

# JAXA report on the status of current and future satellites systems

Presented to CGMS-49 Plenary session, agenda item 1

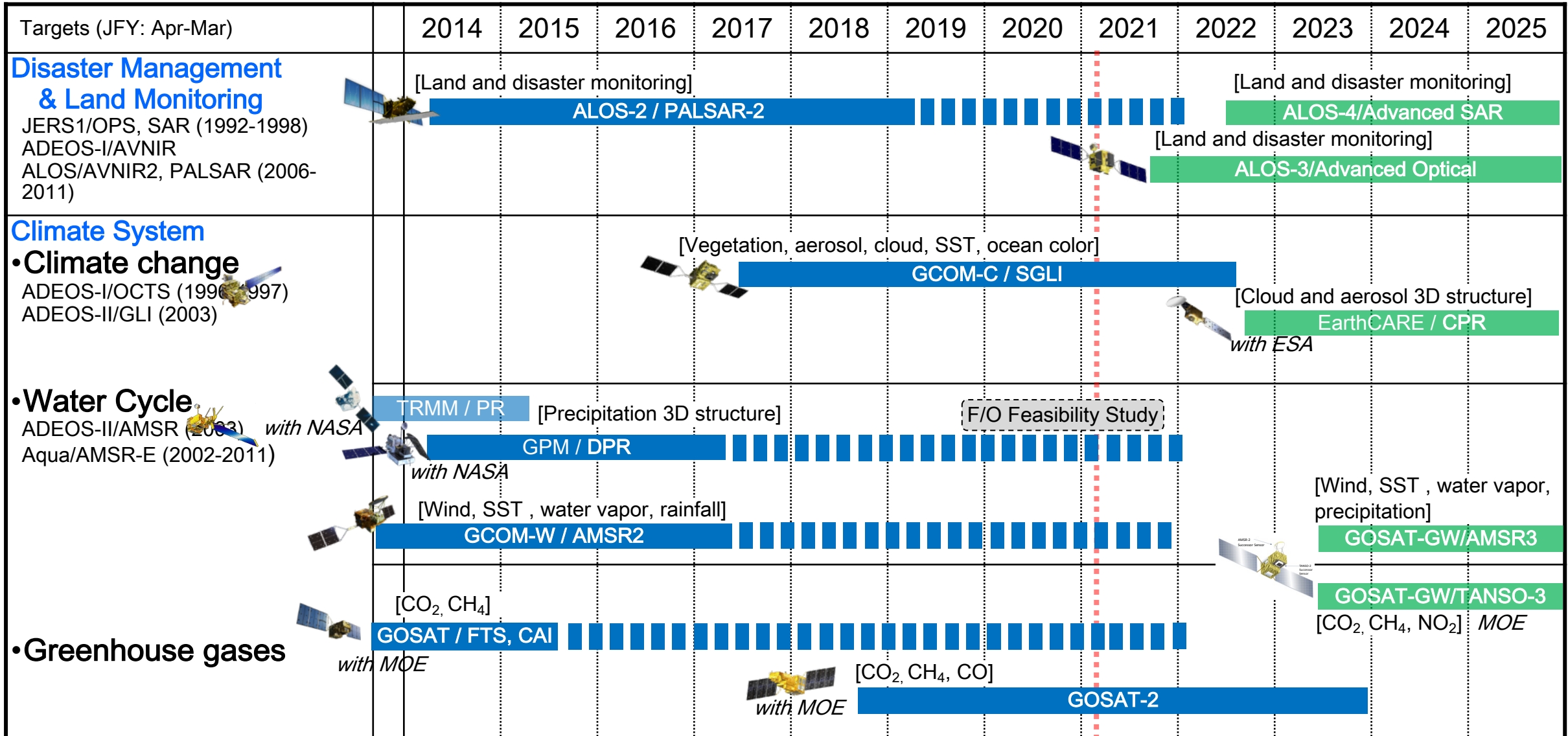
## Executive summary/abstract

JAXA operates various kind of satellite sensors and opens the products to the public. We keep developing and improving the products to address the climate and disaster issues. The major updates since CGMS-48 is the Global Observing SATellite for Greenhouse gases and Water cycle (GOSAT-GW), which will carry the GCOM-W follow-on instrument (Advanced Microwave Scanning Radiometer 3; AMSR3) and GOSAT-2 follow-on instrument (Total Anthropogenic and Natural emissions mapping SpectroMeter-3; TANSO-3), is being developed and to be launched in Japanese Fiscal Year (JFY) of 2023.

