

# Satellite Applications for Disaster Risk Reduction

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Japan Aerospace Exploration Agency (JAXA)

1. An Overview of JAXA
2. Major Earth Observation Programs of JAXA
3. Satellite Utilization in the Great East Japan Earthquake in 2011
4. Regional Framework to Support Disaster Management - Sentinel Asia

# Project Overview: 2<sup>nd</sup> Mid-Term Plan (Apr.'08 – Mar.'13)

## Contributions toward a Secure and Prosperous Society

### Earth Observation Satellites

Advanced Land Observing Satellite  
(ALOS) "DAICHI"



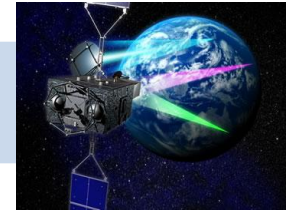
Greenhouse Gases  
Observing Satellite  
(GOSAT) "IBUKI"



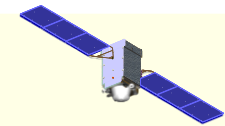
Global Change  
Observation Mission-  
Water (GCOM-W)  
"SHIZUKU"



### Communication & Navigation Satellites



Wideband Internetworking  
Engineering Test & Demonstration  
Satellite (WINDS) "KIZUNA"



1st Quasi-  
Zenith Satellite  
"MICHIBIKI"

## Expansion of Human Frontiers

### International Space Station (ISS)



H-transfer Vehicle  
(HTV)



ISS/Japanese  
Experiment Module  
(JEM) Kibo

### Space Science



Solar Physics Satellite  
"HINODE"

### Space Exploration



SELenological and  
Engineering Explorer  
(SELENE) "KAGUYA"



Asteroid Explorer  
"HAYABUSA"

