

**Statement of Sudan Delegation in the First International Space Forum, entitled “Space Science and Academy for Global Challenges”, Trento (Italy) on 24 Oct 2016.**

**Dr Tahani Abdalla Attia – Federal Minister of Communication and Information Technology, Republic of Sudan.**

Dear Honorable Stefania Giannini, Minister of Education, University and Research in Italy

Dear Honorable Colleagues; Ministers from the COPUOS Member States

Dear Honorable Presidents and Representatives of IAF, IAA and ASI

Dear Honorable Colleagues from University and Academy, and all Audience

My gratitude and thanks are due to Her Excellency Honorable Stefania Giannini, the Minister of Education, University and Research in Italy, the International Astronautical Federation (IAF), the International Academy of Astronautics (IAA) and the Italian Space Agency (ASI) for the kind invitation of the Sudan delegation to participate in this forum of Space Science and Academy for Global Challenges.

The major themes and the global challenges addressed by this forum are the: Climate Change, Big Data Management and Earth Protection. Climate change is a big issue for Sudan and sub-Saharan countries in North Africa. Drought and desertification are of big concern to both governments and academia. Space uses provide the necessary data for the analysis of and remedies applied to solve climate change effects. In turn, Big Data of large volumes, both structured and unstructured, which is made available by space sector to the different organizations forms one of the key rising challenges. Protection of the Earth against ultra-violet and other radiations becomes essential due to the dramatic changes that occur in radiation intensity during solar flares overcoming the Earth magnetic field. Despite their low probability, asteroids and their collisions with the Earth have to be catered for and protection measures have to be considered in order to mitigate the global effects that may occur.

Today, space applications are spread all over the world in the different fields of engineering, geology, agriculture, population and environmental studies. Sudan as an older member state of COPUOS and one of the active developing countries in the peaceful uses of space emphasizes that; space use is a global activity that requires a high level of scientific and technical knowledge. That could be realized through international cooperation in peaceful uses of space, besides providing developing countries with building of human capacity and knowledge transfer to enable them to contribute with the rest of the world positively to space activities.

Nowadays, space is used by the developed and high-tech countries and some developing countries, which at present spend money on becoming space capable. Sudan and other African and Middle East countries have started national space programs, hoping to eventually benefit from space applications. The African Policy and Strategy document developed by the African Union throws more light on this very same issue. Developing nations can utilize

economical engineering to lower costs of developing useful scientific and engineering projects, for both space and on-earth applications that would be useful for the developed countries as well.

Universities and research institutes active in space technology and remote sensing research contribute to the global efforts of developing the Earth observation and space sectors. Research institutes and universities have already incorporated in the design and launch of Cube and Nano Satellites. Small satellites benefit from research projects and postgraduate dissertations and scientific papers that are regularly produced in universities and research centers.

In order to achieve the greatest benefit from research institutes and universities, the space sector should support them and fund the R&D projects they run. The sector has to aid education and training programs in the fields of space science and engineering. University and Academy form a world wide network of knowledge supporting the exploitation of the space programs regardless the geographical location. University and Space Academy should contribute to space global challenges and they should have to undertake a major role in the governmental space policies. That requires the promotion of the programs of space science and technology in universities and academy.

Space activities have started in Sudan since the beginnings of 1970's, when small specialized units were established for remote sensing as parts of some governmental departments, such as Soil Maintenance, Land Investments, Water Program, Forestry and the Department of Surveying in the University of Khartoum. In 1977, the National Center of Remote Sensing was established under the umbrella of the National Council for Research. That center has been later transformed to the Remote Sensing and Seismology Authority (RSSA), which is one of the institutes of the National Center for Research (NCR). It is active in the field of analyzing and interpreting space images of the Earth surface to extract useful data about the environment and natural resources, as well as human economic activities.

The Sudan National Space Program has been launched in 2012 by the Ministry of Science and Communications at that time, in order to promote development of space activities intended to contribute to Sudan's economy and scientific development. In June 2013, the Institute of Space Research and Aerospace (ISRA) has been established as one of the institutes of the National Center for Research, as part of the Sudan Space Program. ISRA will contribute to local research and development in space science and aerospace engineering in Sudan. Within the same period, two universities which are as the University of Khartoum (UofK) and Sudan University of Science and Technology (SUST) have established space research centers in order to cope with the advances in the space sector. This October, ISRA organized the World Space Week in Sudan for the second time, which included seminars and exhibitions.

Finally, I hope fruitful outcomes and recommendations will result from this important forum for the benefit of humanity and our shared globe. Thank you for listening.