# International Mechanism for Cooperation in the Peaceful Exploration and Use of Outer Space

In the Case of



Japan Aerospace Exploration Agency

UNCOPUOS, Legal Subcommittee 53rd Session Vienna, 27 April 2014

## TYPES OF INTERNATIONAL AGREEMENT CONCLUDED BY THE GOVERNMENT OF JAPAN AND ITS EXAMPLES

- > UN Conventions (Treaty, Agreement)
  - ➤ Japan has concluded all of the UN Conventions for space activities except for the "Agreement Governing the Activities of States on the Moon and Other Celestial Bodies".
- **➤ Multi-lateral Agreement** 
  - ➤ IGA for International Space Station
- Bilateral Agreement
  - ➤ US-Japan Cross-Waiver Agreement

## MAIN DOMESTIC LAWS, POLICY, ETC., WITH WHICH JAXA SHOULD COMPLY IN THE COURSE OF CONDUCTING ITS ACTIVITIES.

Japan Aerospace Exploration Agency (JAXA) is an incorporated administrative agency that is the core organization in Japan's space exploration.

- ➤ Basic Space Law (Law No. 43, 2008)
- **▶** The Basic Plan on National Space Policy
- **➢** Act on General Rules for Incorporated Administrative Agency (Law No. 103, 1999)
- ➤ Law concerning Japan Aerospace Exploration Agency (Law No. 161, 2002) ("JAXA Law")
- **➤** Statement of Operation Procedures by JAXA



## ARTICLE 24 OF JAXA LAW CONCERNING INTERNATIONAL COOPERATION

JAXA shall correspond to requests of the competent Ministers to take necessary actions, when the competent Ministers deem it necessary

- •in order for Japan to fulfill <u>its treaty and other</u> <u>international agreements</u> regarding space development and utilization; and
- •upon request from a relevant government agency, in order to promote <u>international cooperation</u>, maintain international peace and safety or where there is an urgent necessity.



#### JAXA'S STATEMENT OF OPERATION PROCEDURES

Under the "Act on General Rules for Incorporated Administrative Agency", JAXA shall prepare a "Statement of Operation Procedures" and obtain the approval of the competent Ministers.

JAXA shall conduct its activities pursuant to the Statement of Operation Procedures.

Art. 21 of Statement of Operation Procedures provides measures taken by JAXA that are necessary to fulfil JAXA's responsibility under Art. 24 of JAXA Law.

## NECESSARY MEASURES FOR INTERNATIONAL COOPERATION PRESCRIBED BY THE STATEMENT OF OPERATION PROCEDURES

- ➤ JAXA shall take necessary measures such as obtaining a liability insurance used to compensate for certain damage caused by activities under international agreements such as the IGA or US-Japan Cross Waiver Agreement.
- ➤ To comply with international agreements, JAXA shall take other necessary measures regarding to the Code of Conduct for International Space Station Crew, treatment of technical Data and Goods, etc.



### INTERNATIONAL ARRANGEMENT BETWEEN SPACE AGENCIES

#### > Cooperative

- without compensation (each party shall bear own costs)
- ➤ for international space mission such as research cooperation, technical cooperation, etc.
- ➤ between advanced advanced countries
- between advanced developing countries

#### > Contract

onerous contracts such as sales contract, service contract, etc.

#### **EXAMPLES OF JAXA'S INTERNATIONAL COOPERATION (1)** ALOS KYOTO AND CARBON INITIATIVE (ALOS KC) 1/3

- ALOS KC: an international collaborative project led by JAXA.
  - Provision of data products and validated thematic information derived mainly from L-band SAR (PALSAR) data from ALOS (from 2014, ALOS-2).
  - ALOS PALSAR data is analyzed and processed to understand global-scale forest carbon volume change to compile useful data for control measures to tackle deforestation and forest deterioration.
- For data distribution, JAXA concludes an arrangement with each of cooperative organizations around the world. (research institutes, universities, national agencies for space/geospatial information, NGOs, etc.)

#### ALOS KYOTO AND CARBON INITIATIVE (ALOS KC) 2/3



- The Japan International Cooperation Agency (JICA) is promoting **REDD+** (Reducing Emissions from Deforestation and Forest Degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries).
- JICA promotes REDD+ projects in Mozambique with an aim to establish a forest resource monitoring system by utilizing satellite image data through technical cooperation with Mozambique's **National Directorate Lands and Forest (DNTF).**
- DNTF is also one of the cooperative organizations of ALOS KC.

#### ALOS KYOTO AND CARBON INITIATIVE (ALOS KC) 3/3 SPECIAL AGREEMENT

- Upon DNTF's request, JAXA concluded a special arrangement allowing
  - (1) use of ALOS PALSAR data for REDD+ project (use of PALSAR data for other purpose than ALOS KC is normally prohibited)
  - (2) provision of JAXA's Measurement, Reporting and Verification software to analyze PALSAR data (MRV software).
- Similar special arrangement to support JICA-Columbia REDD+ project also has been concluded (including dispatch of JAXA) personnel for PALSAR data analysis training using the MRV software).

@JAXA, METI Analyzed by JAXA

#### **EXAMPLES OF JAXA'S INTERNATIONAL COOPERATION (2)**

One of the APRSAF Initiatives: Sentinel Asia (1/4)

**APRSAF**: Asia-Pacific Regional Space Agency Forum

**Goal:** To promote and expand space activities and their applications for socio-economic development in Asia and the Pacific.

#### **Objectives**

- •Provide a forum where agencies and international organizations in the Asia-Pacific region gather to exchange views, opinions and information on space activities;
- •Identify and undertake measures to contribute to the sustainable development in the region.
- Promote and expand mutually beneficial cooperation in the region.

#### **Approach**

- Open and flexible framework for cooperation;
- Participation on a voluntary basis

#### Framework of Sentinel Asia (2/4)

Voluntary and best-efforts-basis initiative by participating organizations

#### **Space Community**

#### **APRSAF**

**Data Provision** 

Promotion of Utilization

**Capacity Building** 



#### Community

**Disaster Management** 

\*Asian Disaster
Reduction Center

#### **ADRC\***

**Member Countries** 

Utilization (User)

#### Sentinel Asia

Joint Project Team (JPT)

JPT consists of total **93** organizations including **79** organizations of **25** countries/region and **14** international organizations as of March 2014

JAXA is the secretariat of JPT.

JPT meeting in Bangkok, Thailand in November 2013

UN ESCAP / UN OOSA ASEAN / AIT etc.

**International Cooperation** 

**International Community** 



#### Activity of Sentinel Asia: Step 3 (2013 onwards) (3/4)





Communication satellites



Information delivering to personal terminals



**Monitoring** 



Information / data transmission

Post-disaster

Recovery:

Monitoring

#### Pre-disaster

#### Mitigation:

Community education
Preparedness:
Hazard map
Early warning system





#### Just after disaster

#### Response:

**Emergency observation** 





Information sharing (Web-GIS)



Human network
Capacity Building, Outreach

#### **Document Structure of Sentinel Asia (4/4)**

Terms of Reference on the Joint Project Team for Sentinel Asia Step3 (Step3 TOR)

Sentinel Asia Step3
Implementation Plan (Step3 IP)

Sentinel Asia (SA) to Charter Interface Control Document (RSCSA-IC0014)

Cooperative Initiative

Procedure of Emergency Observation

- Procedure of Emergency Observation Request (EOR Procedure)
- Procedure of Data Provider Node (DPN Procedure)
- Procedure of Data Analysis Node (DAN Procedure)



# THANK YOU VERY MUCH FOR YOUR ATTENTION.