## Development of Advanced Technologies

### Space Transportation



H-IIB  
Rocket

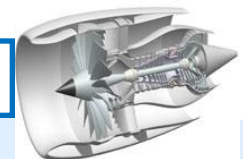


Epsilon Rocket



Research on Domestically made  
Passenger Aircraft Technology

### Aeronautics



Research on  
Environmentally Friendly  
Clean Engine Technology

# JAXA Organizational Structure

Dr. Keiji  
Tachikawa



**President**

**Vice-President**



Mr. Kiyoshi  
Higuchi

Budget (FY2011) :  
172.6 Billion Yen  
Personnel : 1,550

Policy Coordination

Admin. Management

Technical Management

Space  
Transportation  
Mission  
Directorate

Space  
Applications  
Mission  
Directorate

Human  
Space  
System &  
Utilization  
Mission  
Directorate

Aerospace  
Research &  
Development  
Directorate

Aviation  
Program  
Group

Institute of  
Space &  
Astronautical  
Science

Lunar &  
Planetary  
Exploration  
Program  
Group



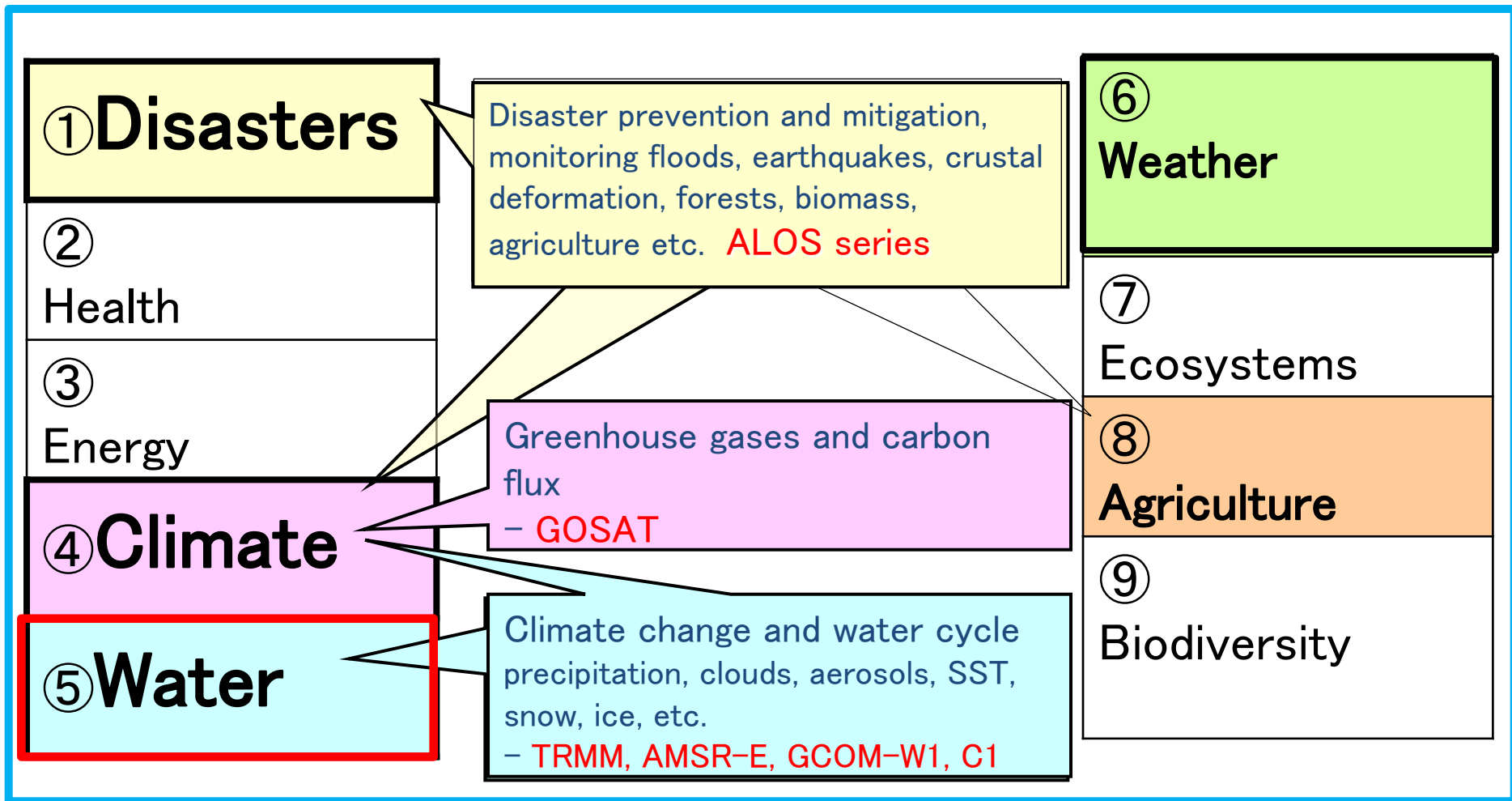
Tsukuba

Chofu

Sagamihara

# Major Areas of JAXA's Earth Observation Program

JAXA focuses on 4 areas out of 9 Societal Benefit Areas of GEOSS Implementation Plan.



# ALOS Series

**ALOS** Jan. 2006-May 2011



Weight : 4 t

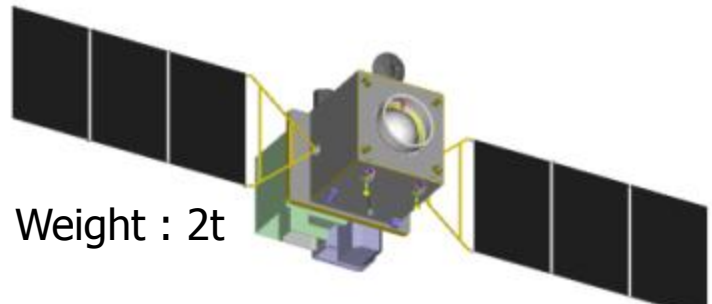
**PALSAR**

**PRISM**  
**AVNIR-2**



Weight : 2t

- **ALOS-2 (SAR satellite)**
  - **Launch in 2013**



Weight : 2t

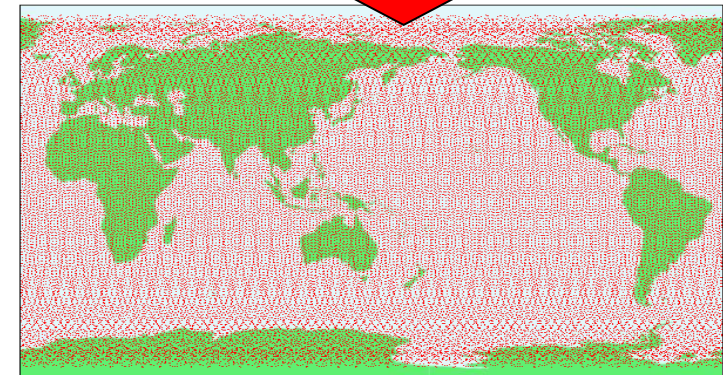
- **ALOS-3 (Optical satellite)**
  - **Launch in 2015(TBD)**



