

GMES & AFRICA PROGRAMME

GMES & Africa OSS-Northern Africa: Earth Observation for Sustainable
Management of Land and Water in North Africa

CALL FOR APPLICATIONS "POSTGRADUATE SCHOLARSHIPS"

NORTH AFRICA – 2019

[\[AC/OSS/GMES&Africa-BourseEtude/010319-4\]](#)

BACKGROUND

The Sahara and Sahel Observatory (OSS) is calling for applications from students in postgraduate studies (Master's or PhD) to finance three fellowships as part of its project "Earth Observation for the Sustainable Management of Land and Water in North Africa ", funded by the African Union.

This call for applications is open as follows:

SCHOLARSHIPS TO BE AWARDED

- Level: Master or Doctorate;
- Number: 3 applicants;
- Duration: 6 months renewable;
- Area: Agronomy, Environment, Hydrology and any other discipline related to TDM;
- Start date: April 2019;
- Who is concerned: North African students enrolled in a Tunisian institution (resident in Tunisia);
- Payment: 1000 Tunisian Dinars per month.

AREA OF RESEARCH FOR MASTER'S LEVEL

- Surveillance, monitoring and evaluation of water in irrigated areas;
- Monitoring and evaluation of land degradation;
- Seasonal Agricultural Monitoring, Early Warning and Assessment.
- Details are given in the appendix.

DOCUMENTS TO BE PROVIDED

- Application form ;
- Curriculum Vitae ;
- Covering letter ;
- Copy of the degree;
- Certificate of registration for the 2018/2019 academic year.

SCHEDULE OF THE CALL FOR APPLICATIONS

- Opening of the call: 1 March 2019;
- Deadline for submission of applications: 15 March 2019;
- Start of the internship: April 1, 2019.

Applications should be sent to the following address: procurement@oss.org.tn , with the mandatory subject line "[AC/OSS/GMES&Africa-BourseEtude/010319-4] GMES-North Africa: Financing of scholarships 2019".

ANNEX

The project "Earth Observation for Sustainable Land and Water Management in West Africa" is a project of the North developed by OSS and its national and regional partners, in charge of remote sensing, namely ASAL (Algeria), DRC (Egypt), LCRSSS (Libya), CRTS (Morocco), The University of Nouakchott (Mauritania) and the CNCT (Tunisia) for the national level, and the CRTEAN and CRAFT-LF for the regional level. The overall objective of this project is to support decision-making in the sustainable management of natural resources and water through the provision of products and services based on Earth Observation (EO) data and techniques. It will be achieved through the following objectives:

- Develop and sustain decision support services for the benefit of natural resources and water;
- Boost regional cooperation and promote the exchange of know-how in the field of Natural resources and water management in North Africa;
- Build capacity and raise awareness among all partners and end users on the potential and better consideration of technical data and Earth Observation applications.

The Master's degree subjects are related to the following services:

1 - MONITORING, FOLLOW-UP AND EVALUATION OF WATER IN IRRIGATED AREAS

- Mapping of irrigated areas, their long-term spatial and temporal monitoring;
- Multi-scale methodologies for estimating, monitoring and evaluating irrigated areas by remote sensing and the volumes of water withdrawn for irrigation;
- Indicators on the state of resources and anthropogenic pressures and natural factors, crop water productivity;
- A system for monitoring the extension of uncontrolled / unauthorized irrigated areas and the overexploitation of aquifers;
- Simulation and projection of scenarios of the evolution of the state of water resources and their use for decision-making.
- Use and impact of results: development of approaches for quantitative estimation of water withdrawals.

2- MONITORING AND EVALUATION OF LAND DEGRADATION

- Multi-scale indicators on land degradation;
- Operational services for monitoring land degradation at regional and local levels;
- Capacity building of agencies on the calculation of indicators;
- Characterization and analysis of land degradation hotspots;
- A degradation information system, accessible online.

→ **Use and impact of results: development of integrated approaches to land degradation assessment - contribution to the analysis of indicators for monitoring degradation.**

3 - SEASONAL AGRICULTURAL MONITORING, EARLY WARNING AND ASSESSMENT

- Multi-scale maps of land use and its changes;
- Remote sensing indicators for monitoring agricultural campaigns;
- Methodologies for the spatial and temporal monitoring of agricultural areas;

- Tools for disseminating crop year monitoring products at defined time intervals (newsletters and information systems);
- Early warning bulletins for drought (water and agricultural).

→ **Use and impact of results: assessment of pressures on biodiversity - contribution to regular monitoring of ecosystem health.**