



# Space Development Overview of the Middle East and North Africa

SPACE POLICY AND INDUSTRY RESEARCH GROUP (SPIRG)

Henry Off | McGill Space Systems Group | 13 June, 2017

## Algeria

Astronauts: No

Operates Satellites: Yes

Sounding rockets capable: No

Agency:

- Algerian Space Agency

Legislation:

- Presidential Decree No. 02-49 "Creation, organization and functioning of the Algerian Space Agency (ASAL)" of 16 January 2002
- Presidential Decree No. 06-225 "Ratifying the Convention for Damage Caused by Space Objects" of 24 June 2006
- Presidential Decree No. 06-468 "Ratifying the Convention on Registration of Objects Launched into Outer Space" of 11 December 2006

Concerning bilateral cooperation, the Agence Spatiale Algérienne signed:

- Three (03) governmental cooperation agreements signed with Argentina, the Argentine space agency (CONAE), France (French space agency: CNES), and Ukraine (Ukrainian space agency NSAU);
- Memorandums of Understanding and Cooperation with the Russian space agency (Roscosmos), China (CNSA), the United Kingdom (UK Space Agency), Germany (DLR), India (IIRS), Syria (GORS) and Argentina (CONAE).
- In addition, three (03) governmental agreements are being finalized, with Russia (Roscosmos), South Africa (SANSA) and China (CNSA);

Membership

- UNOOSA
- CRTEAN
- ITU

Policy and Development:

- To propose to the government the elements of a national strategy in the field of space activity and to ensure its implementation;
- Establishing a space infrastructure to strengthen national capacities;

- Implement the annual and multi-annual programs for the development of national space activities in relation to the various sectors concerned and to ensure their monitoring and evaluation;
- To propose to the Government the space systems best suited to national concerns and to ensure, on behalf of the State, their design, implementation and operation;
- To propose to the Government a bilateral and multilateral co-operation policy adapted to national needs;
- Ensure the monitoring and evaluation of commitments arising from the obligations of the State with regard to regional and international agreements in the fields of space activity.

## Bahrain

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- National Space Science Agency (not currently functioning)

Legislation:

- In February 2014, Bahrain's King Hamad bin Isa Al Khalifa had issued a decree to establish a first-of-its-type national authority for aerospace sciences.

Membership

- ITU

Policy and Development

- The new agency seeks to establish sound infrastructure for the observation of outer space and the earth, make Bahrain a leader in space science and technology, build a culture and methodology of scientific research within the kingdom and encourage technical innovation, among other goals. It is interested in satellites to obtain data, to use them for remote sensing, and to conduct advanced space research, so it can be the engine for the state in the use of the latest satellite communication technologies.

## Egypt

Astronauts: No  
Operates Satellites: No  
Sounding rockets capable: No

Agency:

- NARSS

Legislation:

- No significant legislation.

Membership:

- UNOOSA
- CRTEAN
- ISNET
- ITU
- UNIDROIT

Policy and Development:

- NARSS mission is to pursue, transfer, and provide the most advanced technology in the fields of remote sensing and peaceful application of space sciences, and build the self capability to utilize these technologies to support the national activities for sustainable development. NARSS wishes to become one of the most advanced scientific agencies in conducting research and providing services in field of remote sensing and space sciences.

## Iran

Astronauts: No  
Operates Satellites: Yes  
Sounding rockets capable: Yes

Agency:

- IRANIAN SPACE AGENCY (ISA)

Legislation:

- “Statute of the Iranian Space Agency” (2005 and 2008), Available in the Journal of Space Law, Volume 34, Winter 2008, Number 2

Membership:

- UNOOSA
- ISNET
- APSCO
- ITU
- UNIDROIT

Policy and Development:

- Member of Asia-Pacific Space Cooperation Organization (APSCO).
- Goals:
  - I. Implementing the study, research, designing, engineering and operating issues in the fields of space service technologies, remote sensing and strengthening the communications and space technology networks inside and outside of the country as well as the sovereignty tasks of the Iranian Remote Sensing Center and the Ministry of Communications and Information Technology,
  - II. Preparing and regulating the mid and long-term programs for country’s space sector in cooperation with related institutions for proposing to the relevant referents,
  - III. Study for policy making in designing, manufacturing, launching and using research and applied satellites and providing space services for proposing to the legally cognizable referents,
  - IV. Doing research, designing, manufacturing and launch of the commercial, scientific and research satellites, and designing and establishing control center and launch of national satellites in cooperation with related institutions,

