

United Nations/Austria Symposium on Access to Space: Holistic Capacity-Building for the 21st Century Graz, Austria, 3-7 Sep 2017

The importance of infrastructure in Capacity-Building to perform Space-Related projects in Iran

HALEH ANSARI LARI
Deputy Director General, Center for International Affairs
Iranian space agency

INTRODUCTION TO IRAN



- Population (2016): 79,926,270
- Average family members: 3.3
- Population growth rate: 1.24%
- University scholars: around 5 million (2014)
- Engineering graduates in 2016: 335,000
- Users of 3G/4G Internet: around 27 million

Area: 1,648,195 (km)^2

Number of neighboring countries: 15 (8 through land, 7 through water)



Introduction to IRAN



- According to the World Bank reports:
- Second largest economy in the Middle East and North Africa (MENA) region
- GDP (2016): US\$412.2 billion
- GDP rank: 26

| Gross domestic product 2015 | | |
|-----------------------------|----------------------|-----------------------------|
| Ranking | Economy | (millions of US dollars) |
| 1 | United States | 18,036,648 |
| 2 | China | 11,064,665 |
| 3 | Japan | 4,383,076 |
| 4 | Germany | 3,363,447 |
| 5 | United Kingdom | 2,861,091 |
| 6 | France | 2,418,836 |
| 7 | India | 2,088,841 |
| 8 | Italy | 1,821,497 |
| 9 | Brazil | 1,803,653 |
| 10 | Canada | 1,552,808 |
| 11 | Korea, Rep. | 1,377,873 |
| 12 | Russian Federation | 1,365,865 " |
| 13 | Australia | 1,339,141 |
| 14 | Spain | 1,192,901 |
| 15 | Mexico | 1,143,793 |
| 16 | Indonesia | 861,934 |
| 17 | Netherlands | 750,284 |
| 18 | Turkey | 717,880 |
| 19 | Switzerland | 670,790 |
| 20 | Saudi Arabia | 646,002 |
| 21 | Argentina | 584,711 ь |
| 22 | Sweden | 495,694 |
| 23 | Nigeria | 486,793 |
| 24 | Poland | 477,066 |
| 25 | Belgium | 455,086 |
| 26 | Iran, Islamic Rep. | 425,326 |
| 27 | Thailand | 395,168 |
| 28 | Norway | 386,578 |
| 29 | Austria | 376,950 |
| 30 | United Arab Emirates | 370,296 |



Environmental Challenges in Iran

- Drought and Water Deficiency
- Dust and Sand Storm
- Low Productivity of agricultural fields
- Desertification and Deforestation
- Earth Pollution
- Other Disasters like Flood and Earthquake



Reviewing Three means for Capacity-Building



- Human Capacity-Building
- Infrastructure Capacity-Building
- Institutional Infrastructure capacity building

Human Capacity Building

Infrastructure Capacity Building

Institutional Capacity Building



Human Capacity-Building



- Bachelors, Masters and Doctorate Degrees in Universities and Research Institutes in Aerospace, GIS, Meteorology,...
- Joint Workshops on Space Application, Space law and Tele medicine with UNOOSA
- Offline and Online Training Courses in cooperation with Asia-Pacific Space Cooperation Organization (APSCO)
- Portal on the website of Iranian Space Agency in the field of space application with the efforts of more than 25 experts in the field of RS, GIS and IT at ISA
- Several workshops and Training Courses in World Space Week and Astronomy Week
- Cubesat competition for university students has been announced in 2016



Infrastructure Capacity-Building in Iran



- More than 28 faculties in the most national well-known universities which in Aerospace is studied
- APSCO Training Center has been established in Iranian Aerospace Research Institute in 2014
- One of Regional Support Offices of UN-SPIDER





The UN-SPIDER Support Office in Iran is hosted by Iranian Space Agency

Booklet on "Effective use of Space-based information to monitor disasters

and its impacts: Lessons Learnt from

Drought in Iran"





Effective use of space-based information to monitor disasters and its impacts

Lessons Learnt from Drought in Iran

Prepared by Iranian Space Agency



Remote Sensing Laboratory



- Iranian Space Agency allocates a specified budget for Space laboratories and Institutes
- Environmental Laboratory
- Atmosphere Laboratory
- Sensor CalibrationLaboratory





Mahdasht Space Center



 Was established in 1976 under the supervision of Iranian Remote Sensing Center and after 2003 is directed by Iranian Space Agency.

Capabilities and Facilities:

- Astronomy, Observatory dome
- Earth observation Center
- Meteorological station
- Direct receiving station
- GeoNetCast receiving station
- Geo-Portal



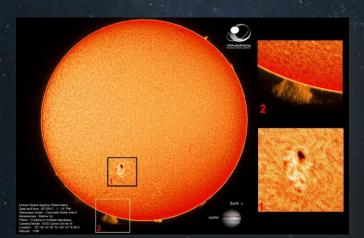


Observatory Activities



- Weekly visit of different teams from schools, universities and scientific institutes
- Workshop on Optical Monitoring of Celestial Bodies
- Training students to be prepared for Astronomy Olympiad
- Holding Summer camps from 2012









Institutional Infrastructure capacity building



- Decision making Institutional capacity building;
- Developing and fostering an environment to enhance decision making
- Building policies, programs and organizational structures in government and organizations



Action has been started



MOUs and contracts between Iranian Space Agency and the Ministry of Agriculture, the organization for crisis management, organization of meteorology, Environment and organization of Forests Management



Iran's Perspective for the future capacity Building



- Training high level officials and managers in decision making levels in space-affected industries to get familiar with the application of space technology
- Integrative thinking and working collectively to strengthen the ties between space and organizations
- setting policy & making decisions for the long term capacity Building development



Thank you for your consideration