



CALL FOR EXPRESSIONS OF INTEREST

TECHNICAL / ECONOMIC VALUE ASSESSMENT OF THE SEAS-OI SPACE REMOTE SENSING STATION

DEADLINE FOR SUBMISSION OF APPLICATIONS: November 1st, 2018



EUROPEAN UNION



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Executive summary and key points

The SEAS-OI station allows the reception and processing of satellite signals captured within a 2500 km circle around the island of Reunion. The technical appendix of this document provides the main characteristics of the station's systems.

Operated since 2012, the station's owners are looking to invite new partners, private or public, to participate in the development and augmentation of this capacity, unique in the Indian ocean.

The objective of this Call for Expressions of Interest is to identify and to select expressions of interest from investor-partners, with proposals to boost the activity of the platform on all or part of the value chain, from the acquisition of satellite imagery to the regional or international production and distribution of new services and/or products.

The quality of the submitted proposals, their technical and economic feasibility and their value in spurring the economic development of the territory will be deciding factors for the selection of the investor-partner, following the selection process as described below.

The proposed approach of this Call for Expressions of Interest is an open approach. The type of partnership, economic models, scope of intervention in the value chain must all meet the minimum standards and prerequisites included in this document; however, these topics remain open to discussion between the issuer of this Cal for Expressions of Interest and the selected partner-investor(s).

- The deadline for the submission of applications is 01/11/2018. All submissions must be submitted electronically, to the following email address: contact@nexa.re

Context

Presentation of the SEAS-OI Station

Based in Saint Pierre de la Reunion, the SEAS-OI station is both a satellite imaging acquisition platform and a center of excellence in remote sensing. With a coverage of 2500 km around Reunion Island, the Station covers all coastal areas of the Indian Ocean Commission countries and some southern and eastern African countries.

SEAS-OI has been operational since July 2012. Its radar (RADARSAT-2) and optical (SPOT-5) image reception capabilities have made it possible to develop expertise in various fields such as biodiversity, agroforestry environments, marine and coastal environments, urban planning, health and natural hazards. However, since March 2015, the station has not received any images in direct reception. A SPOT compensation contract permitted the Station to receive indirect reception images from SPOT 6 and Pleiades until November 2016.

Today, to continue direct reception activities in optical and radar requires an investment to ensure equipment upgrades and maintenance of operational infrastructure costs. For RADARSAT-2, reception and processing are still operational but running costs (reception fee and maintenance) are to be covered.

Current Governance

In 2008, the French State entrusted the Reunion Region with delegated project management for the implementation of the Satellite-Assisted Environmental Monitoring Program in the Indian Ocean Area (French acronym: SEAS-OI).

Since 2008, the station has been managed by four actors, according to a legal convention: the French State, the Reunion Region, the Research Institute for Development (IRD) and the University of Reunion. The operation of the Station was carried out by the Region until February 2017, when a restitution agreement was signed by the Region to hand over operations to the French State.

Partnerships and Current Regional and International Actors

The SEAS-OI program is part of a regional cooperation approach aimed at the mutual development of the countries and territories of the Indian Ocean zone. Thus, the SEAS-OI Station has been involved in many international programs and projects such as RISK, MESA, SMART FISH, and ISLANDS of the Indian Ocean Commission. In addition, two regional cooperation programs with Madagascar were conducted in 2013-2015, namely Orthobase (cartographic reference) and GRIMA (Flood Risk Management and Land Movement in Antananarivo).

SEAS-OI also aims to foster partnerships with the private sector. The companies CLS and GIE MAREX have developed operational services based on data produced by the Station.

Station Downstream Uses and Activities

Many regional, national and international actors benefit from the data provided by the SEAS-OI station. These are available free of charge to public institutions and research laboratories in the South-West Indian Ocean, representing approximately 70 beneficiaries since 2012 and more than 2,300 images distributed, supporting 90 projects. Today, the main users of the SEAS-OI Station include research teams from the ESPACE DEVelopment Research Unit (IRD / UR) and the staff of the Spatial Observation, Innovation and Regional Enhancement Division of the Reunion Region. They use SEAS-OI as part of scientific and operational cooperation projects in order to support the sustainable co-development of islands in the Indian Ocean zone.

