



CRASTE-LF

African Regional Centre for Space Science and Technology Education, in French Language





1. The improvement of the current work according to the original established objectives.

Objective 1 :

increase knowledge in Space Sciences and Technology by organizing :

- Postgraduate training,
- Short courses,
- Seminars, workshops and conferences

at the Regional level.



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Postgraduate Training courses



Remote Sensing & GIS – **12 sessions / 223 trainees**



Satellite Meteorology & Global Climate - **4 sessions / 41 trainees**



Satellite Communications – **3 sessions / 38 trainees**



Space Science and Atmospheric



GNSS (Since 2012) – **2 sessions / 29 Trainees**



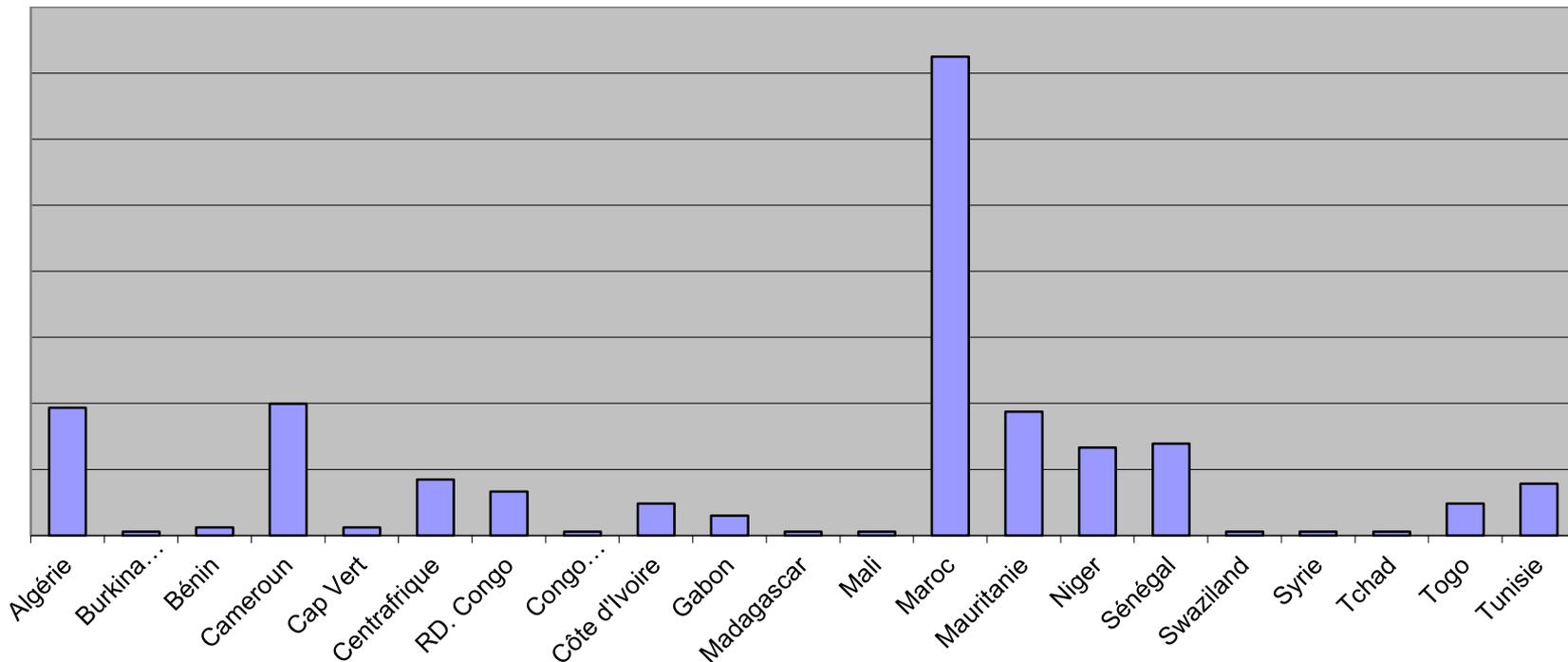
Space Law

Since 2000
21 sessions - 331
trainees



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- from the member and non-member countries of CRASTE-LF.
- Until 2016, the centre registered 331 trainees from 21 countries.





