CRASTE-LF

Inputs of African Regional Centre for Space Science and Technology Education in French Language
Affiliated to United Nations

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Rabat - Morocco
The CRASTE-LF was established in Morocco on 23 October 1998.

under the initiative of the UNOOSA /UN General Assembly Resolution
- 45/72 of 11 November 1990
The CRASTE-LF is based in Morocco at the Mohammadia School of Engineers of the Mohammed V University of Rabat.

13 Member States
Algeria, Cameroon, Cape Verde, Central African Republic, Democratic Republic of the Congo, Ivory Coast, Gabon, Morocco, Mauritania, Niger, Senegal, Togo and Tunisia
**Objectives of the Centre**

- **To increase knowledge** in Space Sciences and Technologies by organizing Postgraduate and/or Short courses, Seminars, workshops, conferences at the Regional level.

- To improve the technical **competences** of the experts, teachers, decision-makers and to hold them informed about technical progress.

- **To assist** the countries of the region on the development of endogens capacities in space tools.

- To **Strengthen** the Local and Regional Capacities.

- To promote **Cooperation** between the Developed Countries and States Members as well as among these States.

- To develop **expertise** in Space Sciences and Technologies.
Capacity Building

organized

✓ 24 Postgraduate training courses
✓ 51 activities in space technologies (Short courses, Seminars, Workshops and Conferences).

Thematic:
Climate change    Biodiversity
water resources   Drought
Agriculture       Disasters
Health            GNSS
Postgraduate Training courses

Remote Sensing & GIS – 13 sessions / 237 trainees

Satellite Meteorology & Global Climate – 5 sessions / 52 trainees

Satellite Communications – 3 sessions / 38 trainees

Space Science and Atmospheric

GNSS (Since 2012) – 3 sessions / 41 Trainees

Space Law

Since 2000
24 sessions - 368 trainees
22 Countries
<table>
<thead>
<tr>
<th>Étiquettes de lignes</th>
<th>Nombre de stagiaires par Pays</th>
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<tr>
<td>Algérie</td>
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<tr>
<td>Bénin</td>
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<tr>
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<td>Cap Vert</td>
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<tr>
<td>Tunisie</td>
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<td><strong>Total général</strong></td>
<td><strong>368</strong></td>
</tr>
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</table>

% Gender

- F: 25%
- M: 75%
Postgraduate Training courses /Master

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.

Each Training Session takes place in 2 phases / in four (04) semesters

**Phase I**: 3 semesters, in CRASTE-LF, theoretical and practical courses, land study and pilot project.

**Phase II**: 1 semester, achieve the Research Project in their institutions.

**End of phase II**: Defense of Memoire in Centre (Jury Members are Professors and Experts).
United Nations / South Africa Symposium on Basic Space Technology « Small satellite missions for scientific and technological advancement »: Stellenbosch, South Africa 11-15 December 2017

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in the centre (CRASTE-LF)
CRASTE-LF
Affiliated to UN

United Nations / South Africa Symposium on Basic Space Technology « Small satellite missions for scientific and technological advancement » : Stellenbosch, South Africa 11-15 December 2017

in the field
United Nations / South Africa Symposium on Basic Space Technology « Small satellite missions for scientific and technological advancement »: Stellenbosch, South Africa 11-15 December 2017

CRASTE-LF Affiliated to UN
United Nations / South Africa Symposium on Basic Space Technology « Small satellite missions for scientific and technological advancement »: Stellenbosch, South Africa 11-15 December 2017
Short courses, Seminars, Workshops and Conferences

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

16 short Courses
537 participants
28 countries
Short courses, **Seminars, Workshops and Conferences**

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

18 **Conferences**
1219 **participants**
42 **countries**
Short courses, Seminars, Workshops and Conferences

1 GNSS School: January 16 to 21, 2017 – Rabat Morocco

22 participants 5 countries: Central Africa, Niger, Cameroon, Morocco, Tunisia
Short courses, Seminars, Workshops and Conferences

2. **Regional Workshop** : Multi-scale remote sensing for sustainable development: from satellite to drone

**July 3 to 6, 2017 – Libreville Gabon**

**40 participants 6 countries** : Cameroon, Gabon, Ivory Coast, Morocco, Mali, Togo
Short courses, Seminars, Workshops and Conferences

3. Space Wheater School ISWI: October 16 to 28, 2017 – Abidjan Ivory Coast

49 participants 12 countries: Algeria, Burkina Faso, Cameroon, Democratic Congo, Congo, Ivory Coast, France, Guinea Conakry, Morocco, Rwanda, Senegal, Tunisia

2017 activities
5. **Regional Workshop**: Web mapping, space infrastructure, data sharing on water resources and agriculture in Africa  
**October 25 to 27, 2017 – Abidjan Ivory Coast**  
**30-77 participants 5 countries**: Gabon, Ivory Coast, Morocco, Benin, Nigeria, Cameroon
4. **Thematic School**: Modeling Geospatial Technologies for Water Resources in Africa

**October 19 to 21, 2017 – Meknes -Morocco**
Participation in some European Research Program (FP7 and H2020) by promoting the Earth Observation for development in the African countries.
The dissemination of EO & CB

- By putting data and educational resources created in the scientific events on the CRASTE-LF website crastelf.org.ma:
- By establishing the link with other geoportals such as the GEOCAB, GEOSS etc
- By developing Open Geoportal Data

SIGMED GEPORTAL (Bouregreg Success Story - Morocco)
Challenges

Problem solved

- The problem of **recognition of the degree** by members states, the Centre opted for the association with the University through 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.

bottleneck

- **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 support of UNOOSA is very important for developing space activities of the Centre.

We are looking for support

- The support may be also by incentiving 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.
If we say no one should be left behind!!

- In the Board of Directors of CRASTE-LF sits 13 ministers from member countries. The French-speaking countries are more than 21.

In the area of capacity building, CRASTE-LF is trying to push the region forward.

If anyone wants to push more to not forget someone behind ... is welcome.
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