A detailed technical description of the SEAS-OI Station and its equipment is provided in the Appendix of this document.

Purpose of the Call for Expressions of Interest

General Objectives

This Call for Expressions of Interest (hereinafter referred to as "CEI") aims to identify and select interested partners to co-invest in the operation and development of the SEAS-OI Station. This partnership will pursue three objectives: to increase and develop the economic, territorial and scientific value of the Station carried by the current partners by ensuring the operational continuity of the platform, the dynamism of the services and associated uses and the stimulation of the local ecosystem.

It is in a spirit of active collaboration and openness to a broad typology of investors that NEXA publishes this CEI in order to allow the partner investors to propose a plan for the development of the SEAS-OI Station and the establishment of other supporting activities in accordance with the abovementioned three objectives.

Economic Issues

A new economic model is to be proposed to ensure the sustainability of the SEAS-OI Station. The upgrade and operation of current services, as well as the creation of new services, requires additional investment. The new proposed economic model will be based on a public-private partnership, the terms of which will be defined with the future partner(s).

Within the context of this CEI, investors are therefore asked to propose innovative financing and management models that correspond to their vision of the future development of the Station. The Reunion Region will mobilize—within the framework of regional development fund programs—up to €2 million euros to be utilized with the operator (or the consortium of operators) to implement a multi-year development plan until 2021. This public funding can only cover less than 50% of the total investment.

Territorial Issues

Due to its geographical location, the SEAS-OI Station must consolidate its role as a regional service supplier for the covered territories, whether for the islands of the Indian Ocean or for countries totally or partially covered by its reception circle, many of which face major challenges in terms of urban planning, coastline and natural risk management. This territorial dimension may therefore include regional cooperation with a wide number of partners, reflected by the new economic and governance model of the Station.

Scientific Issues

Since its creation in 2012, the SEAS-OI Station has been backed by the University of Reunion, which has ensured its scientific development and added value. The scientific teams in the Indian Ocean area covered by the Station use the generated data in many areas of research, including land cover, health risks, shoreline dynamics and coastal environments, space-based characterization of ecosystem services, maritime surveillance, etc. On-the-ground research activities are led by the ESPACE-DEV Joint Research Unit through numerous collaborations with institutions and stakeholders in Reunion and the Indian Ocean. In addition, the station is an important tool for the delivery of applied university courses. The scientific missions of the Station must remain a core element of the infrastructure, and be fully integrated in the new proposed model of activity.

Partnership Arrangements

Partnership Arrangements (1/2)

A partnership agreement will be signed between the selected partner(s) and the Region, clearly delineating the responsibilities of the parties as well as the co-investment conditions.

The new SEAS-OI Station governance scheme will depend on the economic model proposed by the applicants to this CEI, as well as the legal framework under which the activities will take place. The Reunion Region and the University, vested by their roles in the creation of the station and the territorial, economic and scientific value that the Station represents, shall remain parties in any new governance scheme. The new partners will assume rights and responsibilities commensurate with their investment. Depending on the proposed schemes, this responsibility may range from a minority stake in governance to the exercise of a level of operational control over the Station.

Partnership Arrangements (2/2)

As a result, several types of legal structures can be envisaged to develop and re-invigorate the SEAS-OI Station. Depending on the terms of the partnership to be agreed with the future partner(s), these structures may include (but are not limited to):

- Public Private Partnership in the form of a Partnership Contract: a legally-binding contract between a private company or a Consortium of private companies and local public actors;
- Creation of an ad-hoc structure, for example a Collective Interest Cooperative Company type structure (a commercial enterprise which is economically efficient and innovative with a business purpose of collective interest and social utility), Society of Mixed Economy, Public Interest Group, Association in accordance with the 1901 Law, or other proposed corporate or business structure;
- Creation of a Foundation with certain advantages in terms of tax exemptions for private actors;
- A public service delegation structure, with a strong link between remuneration and overall operating result.

