



**GMES
AND AFRICA**



Project funded by
the EUROPEAN UNION



OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY



Global Monitoring for Environment and Security and Africa (GMES & Africa)

OSS North Africa Consortium



NARSS North Africa Consortium

**Regional workshop – North Africa
September 20th – 22nd, 2021
(Virtual event)
Concept note (draft)**

Introduction

The OSS & NARSS are convening a regional workshop for North-Africa from **20th to 22nd September 2021** in Tunis, Tunisia that will bring together the North-African partners of both consortia from the Natural & Water Resources and Marine & Coastal thematic area as well as other relevant end-users and stakeholders involved in GMES&Africa project. Due to COVID constraints, the workshop will be organized in hybrid format, where participants from Tunisia will participate physically , and participants from other countries than Tunisia will participate virtually.

The Global Monitoring for Environment and Security and Africa (GMES & Africa) Support Programme is the crystallization of the longstanding cooperation between Africa and Europe in space science & technology, which is one of the key priorities of the long-term EU-Africa Joint Strategy. In October 2006, the Maputo Declaration provided the necessity for the EU-Africa partnership to confirm the commitment to avail European infrastructure and facilities, under the Copernicus programme to Africa, Caribbean, and Pacific (ACP) countries. This commitment led to the launch of GMES and Africa process, during the 2nd EU-Africa Summit in December 2007, in Lisbon, Portugal that initiated a long-term structured dialogue between Africa and Europe in the context of developing EO systems to manage the environment, understand and mitigate the effects of climate change and ensure civil security. Such EO systems would provide, on a real-time and near real time basis, information to policymakers, scientists, businesses and the public.

The GMES and Africa process is aimed at promoting the development of local capacities, institutional, human and technical resources for access to and exploitation of EO-based services on an operational basis. The Programme is designed to specifically respond to African needs with respect to services related to water, natural resources, marine and coastal areas; to address the global needs to manage the environment, ensure civil security; and to enable the implementation of the African Space Policy and Strategy.

GMES and Africa Programme aims to improve the capacities of African policy-makers, planners, scientists, businesses, the private sector and general public to design, implement and monitor national, regional and continental policies, and to promote sustainable management of natural resources through the use of Earth Observation data and derived information. It introduced four key innovations:

- **Northern Africa** is one of the beneficiary regions in Africa and that makes the Programme a Pan African programme;
- The Programme uses the **EU Copernicus Programme data and services** and adapt them to the African context;
- The Programme's overall management is handled by the **African Union Commission**, through the Department of Human Resource, Science and Technology;
- The Programme is designed to **engage the African private sector** and national institutions and to improve regional and national academia's capacities to conduct relevant training.

GMES&Africa North Africa :

The project proposal « **Earth Observation for Sustainable Land and Water Management in North Africa** » was developed by OSS in collaboration with regional and national partners, specialized in remote sensing: ASAL (Algeria), DRC (Egypt), LCRSSS (Libya), Nouakchott University AL-Aasriya (Mauritania) and CNCT (Tunisia) for the national level and CRTEAN and CRASTE-LF for the regional level.

The overall objective of this project is to support decision-making in the field of sustainable management of natural resource and water through the provision of products and services based on Earth Observation (EO) data and techniques. It is achieved through the following specific objectives:

- Developing and sustaining decision support services for natural resource and water managers;
- Boosting regional cooperation and promote the exchange of know-how on natural resources and water management in North Africa;
- Building capacity and raise awareness among all partners and end users on the potential and better consideration of technical data and Earth Observation applications.

