CNES, CNRS-INSU, CSTB, IDDRI, IFREMER, IGN, INERIS, INRAe, INRIA, IRD, MESRI, METEO-FRANCE, MTE, OFB, ONERA, SHOM and ONF

principle of pooling existing data generated by international programmes (Copernicus, NOAA, Eumetsat, etc.) and national climate services (DRIAS in France, etc.), the SCO seeks to combine these satellite data with local socio-economic data—on populations, urban development, protected areas, agriculture, linear and local infrastructures, etc.—to give decision-makers key data enabling precise analysis of their territory's vulnerability to climate change. It is the first initiative of its kind to afford tangible assistance to territories by encouraging uptake of satellite data.

The second goal is to adapt and transpose methodologies and tools to other geographical regions around the world to enable an exhaustive and quantified assessment of the impacts of climate change, and thus meet the adaptation commitments of the Paris Agreement in coordinated fashion at international level. This could be achieved notably through common metrics in sectors where this makes sense, through tools that can be scaled nationally and locally, and leveraging digital innovations.

Lastly, a longer-term objective is to give policymakers in all nations the same basic toolbox and to build internationally recognized models able to provide an objective assessment at the relevant scales of the impact of public policies tackling climate change.

The SCO France Charter can be viewed here: http://www.spaceclimateobservatory.org/fr/sco-france.

This call for projects is led by SCO France and its European partners. It is open to all European consortia.

WHAT IS AN SCO PROJECT?

To fulfil its role as an international initiative showcasing applications using satellite data for climate science, SCO's members require selected projects to meet certain criteria.

There are six mandatory criteria.

Projects must:

1. Be focused on an issue that expressly addresses territories' needs with respect to mitigating or adapting to climate change
2. Provide an online operational tool at the end of the project
3. Make the best use of available satellite, environmental, climate and socio-economic data, at the right resolution for the issue under study
4. Be underpinned by research, data production and data distribution infrastructures (Data Terra, Geoportail, the French national biodiversity data centre (PNDB), Copernicus, DIAS, information systems and existing GIS platforms), as well as operational services (Copernicus, etc.)
5. Enable tools to be duplicated and scaled to different territories, be they in France, Europe or the rest of the world
6. Satisfy the SCO's community return criteria

There are also six optional criteria that projects should endeavour to satisfy wherever possible:

7. Federate a consortium of scientists, companies and public authorities able to generate new knowledge, innovative and effective core methodologies, and practical decision-support tools
8. Encourage a methodology founded on the state of the art, including the latest developments in artificial intelligence and associated computing infrastructures
9. Encourage uptake of open source data and tools, and work towards an open end-product
10. Propose a funding mode that brings the end-user on board in the early phase of the project and defines the private sector's involvement in future developments
11. Include work on developing the associated business model
12. Include international cooperation serving nations receiving development aid

SCO ACCREDITATION

Applications matching the SCO's goals and criteria are accredited as an SCO Project, giving them the benefit of the network's national and international visibility. This label awarded by the SCO France/Europe accreditation committee is recognized by all SCO members in all countries.

The SCO label affords preferred access to funding obtained through institutional agreements between the SCO and international and European agencies, as well as to budgets allocated to the SCO by certain institutions sitting on the SCO France inter-organization committee.

Accreditation enables consortia to get support from SCO France and European SCO offshoots, spotlighting them at national and international events, and to benefit from scaling up of technical solutions they have implemented locally.

PROJECT FUNDING

Alongside the accreditation process, French and European funding committees overseen by funding bodies give SCO-accredited projects the opportunity to secure funding agreements.

Four organizations[2] have funded SCO projects directly since its inception in 2019, with other partners making indirect contributions.

THEMATIC AND GEOGRAPHIC SCOPE

All themes covering the impacts of climate change and meeting the criteria for an SCO project are eligible. Projects that have already obtained funding are also eligible. There are no geographic restrictions on project eligibility.

[2] The French space agency CNES, the French biodiversity office OFB, Copernicus Climate Change Services, and the French Ministry for Europe and Foreign Affairs

WHO CAN SUBMIT AN SCO PROJECT?

An SCO project must seek to federate several families of stakeholders:

i. The **scientific community**, whose research work fuels real-world solutions founded on analysis and modelling of available data, and production of algorithms needed to develop innovative project solutions;
ii. **National and local government**, and local and regional authorities, who will be expected to manage adaptation solutions at local level;
iii. **Engineering stakeholders** offering technical expertise for territories
iv. **Firms, consulting engineers and non-profit associations** with the capabilities to lead an industrial and operational solution connecting scientists, data and populations.

Any entity belonging to these families of stakeholders can therefore submit projects and lead them. As the partnership approach is central to how the SCO works, **projects led by a single entity are not eligible for accreditation**.

The 2023 call for projects is open to consortia from European nations.

SELECTION PROCESS

Projects are selected in two stages:

1. Using the standardized project file provided with this call, projects must be submitted to the **accreditation committee**, which will convene after the closing date for submissions. The committee will decide which projects merit accreditation.
2. The consortia selected will then have **two months to finalize their proposal**, respond to any comments from the accreditation committee and ensure compliance with accreditation requirements.
   At the end of this two-month period, if all requirements have been fulfilled, the project will be awarded accreditation.

EVALUATION CRITERIA AND COMMUNITY RETURNS

Only projects meeting the criteria detailed above will be eligible for accreditation.

The accreditation committee will assess the **project's strategic environment**, notably with respect to the following points (this list is not exhaustive):

- How it connects to other projects
- Its use of computing/data infrastructures
- Involvement of end-users and territorial planners
- Funding opportunities

It will also look at the **project's scientific and technical environment**:

- Presence of research laboratories in the consortium

- Proofs of concept or first developments
- Technical maturity
- Initial technology readiness level (TRL) of 5 to 6, and final TRL of 6 to 7 or better

Accredited projects will join the SCO community and work to develop it for the benefit of all. They will define their contribution in their accreditation submission, and this point may be expanded upon at annual follow-up meetings as business models for the project's proposed solutions are refined.

This return should consist, wherever possible, of a set of data, algorithms or technology building blocks ready to be reused in another context. Exceptions to this principle of openness must be limited, substantiated and seek other forms of community return, e.g. international cooperation and capacity building, provision of expertise or technology intelligence. Projects may discuss with SCO France or European SCO members to help them define what form such returns might take.

Project consortia undertake to respond positively to requests from the SCO to help promote and showcase the SCO, contribute to lessons learned and provide testimonials.

SCHEDULE

- **1 September 2022:** 2023 call for projects opens
- **15 November 2022:** 2023 call for projects closes
- **March 2023:** SCO-accredited projects for 2023 announced

CONTACTS FOR PROJECT FILE SUBMISSIONS

Project files must be sent to sco.fr@capgemini.com. All questions regarding the call for projects should be sent to Frédéric Bretar (Frederic.Bretar@cnes.fr) and sco.fr@capgemini.com.