As for the next generation precipitation radar following to the TRMM/PR and GPM/DPR, JAXA proposed the advanced Ku-band Precipitation Radar with doppler capability and higher sensitivity. JAXA is discussing the possible collaboration with NASA. **The mission definition review of the next generation precipitation radar in JAXA is planned to be held in August 2021 (TBD).** JAXA would like to utilize **the report to be delivered by IPWG** in showing requirements from the international meteorological community.



# Japanese Earth Observation Satellites



Mission status  Completed  On orbit  Development  Pre-phase-A

# Future Missions for Climate and Water

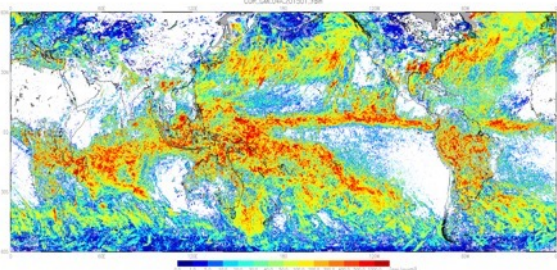
## Global Observing SATellite for Greenhouse gases and Water cycle (GOSAT-GW)



Water Cycle

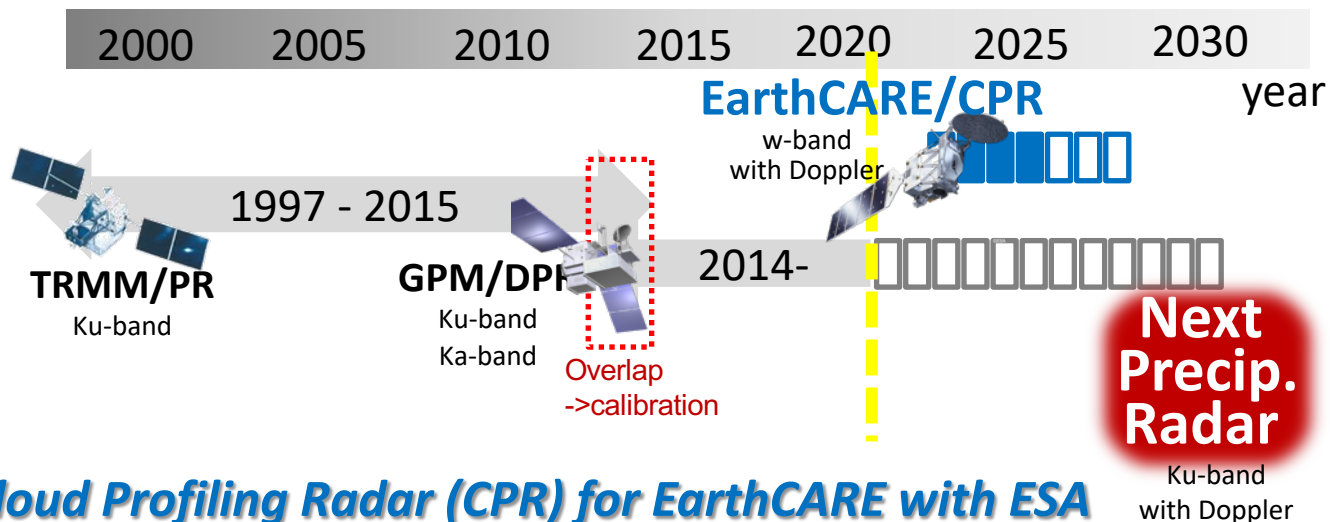
Greenhouse gases

AMSR3 for both snow & rain



- **GOSAT-GW is being developed and to be launched in Japanese Fiscal Year (JFY) of 2023.**
- **GOSAT-GW will carry:**
  - GCOM-W follow-on instrument (Advanced Microwave Scanning Radiometer 3; AMSR3)
  - GOSAT-2 follow-on instrument (Total Anthropogenic and Natural emissions mapping SpectrOmeter-3; TANSO-3),

## Spaceborne cloud and precipitation radars



### Cloud Profiling Radar (CPR) for EarthCARE with ESA

- JAXA and NICT provide the world's first W-band Doppler radar (CPR) on the EarthCARE to be launched in JFY2022, which observes clouds, aerosols, and radiation on a global scale.

### Next generation precipitation radar

- Feasibility study for follow-on mission is now ongoing in JAXA, and discussed with NASA for collaboration.
- The mission definition review is planned to be held in Aug2021 (TBD).
- **JAXA would like to utilize the report to be delivered by IPWG in showing requirements from the international meteorological community.**