Iraq

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- Terminated

Legislation:

- None

Membership:

- **APRSFAF**
- **ISNET**
- **ITU**
- **UNIDROIT**

Policy and Development:

- None

Israel

Astronauts: Yes

Operates Satellites: Yes

Sounding rockets capable: Yes

Agency:

- Israel Space Agency (ISA)

Legislation:

- In January 1983, the Israeli government authorized the Minister of Science and Technology Prof. Yuval Ne'eman to establish the ISA.
- **ISA** has signed cooperation agreements with the space agencies of: United States (NASA), France (CNES), Canada (CSA), India (ISRO), Germany (DLR), Ukraine (NSAU), Russia (RKA), Netherlands (NIVR) and Brazil (AEB).

Membership:

- **UNOOSA**
- **APRSFAF**

- ITU
- UNIDROIT

Policy and Development:

The main goals for vision realization are:

- To build and to support satellite systems for space research and for Earth research from space.
- To develop technologies, knowledge and scientific infrastructure (including laboratories and human resources) required for space research.
- To promote international cooperation in space research and exploration, and for strengthening the national interests of Israel.
- To promote ties between Israeli society, space research, and exploration.

Jordan

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- None

Legislation:

- **Law No. 13 of 1995 on Telecommunications**

Membership:

- **UNOOSA**
- **ISNET**
- **ITU**

Policy and Development:

- While Jordan does not have a space agency of its own, its interest in space is starting to gain momentum. One of the most active space societies in Jordan is the Jordanian Astronomical Society (JAS), it was established in 1987 and has over 300 active members, it's now temporarily located at the Arab Union for Astronomy and Space Sciences (AUASS) – Amman.

## Kuwait

Astronauts: No  
Operates Satellites: No  
Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:

- None

Policy and Development:

- Kuwait has not yet established a space program, however, within Kuwait exists a strong knowledgeable network of motivated youth who are passionate about the space industry and related areas.

## Lebanon

Astronauts: No  
Operates Satellites: No  
Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:



- UNOOSA

Policy and Development:

- From 1960 to 1966, Lebanon started its space activities with a group of young, motivated scientists building and testing rockets in Haigazian College (today's Haigazian University), forming the "Lebanese Rocket Society". Following their initial success, the programme was supported by the state of Lebanon and the experiments were conducted with the supervision of the Lebanese Army for security purposes.

## Libya

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:

- **CRTEAN**
- **ITU**

Policy and Development:

- In 2014, the interim government has announced plans to send a Libyan into space by 2020. Its first mission has been provisionally titled the Astrological Pan-Galactic Revolution in Libya, although the name is still subject to GNC approval.

## Morocco

Astronauts: No

Operates Satellites: Yes (in process)

Sounding rockets capable: No

Agency:

- Royal Remote Sensing Centre (CRTS)

Legislation:

- Decree creating the Royal Remote Sensing Centre (CRTS), of January 17, 1990

Membership:

- UNOOSA
- CRTEAN
- ISNET
- ITU

Policy and Development:

- A number of projects combining spaceborne remote sensing and geographic information systems (GIS) are in the process of development or implementation.
- The CRTS is responsible for the acquisition, archiving and dissemination of data and images, Earth observation, project implementation and the development of methodologies in Remote Sensing and Geographic Information Systems and related fields. It also provides a program of Continuing Training in the field of space technology and participates in research programs and actions in partnership with national and foreign research institutions.
- On an international level, the activities of the CRTS are part of a cooperative and partnership relationship with several national and international institutions and agencies. It participates actively in the work of COPUOS and several regional and international organizations (EURISY, IAA, IAF, ISU, ...).

Oman

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:

- UNOOSA

Policy and Development:

- The Department of astronomical Affairs in the Ministry of Endowments and Religious Affairs includes three sections: section monitoring Crescents, the Department of astronomical observatories, endoscopes, the Department of Astronomy and Calendar reports.

Palestine

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:

- None

Policy and Development:

- Palestine has benefited from a special UNESCO scientific project, the first of its kind in the Arab world. The UN organisation has established the Chair in Astronomy, Astrophysics and Space Sciences at the Islamic University of Gaza in association with Al-Aqsa and Al-Azhar Universities in the besieged territory.
- The aim of the project is to promote teaching, research and outreach activities in the named subjects throughout Palestine.