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Each Training Session takes place in 2 phases



Phase I ; 9 to 10 Months or 3 semesters , in Centre, theoretical and practical courses, land study and pilot project ~ 1000 h.



Phase II; 12 to 15 Months, achieve the Research Project in their institution.



End of phase II ; Defense of Memoire in Centre (Jury Members are Professors and Experts) .



Problem : The number of trainees decreased





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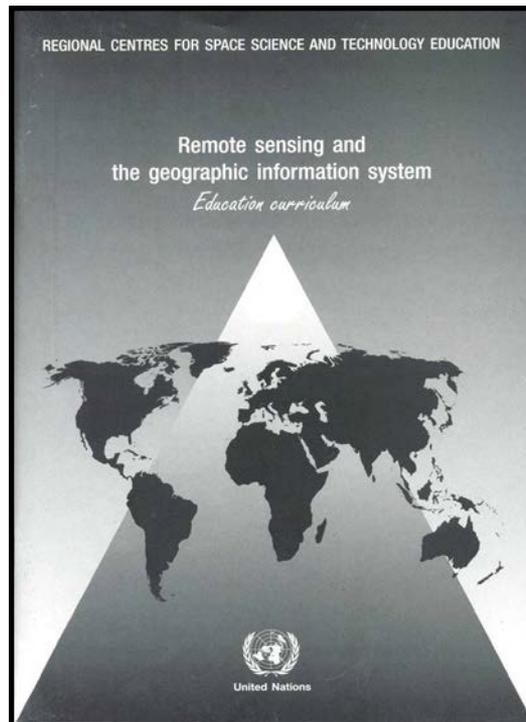


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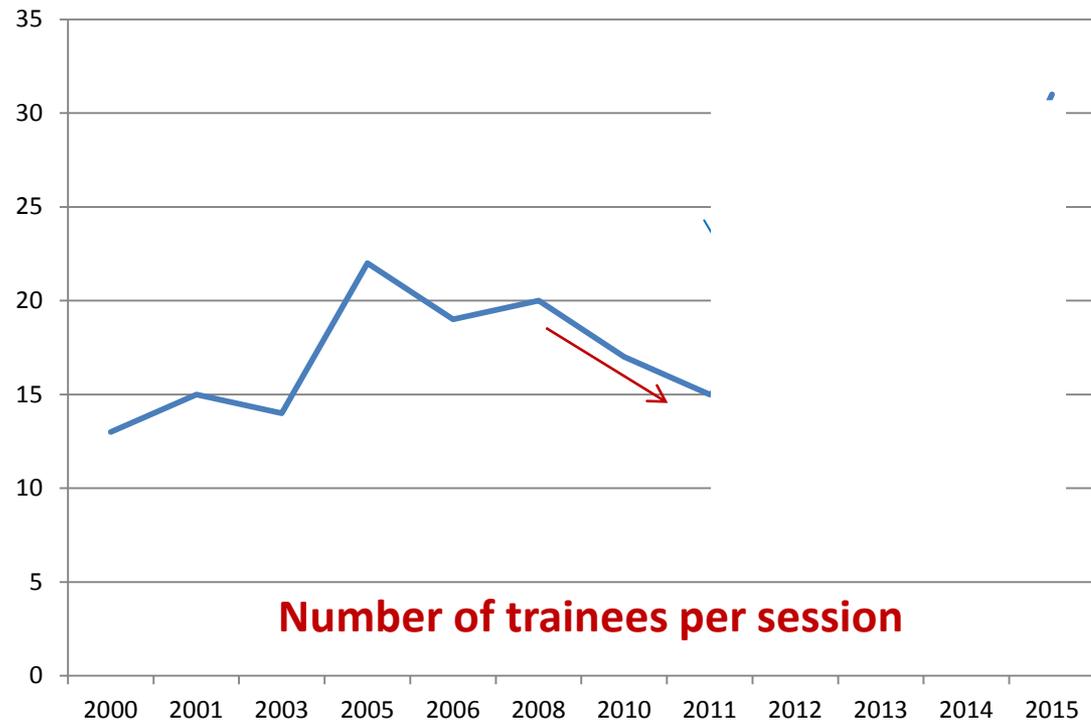
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Since 2012, CRASTE-LF has agreed its post-graduate training in **partnership with the Mohammed V University of Rabat** and the **Agronomic and Veterinary Institute Hassan II**

