

Introduction to UAE's National Space Policy

Today, space is considered a bridge between humanity and the future. Exploring space is a perfect example of international collaboration and truly a source of inspiration. As a result, the interest among nations to explore space has increased globally in recent years, with now more than 60 countries developing space programs and conducting space-related activities. This includes the UAE, which has become a key regional and international player within the space sector.

The UAE has a historical affinity with outer space. Long ago, its people developed their knowledge of astronomy and navigation, which they used to travel by land and sea. The founder of the United Arab Emirates, the late Sheikh Zayed bin Sultan Al Nahyan, was a visionary and welcomed a NASA delegation as early as 1976. Since then, the UAE has been able to build a strong economy, as well as robust infrastructure and national competencies, which have made it a regional leader in space activities. Now, before the golden jubilee of the nation's foundation, we are capable of contributing to the exploration of outer space, and will continue to benefit economically and technologically from the industry.

The UAE has the largest space sector in the region in terms of both diversity and size of investments. The sector is driven by several leading space centers, institutions and companies that include the Mohammed Bin Rashid Space Centre (MBRSC), Al Yah Satellite Communications Company (Yahsat), and Thuraya Telecommunications Company. The state now owns and operates more than six satellites for different uses — soon to increase to ten satellites — and boasts more than AED 20 billion of national investments in space technologies.

The establishment of the UAE Space Agency and the Mars Hope probe project symbolize the ambitious UAE Vision 2021, which will see the establishment of a more diverse and sustainable economy that is based on knowledge and innovation. This will bring more prosperity to the people and a stronger presence of the UAE on regional and global echelons. It will also serve as a beacon of light and hope for the youth of the region, showing them what can be achieved through ambition and hard work.

The planning and management of national capabilities and capacities requires clarity in the government's approach and goals with respect to the national space sector. The UAE Space Agency therefore developed the National Space Policy in order to provide a precise framework. This includes conveying the government's approach, priorities, and ambitions in space; as well as coordinating national efforts and further aligning them with the state's priorities with respect to the space sector. Other key purposes include regulating the space sector, strengthening its role and ensuring its sustainability. Stressing the importance of international cooperation in the domain of outer space is also a fundamental element of the National Space Policy.

The National Space Policy is fully aligned with other UAE policies and national strategies, and serves as an extension of the UAE Vision 2021, the Higher Policy for Science, Technology and Innovation, and the National Innovation Strategy, in regards to the space sector. In addition, the UAE Space Policy has been informed by all existing international space treaties and international laws regarding the space sector, in particular those to which the UAE is a party.

Main Principles of the National Space Policy

The National Space Policy is the manifestation of extensive consultation and consideration with a number of other related governmental departments and initiatives, as well as taking international best practices into consideration. In accordance with the National Space Policy, the UAE space program and activities shall support and adhere to the following main principles:

- **Enhance the Lives of our Citizens**
 - The UAE space program will enrich our knowledge about the universe and how to continuously improve the lives of all UAE citizens. It will enhance education, scientific studies and research, thereby contributing to the transfer of knowledge and technical skills and to the creation of local jobs. It will be a source of national pride and happiness for the UAE people and the region.
- **Support UAE National Interests**
 - The Policy is aligned with important national interests that include safety, security and stability.
- **Support Growth and Diversification of our Economy**
 - Establishing a robust, sustainable, and innovative commercial space sector is a contributor to the continued growth and diversification of the UAE economy.
- **Promote Collaboration and Support UAE status**
 - The UAE is forming partnerships in the outer space domain that serve its goals, realize mutual benefits with its allies, and achieve global recognition for UAE, Arab and Islamic space activities.
- **Respect International Laws and Treaties**
 - The UAE recognizes the right of all nations to explore and use space for peaceful purposes and for the benefit of humanity. A safe, sustainable and stable space environment, free from impediments to access and utilization, is a vital national interest.

Goals and Ambitions

The UAE Space Agency has outlined highly ambitious goals for its national space program to strengthen the domestic space sector and expand its contribution towards humanity. These goals stem from the vision of the UAE leadership for the future. They are founded on the competencies of the UAE and its regional and global achievements in the space sector, and on future plans to continue increasing these achievements.