Three services have been developed based on an optimal and realistic approach, which can be reproduced in other regions or extrapolated to the national level:

- Water Abstraction Surveillance, Monitoring and Assessment in Irrigated Areas
- Land Degradation Monitoring and Assessment
- Agriculture Seasonal Monitoring, Early Warning and Assessment

NARSS (National Authority for Remote Sensing and Space Sciences, Egypt) is the coordinator of the NAFcoast project “Developing an Earth Observation Operational Application for Coastal Ecosystems Mapping, Monitoring and Assessment of the Northern African Coastal Zone – NafCoast” in partnership with 4 partners:

1. Centre for the Environment for Arab Region and Europe - CEDARE, Intergovernmental Organization for Arab region and North Africa – Based in Egypt –
2. Centre d'Etudes et de Recherche des Télécommunications “CERT”, Tunisia
3. Chouaib Doukkali University “UCD” , Morocco – This will be replaced in 2020 by Institute Supérieur d’El Jadida Casablanca, Morocco.
4. Institute Mauritanien de Recherches Océanographiques et des Pêches, IMROP, Mauritanie

NAFcoast project is developing two main services using Earth Observation data in support of other in-situ information and ancillary data. This includes 1) Oil Spill Monitoring Service (OSM) and 2) Potential Fishing Zones Service (PFZ). These 2 main services of OSM and PFZ are developed and continued to be generated with an aim for operationalization and dissemination to stakeholders and beneficiaries. Hence, stakeholder’s engagement is quite essential for the success of the project to increase the value added of the project outcomes, Environment Agency (Disaster Risk Reduction in Egypt, Ports Authority and Maritime Organization in Morocco were directly engaged in the OSM service and they rely now on this service to

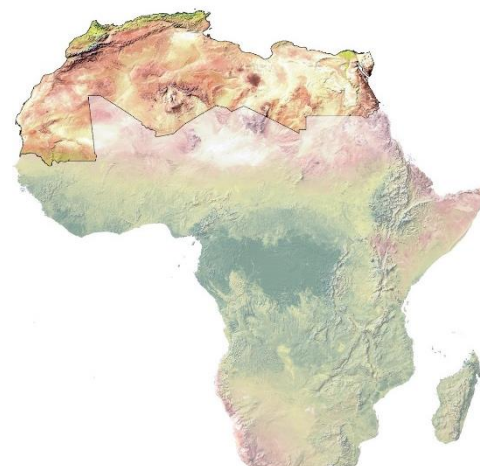


Figure 1: Action zone of GMES North Africa Land and Water consortium

support their mandates. Fisheries institute in Egypt, Tunisia and Mauritania are engaged in the PFZ services, and we continue discussion with them to improve the service and increase the benefit from this service. This regional workshop will be necessary to ensure harmonization and dissemination among all the beneficiaries from the north African countries to improve the delivery of the services and maximize the value of the services.

Overview of the Regional GMES&Africa North-Africa Workshop

The first regional GMES&Africa North-Africa workshop for strengthening data access and sharing practices is organized to:

- Promote the exchange of views among end-users and EO service providers in North-Africa
- Sharing best practices between consortia partners on how to use EO in support to sustainable management of water and natural resources, marine and coastal areas
- Capitalize the achievements of GMES&Africa – North-Africa
- Reinforce the regional exchanges and dynamize cooperation among partners

The regional GMES&Africa North-Africa workshop will be co-organised by the Sahara and Sahel Observatory (OSS) and National Authority for Remote Sensing & Space Sciences (NARSS). It is scheduled to be held from 20th to 22nd September 2021 in Tunis, Tunisia.

The theme of the first GMES and Africa Regional workshop (North Africa) is “**Strengthening Data Access and Sharing Practices**”. It will be focused on the valorisation of GMES&Africa’ achievements where Earth Observation data collected from different space sensors has been translated by the developed GMES services in North-Africa into actionable information in support to sustainable management for water and natural resources management.

Hence, the regional workshop addresses how to capitalize the achievements of the first phase with respect to the operational EO services in support of the sustainable management of natural resources and the socio-economic transformation for the North-Africa region aligned with the national policies and strategies. It also discusses the road map of the GMES and Africa second phase based on the lessons learnt from the first phase.

About 120 representatives of Earth Observation service and data providers, end-users, decision makers, academia, the private sector, research institutions from North-Africa and all over the world are expected to attend the four-day event.