Remote Sensing & GIS



Agree of diploma





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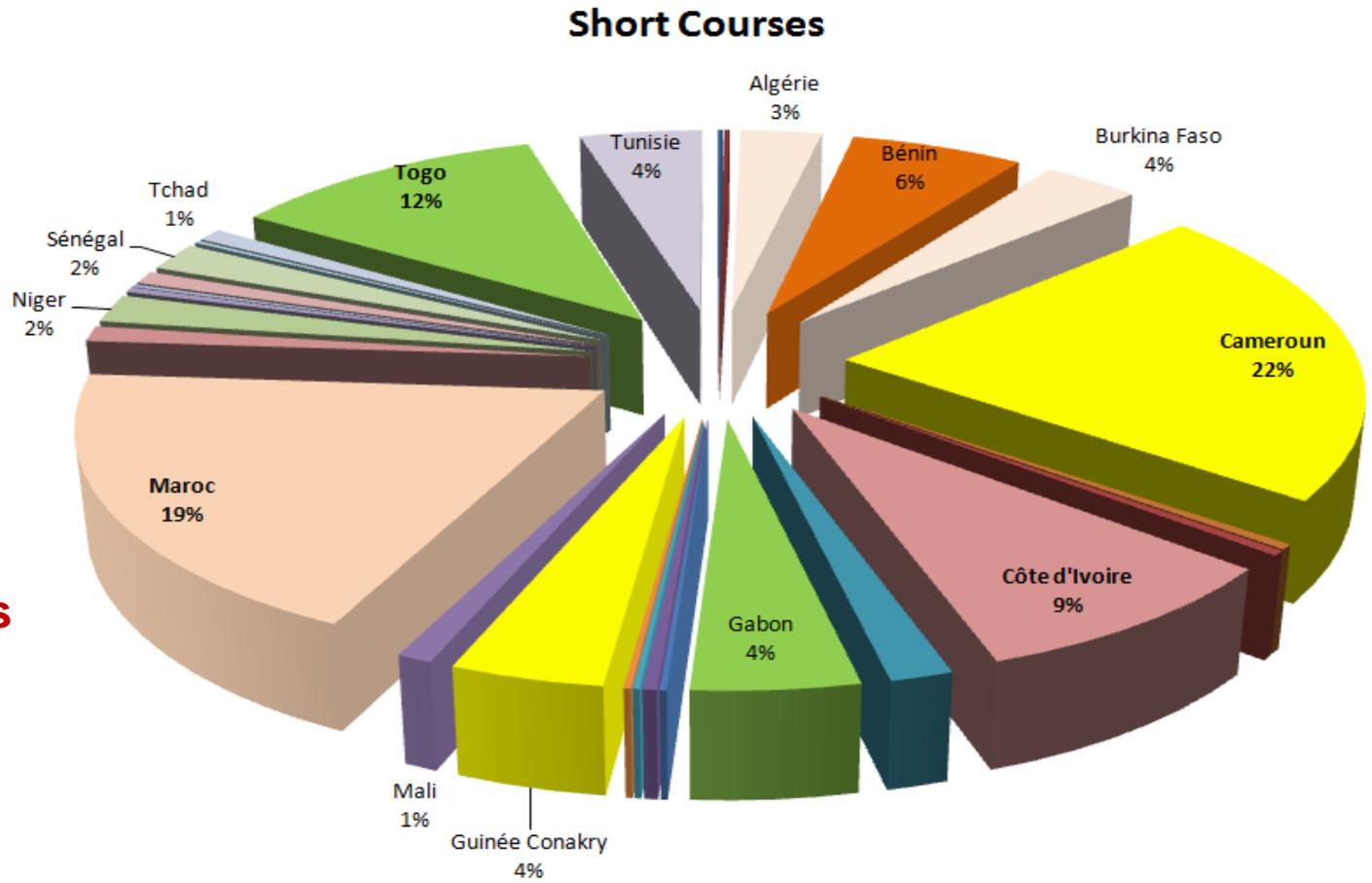


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Short courses, Seminars, Workshops and Conferences

