

Observation for the validation of terrestrial ecological products of GCOM-C

Principal Investigator:

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Post-Doc Researcher:

Tomoko AKITSU (秋津朋子): Univ. Tsukuba (until 2021/09), Toshiyuki Kobayashi (小林利行): Univ. Tsukuba (from 2021/07)

GCOM-C 2022/01/17 JAXA Joint PI Meeting of JAXA Earth Observation Missions FY2020 in Tokyo

Global Change Observation Mission-Climate

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GCOM-C陸域生態系情報の検証

Principal Investigator:

- Kenlo Nishida NASAHARA (奈佐原顕郎) : Univ. Tsukuba

Cooperative Investigators:

- Reiko Ide (井手玲子): NIES
- Keisuke ONO (小野圭介): NIAES
- Atsushi KUME (久米篤): Kyushu Univ.
- Hideki KOBAYASHI (小林秀樹): JAMSTEC
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JapanFlux **JaLTER**

Framework

1. Collection of ecosystem validation data

for LAI, biomass, & fAPAR... JAXA Super Sites 500

(with Tachiiri & Nagai & Kobayashi: JAMSTEC & Kajiwara & Honda PIs)

for land cover map ... SACLAJ

(with JAXA Ecology Group)

for flux, phenology etc. ... JaLTER, JapanFlux, PEN

for VI, spectral reflectance ... PEN

2. Development of terrestrial SGLI global maps

of LAI/fAPAR

(with Kobayashi: JAMSTEC & Yan PIs)

