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Agenda item 14 of the draft provisional agenda*
Long-term sustainability of outer space activities

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Note by the Secretariat

The present conference room paper contains a report received by the Secretariat from Ecuador on 28 December 2011.

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National Institute of Meteorology and Hydrology (INAMHI)

INAMHI Satellite Receiving System

Geostationary Operational Environmental Satellites (GOES)

The GOES satellites of the National Oceanic and Atmospheric Administration (NOAA) of the United States of America provide the kind of continuous monitoring necessary for data analysis. They circle the Earth in a geosynchronous orbit, which enables them to maintain a constant position over a fixed point on the Earth's surface. The satellites are positioned approximately 35,800 kilometres above the Earth, high enough for them to have a full-disc view of the planet. By remaining above a fixed point on the Earth's surface, they are able to monitor atmospheric conditions on a continuous basis and can thus identify severe climatic conditions such as tornadoes, floods, hail storms and hurricanes. The National Aeronautics and Space Administration (NASA) launched the first GOES satellite for NOAA in 1975 and then another in 1977. The United States is currently operating the GOES-11 and GOES-13 satellites. (GOES-12, which is partially operational, provides data support for Central and South America.)

GOES-11 and GOES-13

The United States normally has two meteorological satellites operating in a geosynchronous orbit along the line of the equator. Each satellite monitors almost a third of the Earth's surface, one focusing on North and South America and most of the Atlantic Ocean and the other on North America and the Pacific Ocean. GOES-13 (also known as GOES-East) is located at 75 degrees West longitude and GOES-11 (or GOES-West) at 135 degrees West longitude. Data from the two satellites are combined to show the entire Earth as a single image, day and night. Their coverage extends approximately from 20 degrees West longitude to 165 degrees East longitude.

GOES Satellite Receiving System – INAMHI

The acquisition process for a GOES satellite imagery receiving system ran from November 2009 until April 2010 and was conducted through the Ecuadorian public procurement system.[1] The satellite receiving system was the same as that installed in the offices of INAMHI in Quito and comprises the following components:

- 3.7 metre parabolic antenna
- Receiving system, hardware and software
- Processing system, hardware and software
- SKYVIEW analysis system, hardware and software (1st licence)
- SKYVIEW analysis system, software (2nd licence)

[1] www.compraspublicas.gob.ec.

SKYVIEW Analysis Software

SKYVIEW is a satellite imagery analysis software developed by the Swiss company Tecnavia, which operates in about 100 countries across the world and makes products designed for use in hydrometeorology. Analysis of the satellite images is currently carried out in both Quito and Guayaquil, with the result that a dedicated link is required to facilitate use of the images collected and stored on the processing server in Quito.