**Between
2010 -2016**
- 34 activities
- 1756 participants
- 47 countries



16 short Courses
537 participants
28 countries



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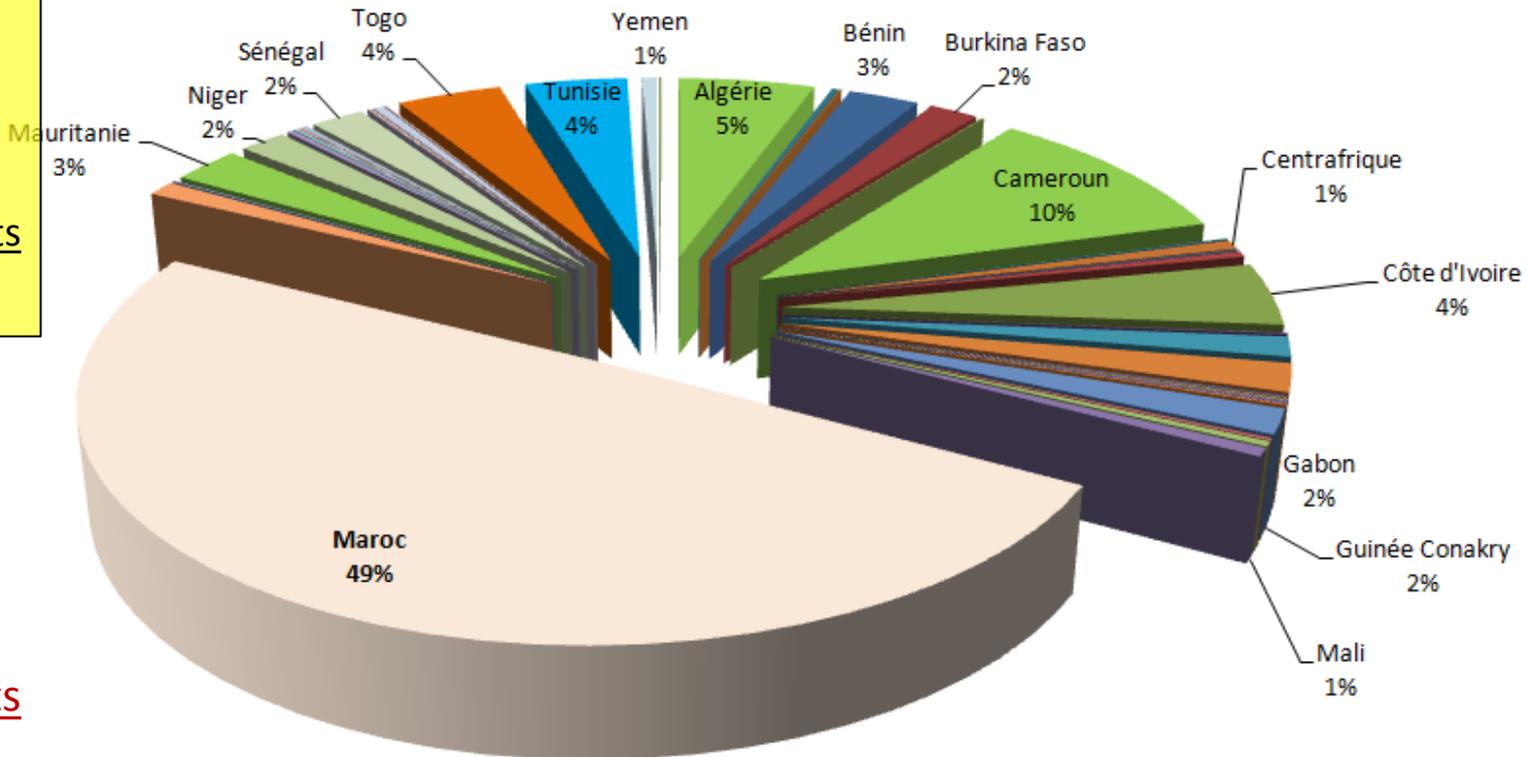
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Short courses, **Seminars, Workshops and Conferences**

Between 2010 -2016
- **34 activities**
- **1756 participants**
- **47 countries**

Conference



18 Conferences
1219 participants
42 countries



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Short courses, Seminars, workshops and conferences