of percentage of tree cover

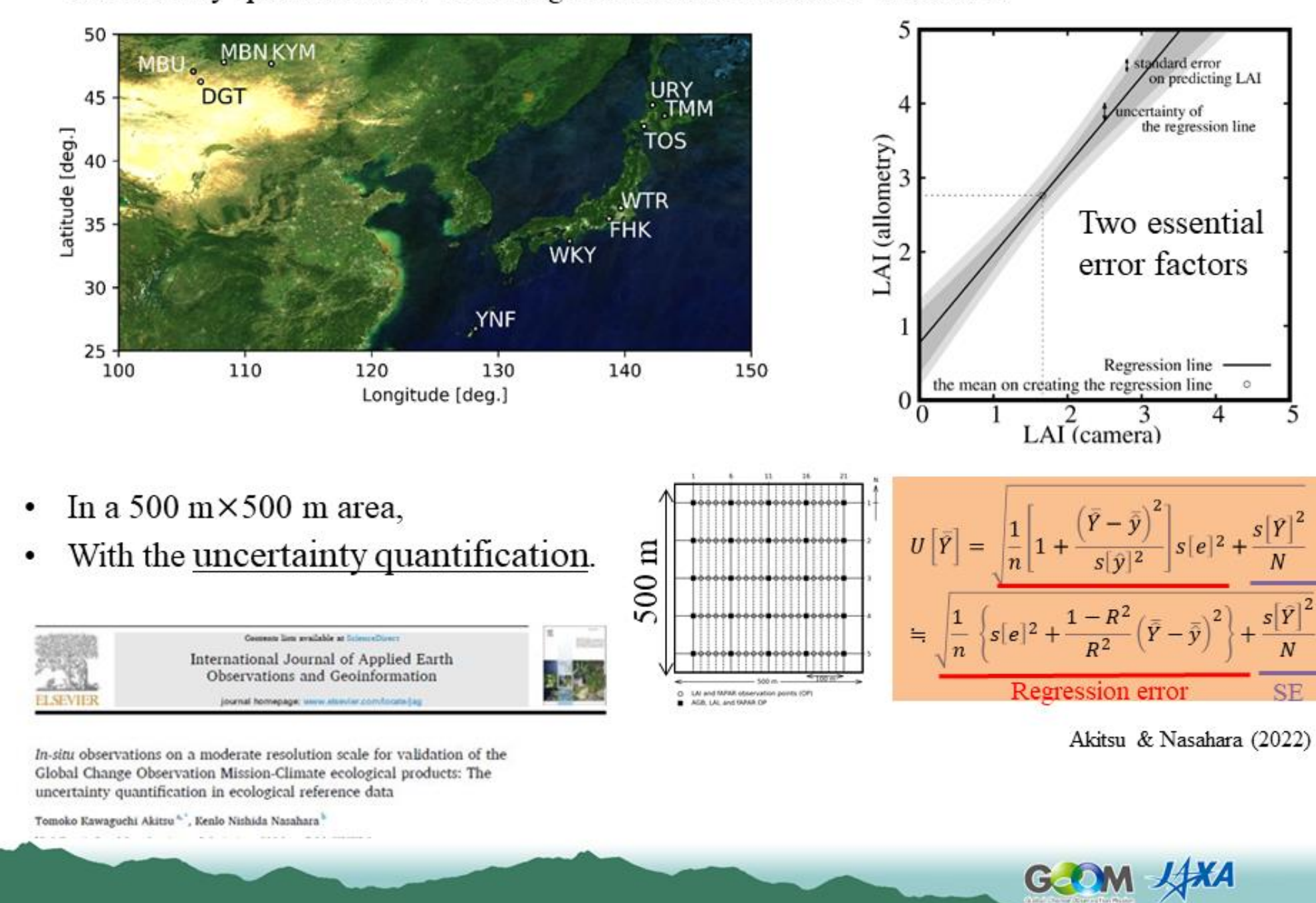
of land cover

(with JAXA Ecology Group)

