



Letter of Intent (LOI)

between Japan Aerospace Exploration Agency (JAXA) and Instituto Nacional de Pesquisas Espaciais (INPE) concerning the promotion and evaluation of a possible partnership in terms of using earth observation satellite data to monitor tropical forests

The Japan Aerospace Exploration Agency (JAXA) and the Instituto Nacional De Pesquisas Espaciais (INPE), hereinafter referred to as "the Parties", for further strengthening their cooperation in the peaceful uses of space technology;

Recalling that JAXA launched and has operated the "Advanced Land Observing Satellite" (ALOS) with the L-Band SAR (PALSAR) instrument;

Recalling that INPE has developed operational capabilities for using Earth Observation satellite data for monitoring tropical forests using optical data, and that INPE has been using PALSAR data available under the Kyoto and Carbon initiative for initial studies on using L-band SAR for tropical forest monitoring;

Considering Resolution 41/65 of United Nations General Assembly, which states that "remote sensing activities shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic, social or scientific and technological development, and taking into particular consideration the needs of the developing countries";

Taking into account the statement for the Brazil-Japan Space Sector Workshop held in Sao Jose dos Campos, Brazil, during 26-27 August 2010, signed by Dr. Gilberto Camara, INPE's Director General and Dr. Tomonori Nishimura, Chairman of Space Industry Mission on 5 October 2010: "*Brazil and Japan will promote and evaluate a possible partnership in terms of using earth observation satellite data to monitor tropical forests, in the context of the Reduction of Emissions from Deforestation and forest Degradation (REDD+)*";

Recognizing that JAXA and INPE have a keen interest to pursue such cooperation envisioned in the afore-mentioned statement;

Recognizing that INPE wishes to have systematic access to PALSAR data covering tropical forests, and to incorporate them into its monitoring system; and

Recognizing that JAXA wishes to cooperate with INPE in order to validate the PALSAR data covering tropical forests with an aim to enhance the REDD + Measuring, Reporting and Verification (MRV) capabilities,

JAXA and INPE intend to promote a partnership for using earth observation satellite data to monitor tropical forests, in the context of the REDD+ initiative. In order to fulfill their mutual intention:

- (1) JAXA intends to downlink the PALSAR data in SCANSAR mode covering Brazil directly to INPE's ground station with direct reception fee to be agreed by the Parties, and provide higher resolution PALSAR data in limited quantity to INPE for selected studies for enhancing the REDD+MRV capabilities;
- (2) INPE intends to provide in-situ data and optical high-resolution data to JAXA for validation actions. INPE will consider making airborne L-band SAR calibration campaigns available to JAXA;
- (3) INPE and JAXA intend to jointly produce a report on the use of PALSAR data for monitoring tropical forests; and
- (4) JAXA intends to grant INPE a license to use all PALSAR data in SCANSAR mode received by its ground station for scientific use, including monitoring activities. INPE is allowed to share such PALSAR data freely for scientific uses in Brazil. INPE will not make any commercial use of the data.

Specific terms and conditions to establish the above cooperation would be further defined and agreed upon through Memorandum of Understanding (MOU). Both Agencies will endeavor to negotiate and execute such MOU in a timely fashion.

The provisions set forth in this Letter of Intent will not create any legally binding obligations between the Agencies.

For INPE:

For JAXA:



Gilberto Camara
Director General



Keiji Tachikawa
President

Date: 8 Nov 2010

Date: Nov. 8, 2010