Inventory of Current situation of EO in AFSC

4 High-level of the EO & structures in charge

Algeria, Morocco and Tunisia

3 EO is developed in academic structures

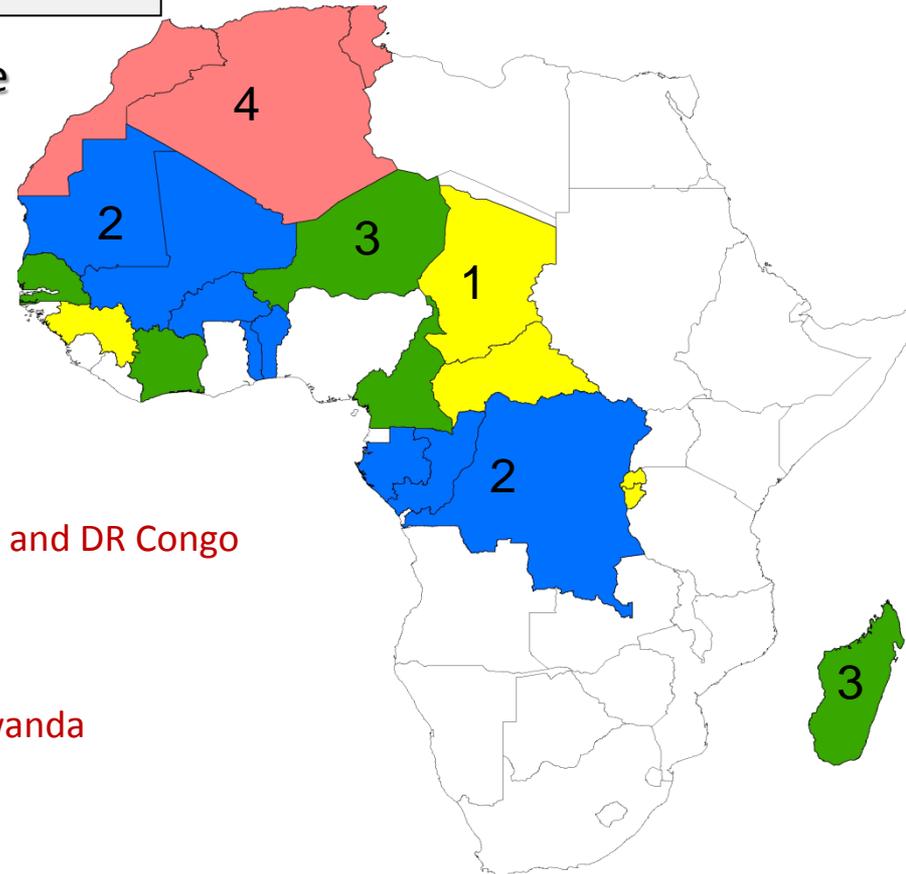
Cameroon, Ivory Coast, Madagascar, Niger and Senegal

2 Moderately use of the EO

Benin, Burkina Faso, Congo, Gabon, Mali, Mauritania, Togo and DR Congo

1 Low level of use of the EO

Burundi, Cape Verde, Central Africa, Chad, Guinea and Rwanda





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Traitements GPS appliqués à l'ionosphère
Sur le site de CRASTE-LF à RABAT Organisé par

En collaboration avec le CRASTE-LF

Avec le soutien de
ICG (International Commission of GNSS)
du 16 au 20 janvier 2017

Rabat (Maroc)

January 2017



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Workshop Régional

Titre : 'La télédétection multi-échelle au service du développement durable : du satellite au drone'

July 2017

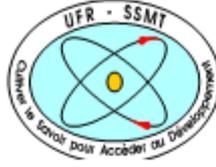
Meeting of the Directors of the
Regional Centres for Space Science and Technology Education,
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Ministry of Higher Education and Scientific Research

**3rd EDITION OF THE SCHOOL OF SPACE WEATHER
ISWI-MAGHREB-WEST AFRICA (IMAO 2017)
Abidjan/Côte d'Ivoire [16 - 28 OCTOBER 2017]**

Organized by
Laboratory of Physics of the Atmosphere, UFR-SSMT,
University Félix Houphouët Boigny

in collaboration with CRASTE-LF

With the support
International Space Weather Initiative (ISWI)
and
ICG (International Commission of GNSS)