Content of Applications

Applicants are invited to develop and submit economic, financial and legal options designed to ensure the optimal continuity and development of the SEAS-OI Station.

Applications should contain the following information

The company, group or consortium

- Presentation of the structure ensuring the successful oversight and implementation of the project: corporate aim and scope, shareholders, manager(s), governance scheme, internal organization, etc.;
- Financial information: balance sheet, income statement and management report for the three preceding financial years;
- Main activities;
- Experience and relevant references in the operation of satellite imagery receiving stations and associated services.

The Proposed Project

- General description;
- Nature and ambition of the project;
- Contribution of the applicant company, group or consortium in terms of resources (the amount of financial investment, human resources, material resources, etc.);
- Investment needed for the project;
- Partnerships envisaged with other private or public actors;
- Role of local institutional actors in the project;
- Economic structure envisaged for the project;
- Governance model proposed;
- Business model and initial ideas of financial revenues.

Application Selection Procedure

Application Selection Procedure

The partners eligible to respond to this CEI (private companies, consortia of private companies, public or semi-public institutions) must submit their application by: 01/11/2018

The selection of the investor partner(s) invited to conclude a partnership agreement with the Reunion Region will be carried out on the basis of the following criteria:

- The economic development of the Station;
- The territorial development of the Station;
- The scientific development of the Station;
- Strength and attractiveness of the proposed business model;
- Investment capacity of the company, group or consortium;
- Experience and references of the applicant(s).

The Reunion Region reserves the right to enter into negotiations with candidates who have submitted an application.

Response Arrangements and Timetable

Response Arrangements and Timetable

- All applications must be written in either English or French
- All applications must be submitted electronically to the following email address: contact@nexa.re
- The application deadline for the submission of applications is: 01/11/2018 (date and time of reception of the electronic submission will be considered evidence of compliance of the deadline)
- Provisional date for the selection of successful applicant(s): 31/12/2018

This Call for Expression of Interest may be modified and / or renewed.

Contact

Contact for all questions related to this CEI:

contact@nexa.re

+262 (0)262 20 21 21

All questions should be submitted in writing.

Annex: Technical File

Background

- October 2008: Under the CPER / POE¹ 2007-2013, the French State entrusts the Reunion Region with delegated project management authority for the implementation of the ERTTS-SEAS-OI operation².
- September 2011: Delivery of the SEAS-OI Station.
- June 2012: Signature of a framework agreement for the governance of the center of excellence in remote sensing between four partners (Reunion Region, French State, IRD and University of Reunion) for a period of three years.
- July 2012: The SEAS-OI satellite receiving station enters into operation with the reception, processing and broadcasting of data from the SPOT 5 and RADARSAT 2 radar optical satellites.
- March 2015: End of direct reception of SPOT 5 satellite images.
- January 2016: End of direct reception of RADARSAT-2 data.

¹ Contrats de Plan Etat Région – Préparations opérationnelle à l'Emploi

² Satellite-Assisted Environmental Monitoring Program in the Indian Ocean Area

Circle of Visibility

Based in Saint-Pierre de la Reunion, the SEAS-OI Station covers all the islands of the Western Indian Ocean, a large part of Mozambique, Swaziland, part of Tanzania, Zimbabwe and South Africa, as well as the two major maritime areas of the Western Indian Ocean and the Mozambique Channel.