Objectives and Rationale

The primary objective of the regional GMES&Africa workshop is to:

- Present the main achievements of GMES&Africa first phase implementation at North-Africa level
- Build on success stories in EO, promote sharing best practices between consortia partners on addressing environmental issues using EO data and products
- Strengthen communication and exchange between EO technical experts and EO-Services providers from one side and various end-users and water and natural resources managers from another side to increase technology user uptake and services effectiveness
- Capitalize the achievements of GMES&Africa – North-Africa
- Raising awareness of water and natural resources managers, stakeholders and policymakers on the EO potentials for decision making, for engaging decision makers to ensure strong and sustainable ownership of GMES&Africa services.
- Highlight the contribution of academia and private sector in GMES&Africa and restitution of their involvement in North Africa

- Boost multi-level exchanges and dynamize cooperation among regional and national partners

The conclusions of the regional workshop, action items and key recommendations will be endorsed at the end of the workshop by the participants and will be considered as valuable input for the second phase. The full report and proceedings will be produced and disseminated online to the participants.

Expected results

At the end of the workshop, it is expected that:

- Enhanced awareness and visibility regarding the GMES&Africa services, achievements and success stories is reached,
- Feedbacks on the implementation of GMES & Africa's in North Africa are collected including the lessons learnt from the first phase implementation;
- Greater awareness on benefits of Earth Observation through the GMES and Africa in North-Africa for support to decision making and sustainable management of water and natural resources.
- A road map for the second phase of GMES&Africa based on the achievements of the first phase as well as the lessons learnt from the first phase is developed.
- Communication channels between GMES&Africa key partners and end-users, decision makers and stakeholders, academia and private sectors are strengthened.
- Refined/updated user needs in terms of access to EO data and services on land, marine and natural resource management applications, and capacity development

Target group

The target groups are:

- The consortia partners'
- End-users of the different services developed
- Academia
- Private sector
- Relevant stakeholder

Participants

Expected participants are from the 06 Member States of North-Africa, Regional Economic Communities, the African Union Commission; the European Commission, regional and international institutions, Non-governmental organisations and the United Nations system. Participants will also come from among GMES & Africa involved institutions and academia, private sector and GMES & Africa final beneficiaries such as policy and decision makers, water and natural resources managers, etc. All other interested entities or organisations will be welcome to participate.

High level participants

High level participants include, representatives of:

- The African Union Commission
- The European Commission
- The Government of Tunisia

- Union du Maghreb Arabe
- International and intergovernmental organisations
- Space agencies and institutions

Approach:

The sessions of the forum will be crafted as per the 7 services being developed in North-Africa. The different sessions will start with a brief presentation of the main achievements of the service, followed by two panel discussions

- EO integration in decision making in the service theme in North Africa (agriculture monitoring, coastal management, .etc)
- The way forward for GMES second phase to support the sustainable development and management of the theme of the discussion

A dedicated media room will be arranged for journalists and communication experts to cover the workshop. Besides, two press conferences will be organized for the forum - one at the opening and one during the closing session.

There will be an exhibition area in the workshop venue (Tunis) where GMES & Africa and its stakeholders, partners and users can demonstrate and exhibit their products and services. It will be a venue for free interaction among users and service providers. It's foreseen that the exhibition management takes into consideration the COVID-related constraints, which implies that limited of persons at the same time are allowed to visit the different stands with respect to the social distancing and movement constraint. Due to the measurements taken by the Tunisian Government, only participants from Tunisia will be present at the workshop venue, whereas remaining participants will attend and interact virtually.

Venue and dates of the workshop, organisational structure

The regional workshop will be held in Tunis, Tunisia, from 20th to 22nd September, 2021 in hybrid format. Participants from Tunisia are expected to attend physically at Mouradi Gammart hotel whereas the remaining participants will attend virtually. The organisation of the 1st Regional GMES & Africa North-Africa workshop will be led by a committee led by Sahara and Sahel Observatory (OSS) and National Authority for Remote Sensing & Space Sciences (NARSS).