Under the patronage of the Minister of Higher Education and Scientific Research

October 2017



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**Appel à communication et
participation aux ateliers de
formation**

L'association SAWIS, la Faculté des Sciences de
Meknès, le CRASTE-LF et le PT4-CUI-VLIRUOS,
organisent:

1^{ère} École thématique

Sous le thème:

**Modeling and Geospatial
Technologies for Water Resources in
Africa**

"MGST for Water in Africa"

**"Modélisation et technologies
géospatiales pour les ressources en eau
en Afrique**

19 - 21 Octobre 2017

**Lieu : Faculté des Sciences de Meknès (Zitoune,
Meknès, Maroc)**

October 2017

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Avec

Le Ministère de l'Environnement et de Ressources Forestières & le Ministère de
l'Enseignement Supérieur et de la Recherche togolais

Atelier Régional

« Cartographie via le Web 'Webmapping', infrastructures spatiales, partage
et mutualisation des données géospaciales en Afrique »

République du Togo, Lomé, 26-29 Octobre 2017

October 2017

Meeting of the Directors of the Regional Centres for Space Science and Technology Education, affiliated to the United Nations



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With the participation/ support of



Organize an

International Conference

on

Water resources Quality and Uses in Central and Eastern Africa: The Impacts over Ecosystems and Health

Palais de la CEMAC, Avenue des Martyrs

12-14 December 2017, Bangui, Central African Republic

December 2017



Food and Agriculture Organization of the United Nations

Useful Address: hydrobangui2017@gmail.com



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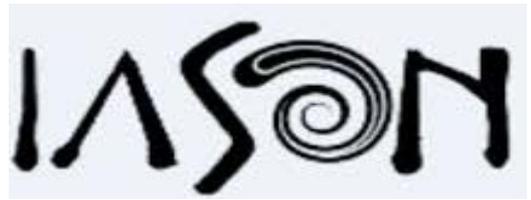


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Participation in some European Research Program (FP7 and H2020) by promoting the Earth Observation for development in the African countries





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Challenges

- **To look for sponsoring** for the realization of the program established by Members State;
- To raise the **awareness** of the members state **to contribute in budget of the Centre**;
- The problem of **recognition of the degree** by member states, the Centre opted for the association with the University for the jointly organization of training courses, while respecting the curriculum established by UNOOSA,
- **Foster capacity building**, the CRASTE-LF encourages the members' countries to propose professional trainees and students to follow training courses organized by the Centre.

problem solved



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2. UNOOSA Support to Regional Centres

- **The support of UNOOSA** is very important for developing space activities of the Centre, including financial support, which remains low, but it is useful and necessary for the training activities and the events of scientific activities.
- The support may be also by **incenting the space agencies** to assist the centre in training by providing teacher experts in specific techniques, equipments or update these and made available the Earth Observation Data.
- To support the **integration of the Centre in research programs** for the supervision of trainees and take advantage of new space technologies.
- **To Develop the training workshops** by organizing the short courses (duration between 1 week to 1 month), as the current tendency in capacity building in the region is to promote such activities.



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3. The vision of the regional centre over the next years - Mission, Objectives & Educational Activities

- The creation of CRASTE-LF **has raised the awareness** of the usefulness of space science and technology in the region, its importance for development, especially at the country level using this technology which is limited due to lack of human resources, technical means and data.
- This awareness is **reflected in the increase of the need for training** in these techniques, this training may be preparing the Master or training workshop in short periods on specific themes.
- The CRASTE LF-developed **networks of cooperation among former trainees** (using social networks) or by creating a network where policy makers can meet experts and users of Earth Observation.
- **E-Learning** may be a good solution for the large current training needs.



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3. The vision of the regional centre over the next years - Mission, Objectives & Educational Activities

- It also **promoted** a system of **information sharing** in the field of EO developing portals where information on projects in the region are mentioned and where users can find free software's and EO data provided by some sites.
- The **UNOOSA** also played an **important role** for the promotion of space technology in the region.
- In addition, the CRASTE-LF with the support of UNOOSA and its **involvement** in European research programs and en collaboration with ISESCO in short courses was able to maintain a high level of training.

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