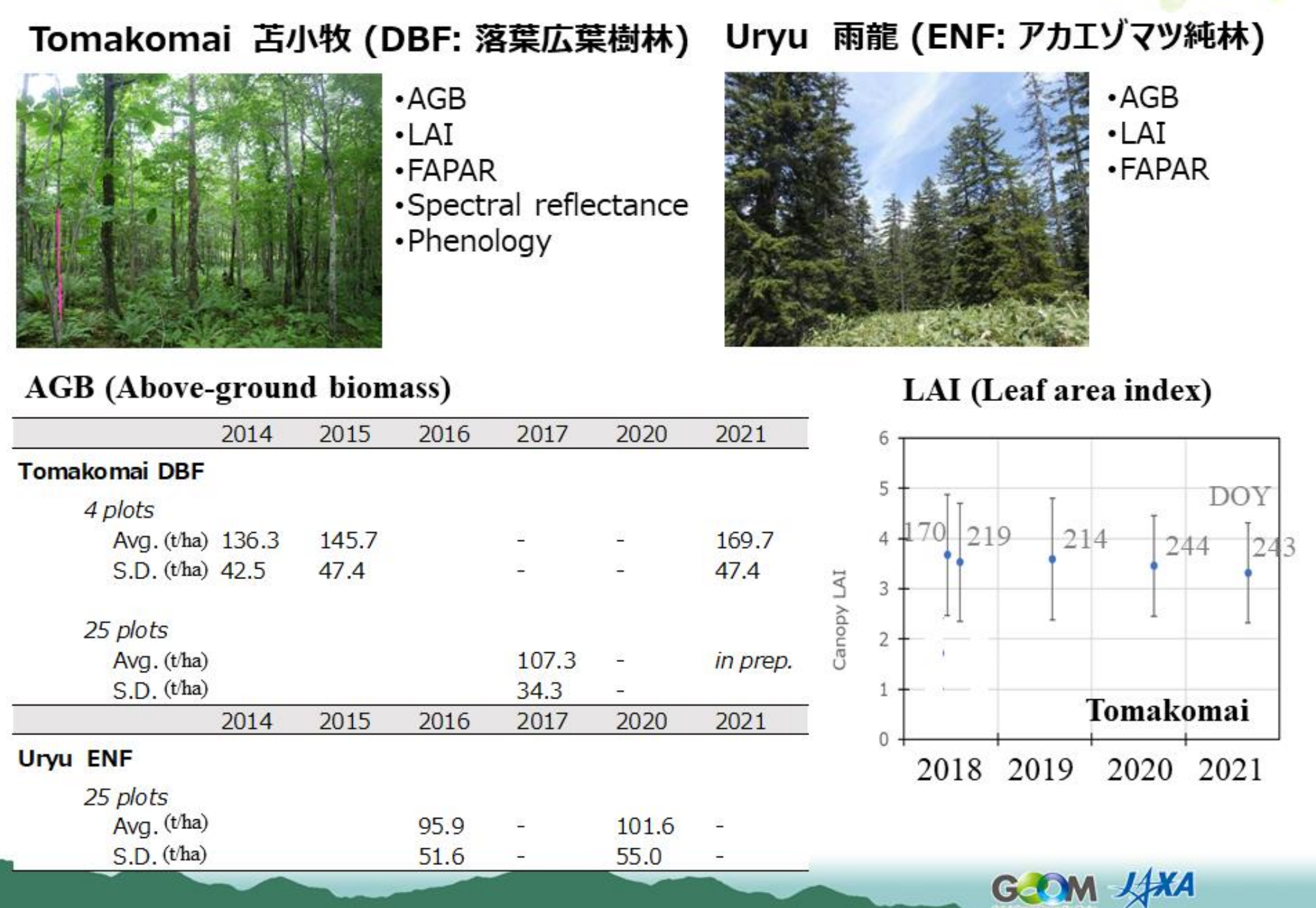
of monthly vegetation cover

JAXA Super Sites 500: large scale ecological validation sites

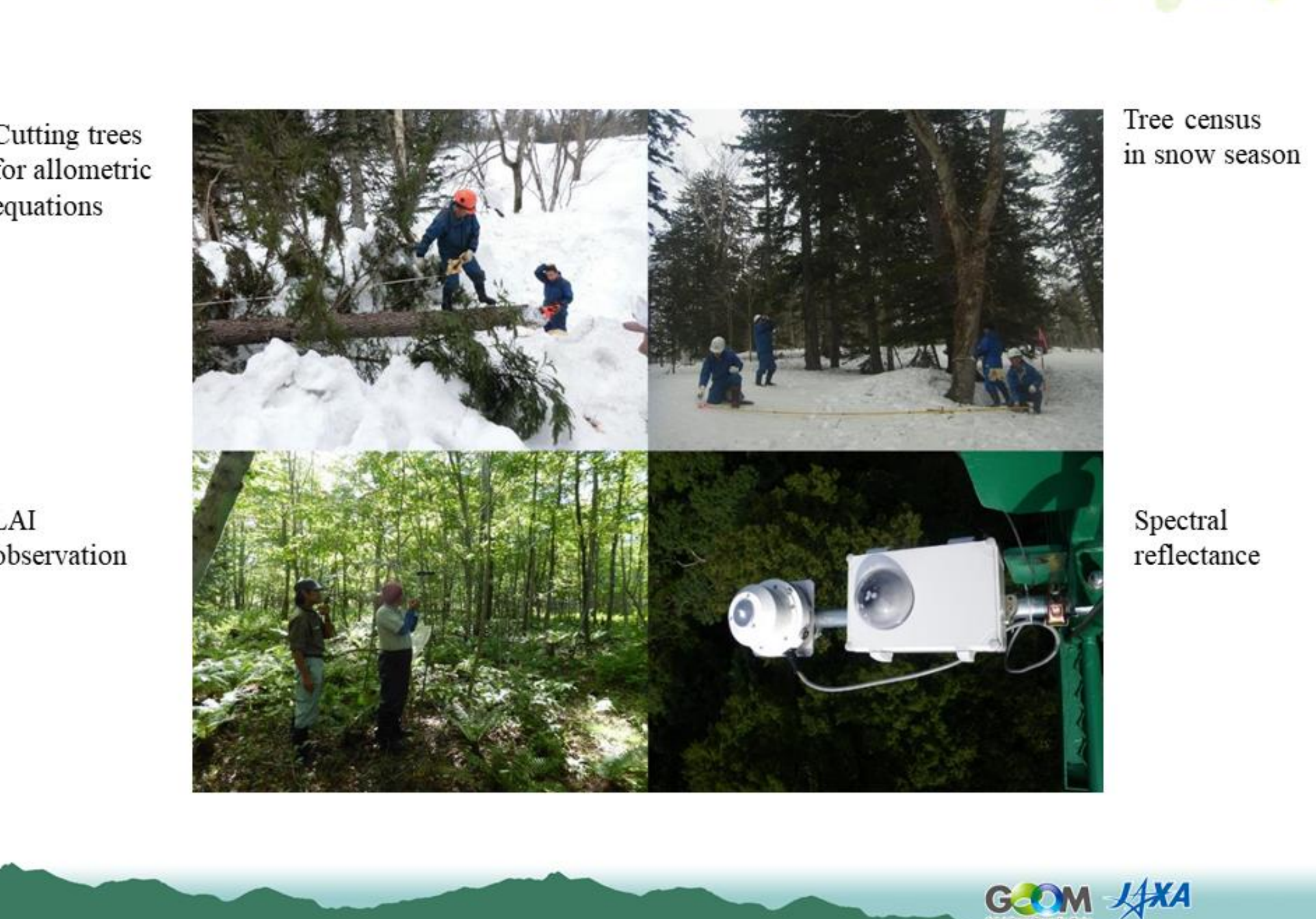
— Uncertainty quantification of ecological reference data for validation —



