

Access to SAOCOM through CONAE as ESA's Third Party mission

Terms of Applicability

Date: 03 February 2023

Rev. 1 Iss. 0

Document type: Technical Note

1 General

Within the Third Party Mission scheme, ESA provides to Earth Observation users data from non-ESA missions, so-called Third Party Missions, to complement the data from ESA EO missions and to support and build up the scientific user community for those data in Europe.

A Third Party Mission (TPM) is a mission

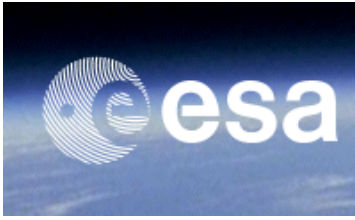
- that is operated by any legal body, governmental or non-governmental entity other than ESA or
- for which ESA assumes some formal responsibility towards the mission operator or to which ESA contributes financially, usually through sharing of Ground Segment facilities or operations cost or
- for which ESA assumes a data distribution responsibility, usually towards European Users, but sometimes towards a worldwide user community for a subset of the geographic coverage of this mission.

The implementation of a new Third Party Mission follows a Selection Procedure approved by the Program Board on Earth Observation in 2004. This procedure evaluates a yearly list of Third Party Candidate Missions according to a set of criteria (e.g. European User benefits and excellence, accessibility etc.). In order to gain access to the TPM data, ESA establishes co-operation schemes with the owners/operators of the Third Party Missions. In these co-operation schemes, one option foresees to provide ground segment support to the TPM owner/operator in exchange for access to the TPM data (e.g., share acquisition or archiving facilities or support respective operations).

SAOCOM (Satélite Argentino de Observación COm Microondas), owned, developed and operated by CONAE (Comisión Nacional de Actividades Espaciales), is a Third Party Mission part of ESA Earthnet. From February 2023, a specific Announcement of Opportunity has been opened to provide access to SAOCOM data outside the existing ASI zone of exclusivity (see item 2 Data Accessibility below), under the Promotion of Utilization and Mission Applications and Science (hereinafter referred to as “PUMAS”) initiative.

Within the ESA CAT-1 TPM Scheme, CONAE offers the ESA CAT-1 community:

- On-demand access to SAOCOM Level-1 archive and new tasking products collected outside the ASI Area of Exclusivity (see definition in 3 below) for all ESA Member States (including Canada as ESA cooperating state and associated members) and joint teams from Users located in the territory of ESA Member States (including Canada as ESA cooperating state and associated members) and Argentinian users
- Tasking option for new acquisition orders, to be finalized at least 4 working days before sensing time
- Product delivery of new tasking data within a maximum of 4 working days after the data acquisition depending on orbital data available.
- Access to [SAOCOM CONAE catalogue](#) for SAOCOM-1 data browsing and discovery, for archive and new tasking data ordering submission and download from FTP server



2 Data Accessibility Conditions

The data available as part of the ESA TPM PUMAS Initiative are the following:

Mode	Polarisation	Swath width	Resolution
StripMap	Single	30 km - 67 km	10 m
	Dual	30 km - 67 km	10 m
	Quad	13 km - 30 km	10 m
TopSAR narrow	Single	TNA: > 174 km TNB: > 150 km	30 m
	Dual	TNA: > 174 km TNB: > 150 km	30 m
	Quad	TNA: > 109 km TNB: > 108 km	50 m
TopSAR wide	Single	> 352 km	50 m
	Dual	> 352 km	50 m
	Quad	> 217 km	100 m

Available processing level and geometric projections:

- Level L1A, Single Look Complex (SLC)
- Level L1B, Detected Image (DI)
- Level L1C, Ground Ellipsoid corrected (GEC)
- Level L1B, Ground Terrain Corrected (GTC)

Archive products

- Products are considered “archive data” if the data is already acquired and in the SAOCOM catalogue
- The full archive is accessible for data discovery on the [SAOCOM CONAE catalogue](https://registro.conae.gov.ar/registracion/view/). Free user registration is requested at <https://registro.conae.gov.ar/registracion/view/> to navigate the catalogue.
- Order submission and download: No ordering is requested to ask for archive products; the data is immediately available for download from the [SAOCOM CONAE catalogue](https://registro.conae.gov.ar/registracion/view/) through the Authorized User (PI). If data is offline or the user requests other production level, the order must be submitted and downloaded within 1 day after the request through the Authorized User (PI).
- Only the approved and allocated number of products can be downloaded

New tasking products

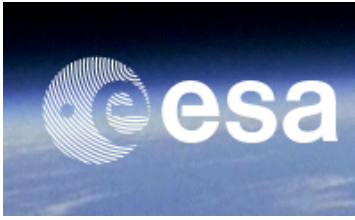
- New tasking products are data not yet available in the catalogue and whose acquisition needs to be planned
- Order submission: Order for new acquisition has to be submitted by the Authorized User (PI) through the [SAOCOM CONAE catalogue](https://registro.conae.gov.ar/registracion/view/) at least 4 days before the acquisition in order to allow the operation team to perform the proper feasibility analysis, finalize the order and plan the satellite. Once the order is confirmed and accepted, the user is notified via email
- Data delivery: Within 4 days from data acquisition the product is available in the SAOCOM catalogue

In compliance with CONAE’s commitments already in place with the Italian Space Agency (ASI) for the SIASGE cooperation, ASI has exclusive distribution rights for the SAOCOM 1 data over the “ASI Area of Exclusivity (ASI AoE)”: *in the range of longitude 10W-50E and in the range of latitude 30-80N (except for the fact that southern limit, from Gibraltar to Suez channel, is constituted by the territorial waters of the North African Countries)*. Therefore, data provided by CONAE under this program does not include the ASI AoE. For data in ASI AoE, please check the relevant [SAOCOM Europe data products](#) collection page.