## Qatar

Astronauts: No

Operates Satellites: Yes

Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:

- UNOOSA

Policy and Development:

- Qatar has been developing its space and satellite-related initiatives at various speeds and to different degrees of investment in recent years. Qatar has no space agency, but has launched satellites from other countries.

## Saudi Arabia

Astronauts: No

Operates Satellites: Yes

Sounding rockets capable: No

Agency:

- King Abdulaziz City for Science and Technology (KACST)

Legislation:

- Comprehensive National Science and Technology Policy, of July 8, 2002

Membership:

- UNOOSA
- ITU

- UNIDROIT

Policy and Development:

KACST is now working in the following programs:

- National Satellite Technology Program
- National ECP Program
- National Program for Advanced Materials and Building Systems
- National Program for Automobile Technology
- Aviation Technology National Program

Sudan

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- None

Legislation:

- None

Membership:

- CRTEAN
- ISNET
- ITU
- UNOOSA

Policy and Development:

- Satellite remote sensing: This is the most active area of space technology in Sudan. The Remote Sensing and Seismology Authority (RSSA) in Sudan was established in the 1970s under the National Centre of Research and it has ever been representing Sudan in Space Related bodies and have strong connections with Space Community at local, regional and international levels.

- Space Technology: Sudan has established many initiatives for sending satellites to space.

## Syria

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- In process of establishment.

Legislation:

- None

Membership:

- ISNET
- ITU
- UNOOSA

Policy and Development:

- In the midst of a civil war, the Syrian government has decided to approve the creation of a space agency with the goal of using space technology for exploration and observing the earth.
- The Syrian Space Agency will be a public body with a scientific and research nature, according to a state-run Syrian news service. But actually conducting science may prove difficult, as many Syrian scientists and academics have fled the country due to violence and persecution.

## Tunisia

Astronauts: No

Operates Satellites: No

Sounding rockets capable: No

Agency:

- CNCT

Legislation:

- Law No. 6 (1968) relating to the ratification of the Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies. 8 March 1968
- Law No. 11 (1973) relating to the ratification of the Convention on International Liability for Damage Caused by Space Objects. 23 March 1973
- Law No. 70-63 ratifying the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space. 8 December 1970
- Law on Telecommunications of 2008
- Law 88-83 of June 11 1988, on the Creation of the National Remote Sensing Center
- Decree n° 84-1125 creating the National Outer Space Commission (CNEEA), of September 24, 1984

Membership:

- UNOOSA
- CRTEAN
- ISNET
- ITU
- UNIDROIT

Policy and Development:

- Tunisia joined some projects of scientific research through programs and technical cooperation. Some of them are:
  - International organizations involved in Earth observation
  - Focal point for UN-SPIDER.
  - Focal Point for Regional Activity Center for Remote Sensing in the Plan of Action for the Mediterranean (ERS / RAC MAP).
  - IAF Membership in 2009

United Arab Emirates

Astronauts: No  
Operates Satellites: Yes  
Sounding rockets capable: No

Agency:

- UAE Space Agency

Legislation:

- UAE SPACE AGENCY FORMS WORKING GROUP FOR SPACE POLICY AND LAW

Membership:

- APRSFAF
- ITU
- UNOOSA

Policy and Development:

- - The mission to Mars program is the first by an Arab, Islamic country. The program will be fully financed and supervised by the UAE Space Agency and developed by Mohammed bin Rashid Space Centre (MBRSC) in support of international partners.
- The UAE Space Agency issued the national space sector policy in December 2016.
- The policy aims to build a strong and sustainable space sector in the UAE that supports and protects national interests and related vital industries. This includes contributing to economic growth and diversification, strengthening specialized Emirati skillsets and developing scientific and hi-tech capabilities.
- Over the past few decades, the UAE has hosted numerous conferences and forums of global importance for the space and satellite sector. These include events such as CABSAT, Milsatcom and the Global Space & Satellite Forum.

## Yemen

Astronauts: No  
Operates Satellites: No  
Sounding rockets capable: No



Agency:

- None

Legislation:

- None

Membership:

- None

Policy and Development:

- Yemen is one of the world's poorest countries, and the poorest outside of Africa. It does not have an agency, which is no surprise, but also no infrastructure in which one would arise. The Universities of Sanaa and Aden do not offer astrophysics, astronautics or aeronautics. The government has no ministry devoted to science of this type.