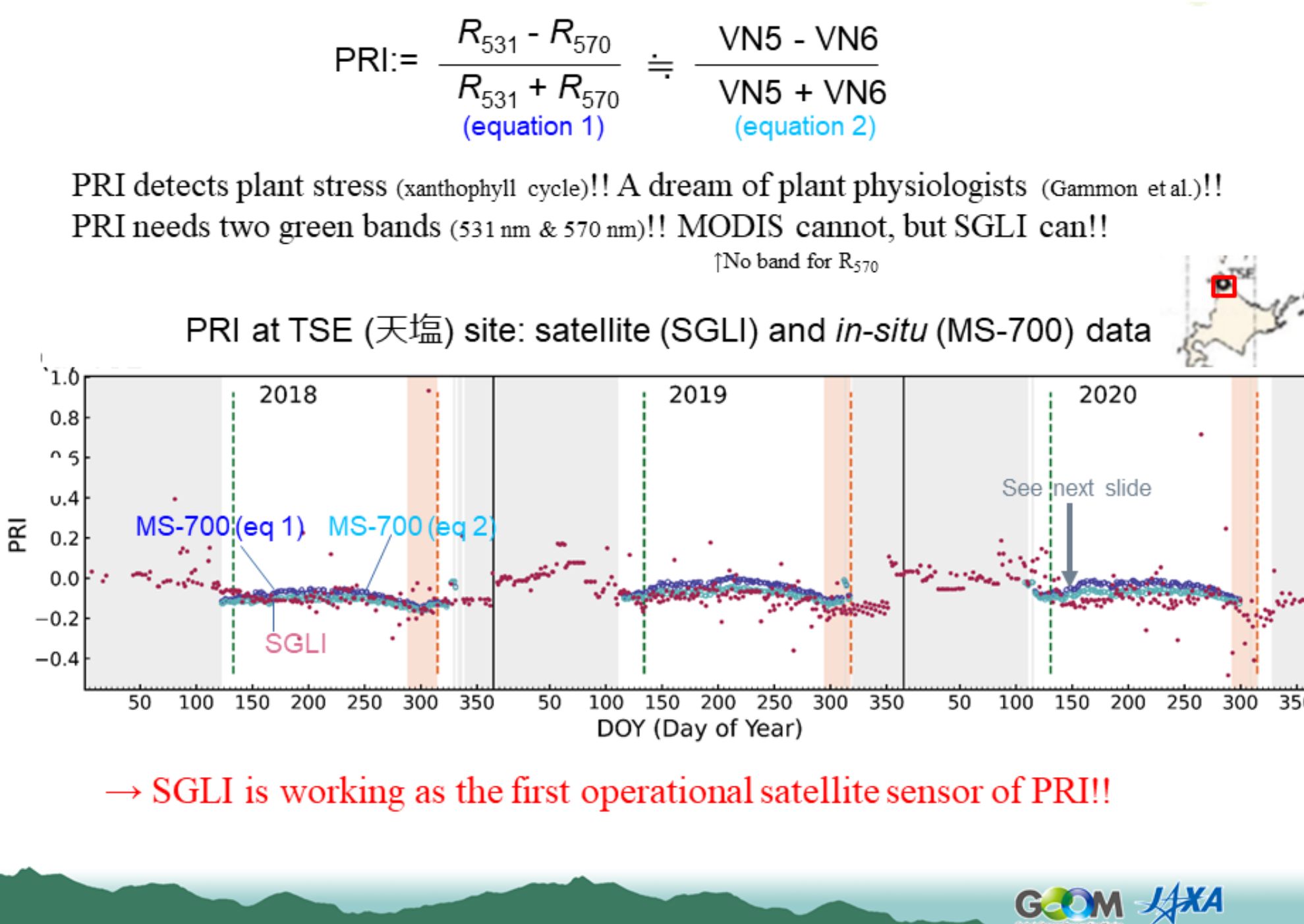
JAXA Super Sites 500 in Hokkaido (Nakaji CI)