Agenda

| Date | Activities |
|--|---|
| Day 1 | |
| Introductory Session: Welcoming ceremony | |
| 08h – 09h 00 | Welcome and participants registration and installation |
| 09h00-10h00 | <p>Statements by:</p> <p>Dr. Tidiane Ouattara, Coordinator of GMES&Africa program Prof. Mohamed Zahran – Chairman of NARSS Representative of the European Union Commission Representative of the Ministry of Environment, Tunisia Representative of CNCT-Tunisia Representative of CRTEAN Representative of CRASTE-LF Nabil BENKHATRA, Executive Secretary of OSS</p> |
| Session 1: State of EO integration in Africa | |
| 10h00 – 11h00 | <ul style="list-style-type: none"> • Overview of GMES & Africa Programme (AUC), Dr. Tidiane Ouattara, GMES&Africa Program Coordinator • Workshop presentation and expectations, coordinator of GMES&Africa program • Video (OSS and/or NARSS GMES&Africa) <p>Theme 1: EO as instrument for sustainable management of water, natural resources, coastal and marine management in North Africa: current state and the main challenges</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representatives of space agencies and national mapping centres in North-Africa |
| Session 2: GMES for land degradation monitoring | |
| 11h00-12h15 | <ul style="list-style-type: none"> • Overview of GMES & Africa land degradation monitoring service, GMES-OSS project coordinator: results and main achievements • JRC support for developing land degradation monitoring service <p>Theme 2: EO as instrument for land degradation monitoring in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of environment manager's / end-user's segment in North Africa <p>Theme 2 Bis: The way forward for GMES second phase to support land degradation / restauration assessment in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of environment manager's / end-user's segment in North Africa |
| 12h15 – 12h30 | Wrap-up of day 1 |
| 12h30 – 14h00 | Lunch break |

| Day 2 | |
|--|--|
| Session 3: GMES for seasonal agriculture monitoring | |
| 09h00-10h15 | <ul style="list-style-type: none"> • Overview of GMES & Africa seasonal agriculture service (OSS), GMES-OSS project coordinator: results and main achievements • Overview of agriculture monitoring in JRC <p>Theme 3: EO integration in decision making in Agriculture sector in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of agriculture manager's / end-user's segment in North Africa <p>Theme 3.bis: The way forward for GMES second phase to support agriculture sustainable development and management</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of agriculture manager's / end-user's segment in North Africa |
| Session 4: GMES for agricultural water monitoring | |
| 10h15-11h30 | <ul style="list-style-type: none"> • Overview of GMES & Africa water abstractions monitoring service (OSS), GMES-OSS project coordinator: results and main achievements • Overview of DEA initiative, products and platforms <p>Theme 4: EO integration for sustainable agricultural water management in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of agricultural water manager's / end-user's segment in North Africa <p>Theme 4.bis: The way forward for GMES second phase to support sustainable agricultural water management</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of agricultural water manager's / end-user's segment in North Africa |
| Session 5: GMES for coastal and marine monitoring | |
| 11h30-12h30 | <ul style="list-style-type: none"> • Overview of GMES & Africa Coastal services (NAFCOAST), Prof. Islam Abu Magd, GMES-NARSS project coordinator: results and main achievements <p>Theme 5: EO as instrument for sustainable fishing in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of fishing /environment agencies in North-Africa <p>Theme 5.bis: The way forward for GMES second phase to support fishing in North-Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of fishing /environment agencies in North-Africa |
| 12h30-12h45 | Wrap-up of day 2 |
| 12h30 – 14h00 | Lunch break |

| Day 3 | |
|--|---|
| Session 6: GMES for marine pollution | |
| 09h00-10h15 | <p>Theme 6: EO integration for sustainable management of marine pollution (oil spill) in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of marine manager's / end-user's segment in North Africa <p>Theme 6.bis: The way forward for GMES second phase to support sustainable management of marine resources</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • Representative of marine manager's / end-user's segment in North Africa |
| Session 7: Communication and outreach in GMES | |
| 10h15-11h30 | <p>Theme 7 : Communication for a better advocacy of EO utility in the field of water, natural resources, coastal and marine management in North Africa</p> <p>Expert group discussion:</p> <ul style="list-style-type: none"> • NARSS Communications Expert • OSS Communications Expert • AUC COM representative |
| Session 8: Roadmap for GMES phase 2 | |
| 11h30-12h45 | <p>Theme 8: Roadmap for GMES Phase 2:</p> <ul style="list-style-type: none"> • Interactive discussions <p>Wrap-up of feedbacks collected during the three days</p> |
| 12h45-13h00 | Closing ceremony |
| 13h00-14h00 | Lunch break |