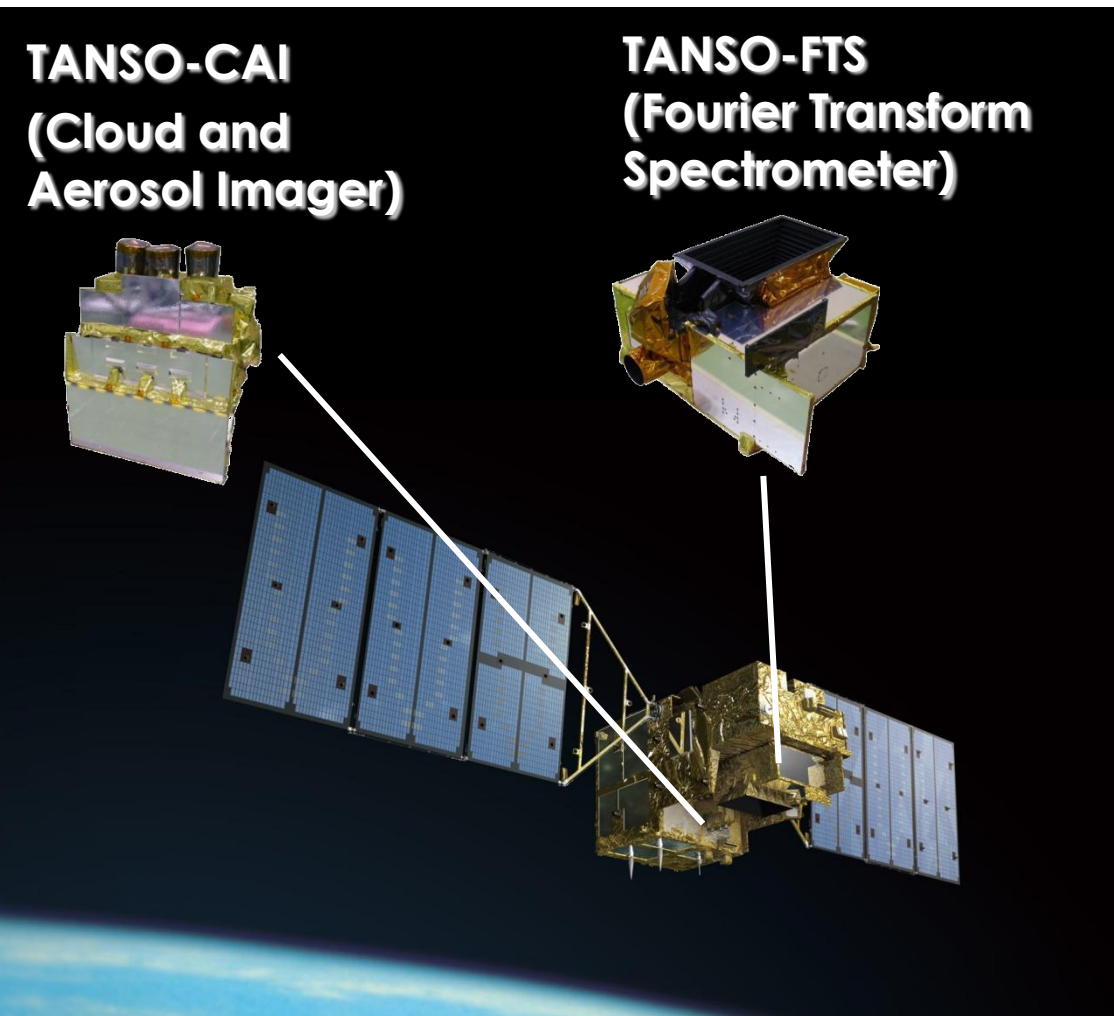
# Greenhouse Gases Observing Satellite (GOSAT)

GOSAT enables global (with 56,000 points) and frequent (at every 3 days) monitoring CO<sub>2</sub> and CH<sub>4</sub> column density. (Launched in Jan 2009)

Current Ground-based Observation Points (320pts)  
*Provided by WMO WDCGG*



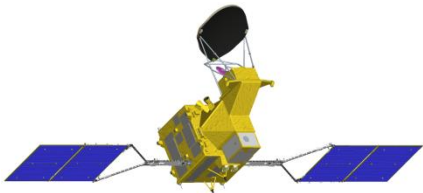
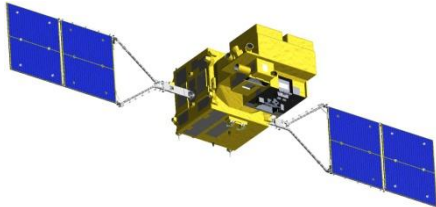
Increase of Observation Points using GOSAT (56,000pts)

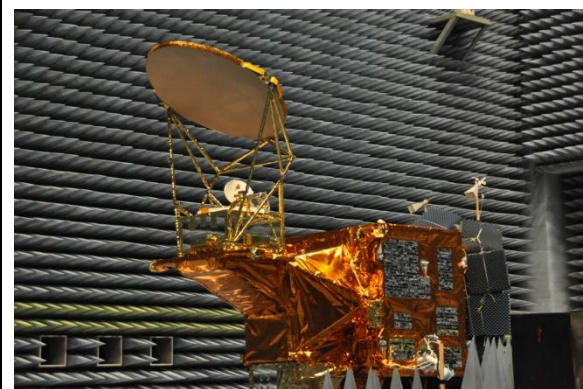


# Global Change Observation Mission (GCOM)

## Main Mission

- Establish and demonstrate **the global and long-term Earth observing system** (contribute to GEOSS)
- Contribute to improvement of **climate change prediction** in concert with climate model research institutions

	GCOM-W	GCOM-C
Orbit	Type : Sun-synchronous orbit Altitude : 699.6 km (A-Train) Inclination : 98.2 degrees Local sun time : 13:30±15min	Type : Sun-synchronous orbit Altitude : 798 km Inclination : 98.6 degrees Local sun time : 10:30±15min
Satellite overview		
Mission life	5 years	



GCOM-W1 EMC Test

The Afternoon Constellation  
"A-Train"



预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_7760](https://www.yunbaogao.cn/report/index/report?reportId=5_7760)