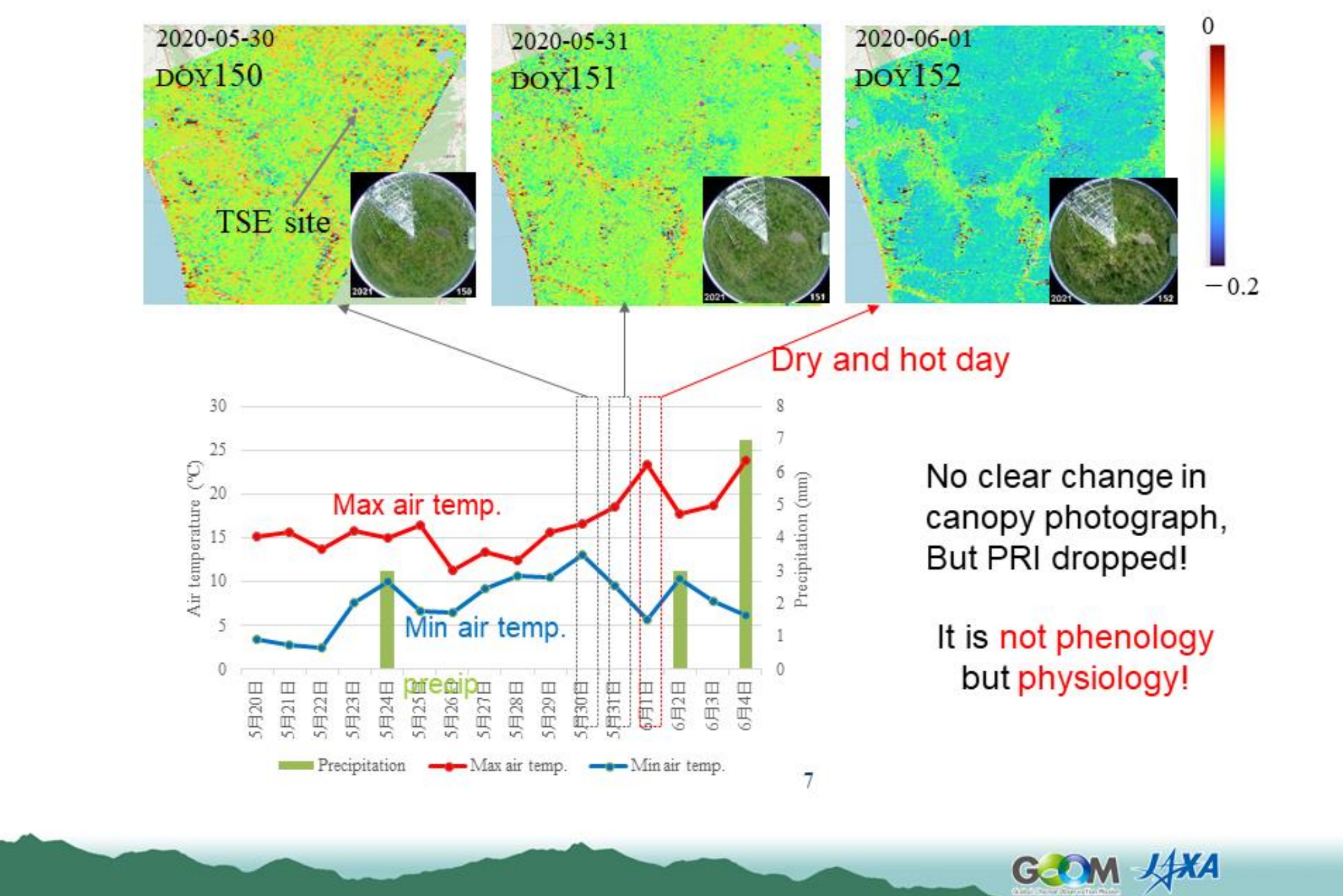
Field works by Hokkaido Univ. members (Nakaji CI)



