

CONAE's capacities for contributing to an International Earth Observation System

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Argentina welcomes the invitation to participate in this unique international event, and the possibility of contributing to build the basis for International Earth Observation System. We celebrate this opportunity of meeting with our colleague institutions and the representatives of international organizations to join our efforts in this new initiative and seek to create the best conditions to share our knowledge for the benefit of all humankind.

Our own experience makes us understand perfectly how valuable having access to space information can be to understand the changes and processes our planet is going through, and also, how necessary it is to work in a framework of associative cooperation with national and international partners given the great, challenging effort a proper development of space capacities represents.

Argentina carries out its space activities through the actions of CONAE, the National Space Agency in charge of implementing the National Space Program, which, being focused on Earth observation, calls for the generation of Space Information Cycles (CIE's) that is, the set of information from space which, together with information from other sources, will have a relevant impact on some country selected socio-economic activities. The CIE's identified so far are:

- Agriculture, fisheries and forestry
- Climate, hydrology and oceanography
- Emergency management
- Monitoring of the Environment and Natural Resources
- Cartography, Geology and mining
- Health

With this aim, CONAE has worked hard together with our partners during the past years to develop its own means of accessing space information, namely:

Ground Infrastructure

CONAE's Córdoba Ground Station (ETC) has been in operation since 1997. It has capacity for data

reception and TT&C. Currently, it receives data from 12 international satellites, besides the data from Argentine missions.

The National Space Program foresees the setting up of a second ground station in Ushuaia, Province of Tierra del Fuego, at the southern tip of Argentina so as to enable the collection of data on the Antarctic continent.

Satellite Systems

The Argentine National Space Program provides for two satellite series and both are devoted to Earth Observation: one with main Argentine instruments in the optical range (SAC) and the other one in the microwave range (SAOCOM).

The SAC series has been developed in close cooperation with NASA, and it has included so far the participation also of Brazil, Denmark, Italy and Germany.

Up to the present, three Argentine satellites have been launched: SAC-B, which was devoted to scientific research; SAC-A, a technological demonstration satellite and SAC-C, the first Earth Observation Satellite of Argentina.

In this context, CONAE has joined efforts with NASA in the creation of the First International Earth Observation Constellation, with Argentine SAC-C and the US Landsat 7, EO-1 and Terra missions.

The next step in this line is SAC-D/Aquarius, planned for 2008, which will carry the NASA provided Aquarius mission for taking measurements of sea salinity which will contribute to the better understanding of the environment, together with CONAE provided sensors which will contribute to monitoring possible fire focuses.

On the other hand, the SAOCOM series involves the construction of two missions with an Lband full polarimetric Synthetic Aperture Radar (SAR) as main payload, with Belgium and Italian partnership.

These missions will be part of the Italian-Argentine System of Satellites for Emergency Management (SIASGE), together with the Italian COSMO-SkyMed missions. Knowing the great advantages of combining the information provided by L and X Band radars and the convenience of a shorter revisit period, Argentina and Italy are joining efforts to develop this system, which will be fully devoted the provision of information to lessen the consequences of natural disasters.

Satellite data applications

In the field of human resources training and the development of applications of space technology, CONAE has created, together with the National University of Córdoba and the support of the Italian Agency, the Gulich Institute of Advanced Space Studies.

The Institute is devoted to the development of advanced methods of applying space information to health, environment and natural and man-made disasters, using state of the art technology and working in a multidisciplinary environment.

Because of its goals, the Gulich Institute is the academic branch of the Federal System of Emergencies (SIFEM) of Argentina, and it will also become a Center of Excellence for the development of applications for the SIASGE System.

In the area of public health we are concluding with France the basis for creating in South America a network for early warning of epidemiological diseases using remote sensing data.

For the fulfillment of its goals, CONAE seeks partners to work under the concept of international associative cooperation, in which the cooperating parties are true partners, with the obligation to participate in the joint space projects and activities on equal basis as regards to quality.

In this sense, Argentina is part of several international efforts to maximize the benefits that derive from the application of satellite data to the monitoring and protection of the environment and the natural resources of our planet. Therefore, conscious of the dramatic consequences of natural and man-made disasters, CONAE has proudly joined ESA, CNES, CSA, NOAA and ISRO in the International Charter on Space and Major Disasters, a remarkable mechanism to share information at critical times. Also, CONAE is now part of the UNESCO-ESA Open Initiative for the application of space information to the protection of the World Heritage.

We consider regional cooperation is of foremost importance and therefore, CONAE is promoting the development of regional projects in the fields of study of the Gulich Institute, working closely with the UN for the preparation of expert meetings and training sessions to help strengthen the space capacities in South America.

Furthermore, we support all actions that contribute to the creation of suitable conditions for the creation of a

regional space agency, which contributes to sustaining space activities in our countries.

The proposal of this forum converges with the spirit our National Space Program of cooperating and sharing efforts towards achieving concrete, well-defined projects. So it is only natural for us to support it.