The UAE will strive to achieve the following goals through its national space program:

- **Expand the Utilization of Space to Protect and Support Vital Sectors**

- The UAE aims to strengthen the role of the space sector in supporting social, economic, political and national security initiatives. The industry will contribute to building capabilities such as disaster and crisis management, education and research as well as telecoms and broadcasting.
- **Develop a Sustainable, Competitive and Innovative Commercial Space Industry**
 - This involves creating an attractive regulatory environment to invite global companies and investments to the space sector, as well as entrepreneurship and innovation and develop national space professionals.
- **Conduct Scientific Space Missions**
 - The Hope mission to Mars is the key outer space exploration mission currently being conducted by the UAE. This mission will contribute to the global scientific community's understanding of the Martian atmosphere and other areas of international interest. Efforts are being made to elevate the UAE's status in order to become a center of excellence for educating and developing professionals in the fields of astronomy, space science technology and engineering.
- **Promote a Safe and Stable Space Environment that Supports Sustainable Space Activities**
 - The UAE is supporting relevant national and international efforts that aim to improve the planning, access to and efficient use of radiofrequency spectrum and orbital slots, as well as sustainability of space activities.
- **Establish and Expand UAE's Leadership in Space Regionally and Internationally**
 - The UAE is working closely with international space sector bodies and agencies in order to play an increasingly prominent role within the international space community. Recent achievements related to this goal include receiving membership on UN committees and becoming part of the International Astronautical Federation.

Key enablers

To achieve the National Space Policy goals successfully and efficiently, the UAE space sector requires a number of key enablers that underpin the implementation of the various initiatives and activities.

All relevant entities in the UAE shall therefore collaborate to develop and expand key enablers, such as continuously raising awareness on the importance of space and developing qualified UAE space professionals. Other enablers include creating an effective and attractive space regulatory environment, having active management of radiofrequency and satellite orbital resources and effective science, technology and innovation programs. It is also critical that there is national, regional and global collaboration, coordination and partnership, as well as adequate investment and financial support with appropriate facilities and infrastructure.

Guidelines

To support the development and growth of the UAE space sector, and achieve the National Space Policy goals in line with its principles, the stakeholders in the United Arab Emirates will implement the following guidelines which fall into three key interdependent areas of space activities: national functions; science, technology and exploration; and commercial activities.

National functions guidelines

This involves supporting national security, enhancing disaster monitoring and response as well supporting humanitarian aid. Space capabilities will be used to develop and boost the capacities of various sectors and vital areas that are important to the state. Another guideline includes utilizing space technology to improve the quality of life of UAE people by continuously improving the level of security, safety and protection of the environment and public health. Other guidelines include supporting natural resources management, the development of smart cities and e-Government as well as supporting international efforts for the promotion of sustainable space activities.

Science, Technology and Exploration Guidelines

These guidelines involve developing and encouraging scientific and aerospace engineering professionals across the UAE. Enhancing land and climate observation and supporting environment protection are also key guidelines, as well as supporting the development of national space technologies.

Commercial Sector Guidelines

UAE space services and commodities have proven beneficial for the UAE and the whole world. In order to support these national space commodities, it is important that they are used by, and bring benefits to, different entities in the state. As such, promoting UAE products and services is an important guideline under this section. The Agency will also work as much as possible to help companies operating in the domestic space sector — especially national companies. This includes assisting them in identifying and increasing available opportunities for them to access new markets and other economic sectors. It will also continue working on creating a competitive and sustainable commercial space industry. Promoting and sustaining innovation, creative entrepreneurship and commercial space projects are all crucial guidelines under this section of the National Space Policy.

Implementation and Governance

The success of the UAE's space program relies on the effective adoption and implementation of the National Space Policy by stakeholders. This requires regular monitoring and governance to ensure efficiency, effectiveness and progress in the planning and implementation of all initiatives emanating from the National Space Policy. Key factors for success in this regard include effective stewardship of the UAE National Space Program, active stakeholder involvement and coordination, and regular assessment of the space sector to identify key gaps and opportunities, as well as regular policy review and amendment.