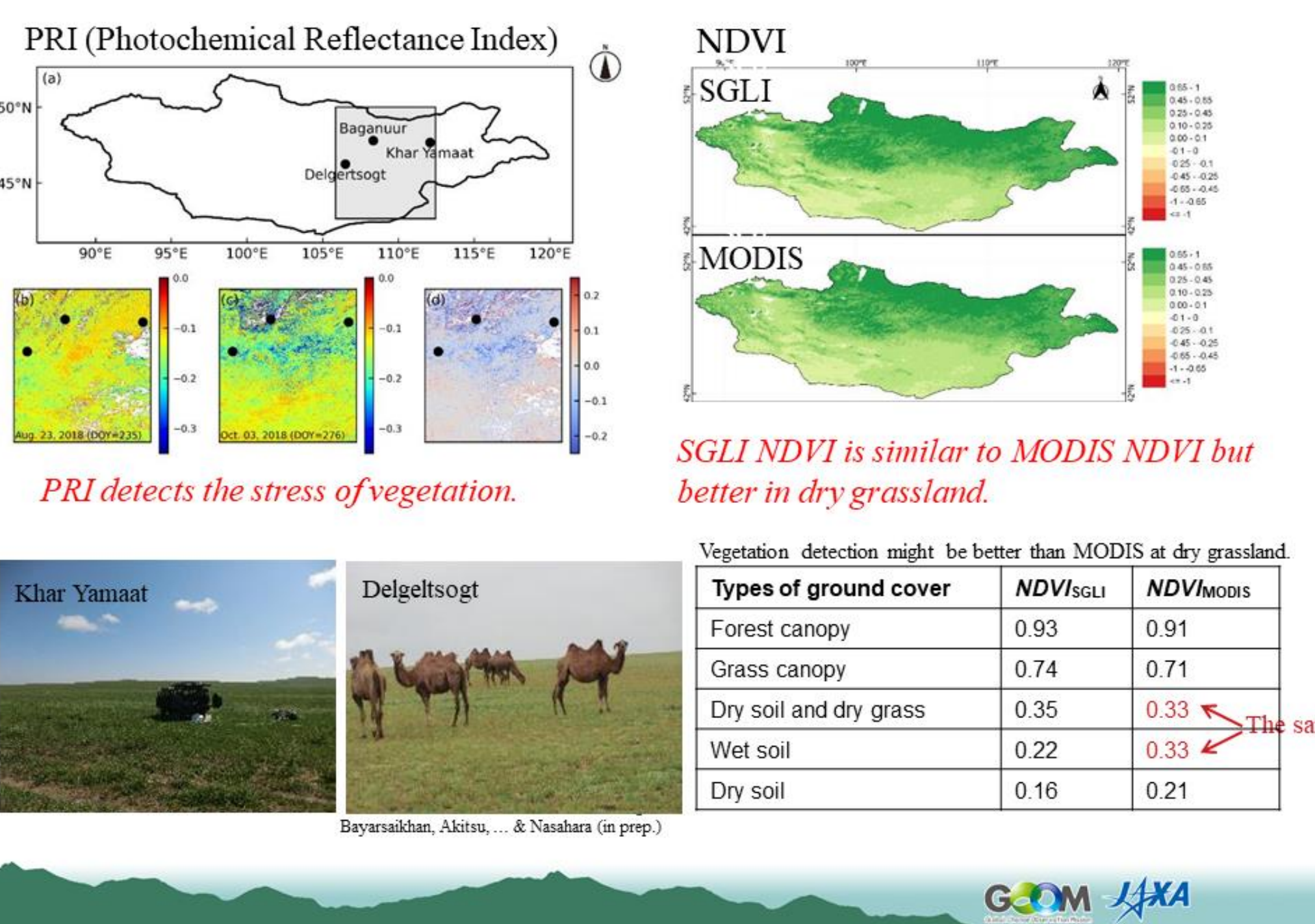
Photochemical reflectance index (PRI)



