Statement of KARI (Korea Aerospace Research Institute)
By Hyo-Suk Lim

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Distinguished participants, space representatives from Latin America and Caribbean, and ladies and gentleman

I would like to express my sincere gratitude to IAF, ASI, and CONAE for invite me and Korean delegation to this forum and giving me this opportunity to address space development in Korea.

My name is Hyo-Suk LIM and Executive Director of Satellite Operation and Application Center of Korea Aerospace Research Institute (KARI). KARI, leading the space development in Korea, has been striving to research and develop in the area of satellite, rocket, lunar exploration, and aircraft.

Beginning from the 1990s, Korea has become active in space development. Korea's first experimental satellite called KITSAT (Korean Institute of Technology Satellite)-1 was launched in 1992. We named it Wooribyeol, which literally means 'Our Star' representing our aspiration toward space. Since then, the first Korean Sounding Rocket (KSR-1) was successfully launched in 1993 and Korea's first earth observation satellite, KOMPSAT (Korea Multi-Purpose Satellite)-1 in cooperation with the U.S was launched in 1999.

And what's more, in 2010, Korea's first geostationary earth observation (GEO) satellite, COMS which stands for communication, ocean and meteorology, was successfully launched and operated until now. Looking at the details of satellite, thanks to our successful development of KOMPSAT-1, we were able to launch several high resolution optical and SAR satellites. There are currently 4 LEO satellites and 1 GEO satellite in operation.

Based on the success of KOMPSAT series, Korea launched a new satellite program in 2015, the Compact Advanced Satellite (CAS)-500, to make a standardized satellite bus platform. A 500-kg class standard platform will be developed by 2019 and carry various payloads such as optical cameras, radar, microwave and hyper-spectral systems.

In terms of space launch vehicle, after two failures in 2009 and 2010, Korea's first space launch vehicle (KSLV-1) was successfully launched in 2013, with all Korean citizens counting down together. Korea is currently developing its own space launch vehicle, called KSLV-II. By doing so, our hope is to launch our own satellites independently from Korean territory. For KSLV-II, it will have a capability of launching 1.5 ton multipurpose satellite into LEO. The test launch vehicle with main engine will be test-launched this year and complete KSLV-II will be launched in 2021. Afterwards, it will go through a series of launches to secure reliability.

From 2012, Korea launched 'University Cubesat Mission' to provide undergraduate and graduate students with opportunities for hands-on experience in satellite development. This program includes education, contest, and development. Korean government provides development cost, technical support of cubesat development, space environment test, and launch service for the selected team.

For space exploration, Korea's priority is focused on a robotic lunar exploration, which is to develop a Korea Pathfinder Lunar Orbiter (KPLO) based on international cooperation with NASA and it is scheduled to be launched in 2020. As a follow-up to this project, Korea is planning to launch a lunar lander with its own space launch vehicle by 2030.

Korea has been actively promoting international cooperation with the countries for the peaceful uses of outer space. KARI and the CONIDA (National Commission for Aerospace Research and Development) of Peru signed a frame agreement on cooperation in joint utilization of satellite resources and exchange of space technological experiences in October 2016. KARI and CONAE of Argentina have discussed common interest in the exploration and utilization of space development and will sign MOU during this forum.

KARI and the Adama science and technology university of Ethiopia signed MOU in 2016 on the exchange of scientists, technical experts, and professional training. Based on the MOU, KARI and KAIST (Korea Advanced Institute of Science and Technology) hosted a space technology training course. In this year, KARI and Adama science and technology university started joint development of nano-satellite.

In addition, Korea contributes to future technology capacity development through the KARI International Space Training (KARIST) program. Since 2010, we have invited researchers from emerging countries to share our experiences on satellite development and remote sensing. 200 space experts from more than 30 countries were joined and next year will mark the 10th anniversary of KARIST. In its celebration, Korea is planning to hold a joint workshop with UNOOSA (UN Office for Outer Space Affairs).

On top of that, KARI has been providing the satellite image taken by KOMPSAT to the 'International Charter Space & Major Disasters' participating 18 space organizations operating satellites with an interest in a major disaster internationally.

The whole world is now facing various disasters including global warming, and it is not exceptional to Latin America, Caribbean, and Korea. The task remaining before us is to build a healthier and safer global society where the benefits of space technology can be shared by all. I sincerely hope the cooperative relationship between all participants would be last continuously.

Thank you very much.