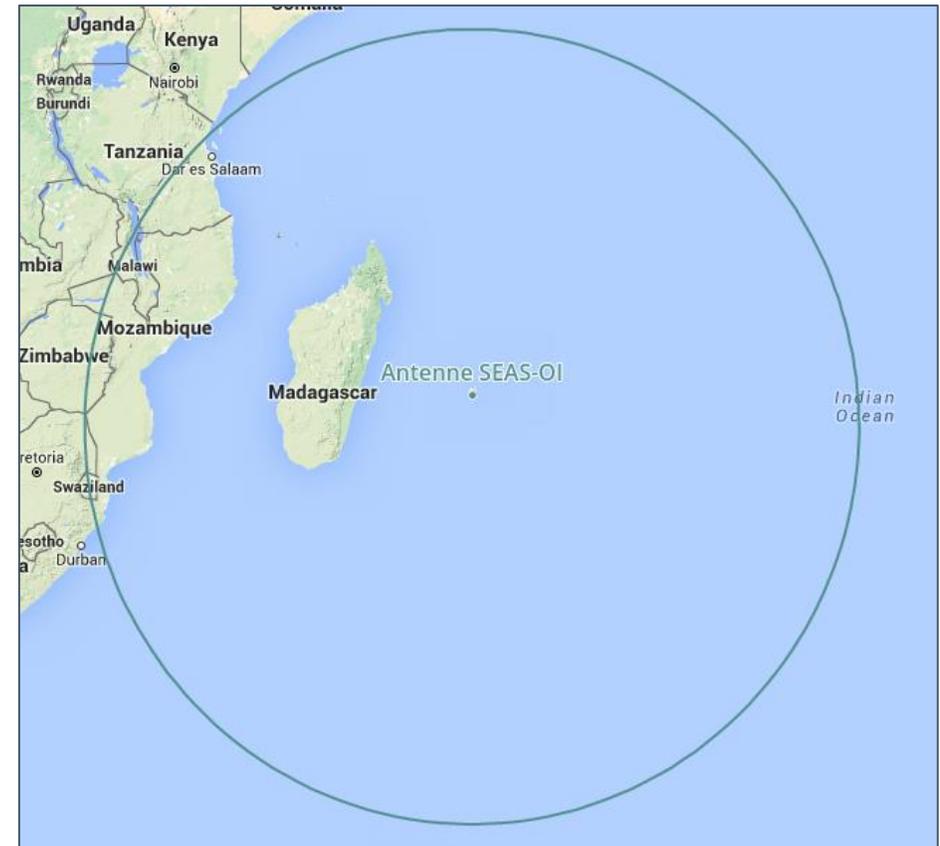


Figure 1: The SEAS-OI Station circle of visibility

SEAS-OI Station Objectives

The creation of the station has as its primary four objectives:

- Scientific research;
- Initial and continuous training (mainly in geomatics and remote sensing);
- Technological innovation;
- Regional cooperation (Indian Ocean coastal countries and Eastern African countries).

Thematic Areas and Uses Addressed by the SEAS-OI Station

The downstream thematic areas and uses addressed by the SEAS-OI Station include:

- Urban planning;
- Land management;
- Coastal zone management;
- Agriculture;
- Forest management;
- Management of the marine and coastal environment (boat traffic, fishing, pollution);
- Natural risks;
- Biodiversity;
- Health and epidemiology;
- Climate change.

Technical Equipment > Three Principal Sub-systems:

I. Reception sub-systems:

- Hexapod Positioner HXP 63-60
- Reflector: 5,50m
- Cassegrain source X-band monopulse, double polarisation
- Receiver Chain Cortex HDR 150Mbps, D/C band X 720MHz fixed
- Antennae radome: 5,5m

II. Radar processing sub-system:

- Direct Archive System server (Dell PowerEdge T710)
- Processing/Storage, archive, and catalogue system (Dell Precision T3500)
- Cataloguing and Products Processing System (CAPPAS) based on Dell PowerEdge R710 server
- Catalogue System and Database Server based on Dell PowerEdge R300 server

III. Optical processing sub-system:

- IBM Workstations MPro 9229
- Inputs server: IBM x3200
- Decoding server: IBM x3200
- Acquisition and formatting server: IBM x3650
- Inventory server: IBM x3650
- Administration, archive and production servers: x3650

Technical Equipment > Online Archived Data Consultation System (SPOT 5 and Radarsat-2)



Figure 2: View of the technical buildings
and the antenna under radome

Images Received and Processed by the SEAS-OI Station

	2012-2013	2013-2014	2014-2015	Received	Processed
SPOT 4 & 5	6,990	10,543	3,862	21,395	9,190
RADARSAT 2	95	93	90	278	278
Total	7,095	10,636	3,952	21,673	9,468