3 Data users

- Users located in the territory of ESA Member States (including Canada as ESA cooperating state and associated members) Joint teams from Users located in the territory of ESA Member States (including Canada as ESA cooperating state and associated members) and Argentinian users working together on dedicated PUMAS research projects are eligible for the submission of a data request
- Access to SAOCOM data is subject to further CONAE control which might introduce limitations or even the rejection of the order: CONAE reserves the rights, in its sole discretion, to accept or reject the proposal (evaluation done on case-by-case basis)



4 Assignment and usage of quota

Project Proposal submission and evaluation

A user requesting access to SAOCOM-1 products in the frame of the TPM PUMAS Initiative shall submit a project proposal to ESA and CONAE. During the project submission, the user shall specify his need as

- Mode
 - Stripmap
 - TopSAR narrow
 - TopSAR wide
- Number of products (split in archive and new acquisition)
- Region of interest (ROI) (as kmz or shape file)
- Time of Interest
- Polarization (optional)
 - SP: Single Pol
 - DP: Dual Pol
 - QP: Quad Pol
- Geometric Projection (optional)
 - Single Look Complex (SLC) - Level 1A
 - Detected Image (DI) – Level 1B
 - Ground Ellipsoid Corrected (GEC) - Level 1C
 - Ground Terrain Corrected (GTC) – Level 1D

To quantify the number of products needed and the availability over the Region of Interest (ROI), the user is invited to check the [SAOCOM CONAE catalogue](#) (free user registration at <https://registro.conae.gov.ar/registracion/view/>). There the user must make a preliminary analysis of the number of products that will be required according to the project's Region of Interest and depending on the Mode that is requested. For this the user can enter the catalogue, draws the region, and adds the parameters of Mode and Submode. With this the user will see how many scenes are needed to cover the ROI and will also see whether more than one cycle will be needed to cover the ROI. The period of one year includes 23 cycles.

During the evaluation process, the scientific content of a submitted project proposal is evaluated by ESA and CONAE against the data requirements of the PI and a respective quota will be assigned to the project.

ESA/CONAE try to support as many high-quality and innovative projects as possible within the quota limit available, therefore only a limited number of products can be made available to each project.

The assigned quota is valid for one year after reception of the acceptance email. After the validity period of 1 year, ESA/CONAE reserve the right to remove the credits or to extend the end date. This validity period can be extended if requested and duly justified by the user.

Usage of the quota

PI is allowed to order the products within the limit of the quota assigned by ESA/CONAE. The Quota is counted in number of Products.

The ordered products can change with respect to the original proposal provided that the ROI is the same and the new data request is within the original assigned quota (e.g. if a Project has a number of archived data, the Project can exchange such amount for new acquisition data if the total quota is not exceeded).

The PI is responsible to consume the credits assigned to the project within the validity period of 1 year. After the validity period of 1 year, ESA/CONAE reserve the right to re absorb them.

Order submission and data delivery

The ordering is done directly through CONAE by following the procedure received by EOHelp@esa.int in the start-up email stating the formal acceptance of the project. Only the PI registered account will be authorized to download data and submit requests: the other members of the project can register in the catalogue and navigate it freely. All members of the team that will be working with the products will have to sign the License to Use.

If the Project is accepted by ESA/CONAE, the SAOCOM License (provided in the start-up email) has to be signed by the PI and all the CO-PIs, if any, for acceptance and sent back via email to CONAE (ao-pumas@conae.gov.ar) together with the



title of the project proposal, the project proposal ID number and the PI registered account used to access the [SAOCOM CONAE catalogue](#).

The PI account will be configured to allow the download of the images and the submission of orders for new: the permission shall be valid over the region of interest defined in the proposal, for the approved quota of products and for the duration of the project. The Co-PIs can register themselves in the catalogue and navigate it freely but are not entitled to download and order.

Archive data can be immediately downloaded from [SAOCOM CONAE catalogue](#) as soon as the account is configured. Once the order is submitted, the product is prepared and when it is ready to be downloaded the user is notified via email of the availability on the ftp server (credentials are provided as well).

Order for new tasking data has to be submitted on the [SAOCOM CONAE catalogue](#) at least 4 working days before the sensing; the product shall be available for download within 4 working days after the acquisition.

As soon as the new tasking data are available, the PI is notified by email that the products are available for download from the [SAOCOM CONAE catalogue](#) (the process is the same as for archive data). The retention time for data download is 15 days.

5 Reporting

All selected PI's will be required to provide a short progress report to eohelp@esa.int describing the status of the project and highlighting any issues which may interfere with the running of the project.

At the end of the project period, a final report shall be submitted summarizing the major findings of the project and its achievements versus the original objectives.

The report will be shared with CONAE. PIs may be invited to present their results at symposia or specialized workshops to be organized by ESA and CONAE.

The [template](#) for reporting can be downloaded from the [collection description page](#), in the RESOURCES section.