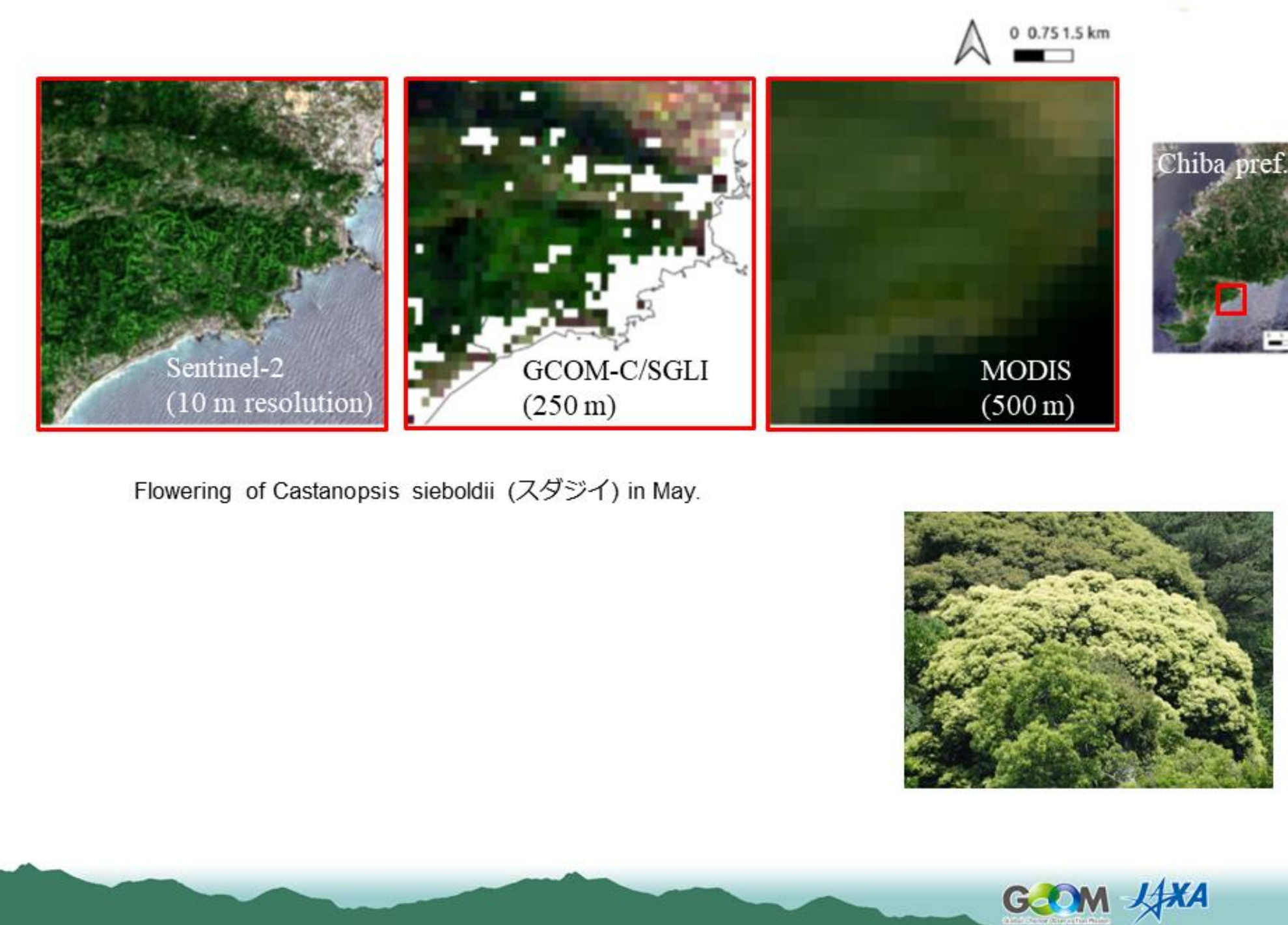
SGLI PRI responds to plant physiology dynamics!!



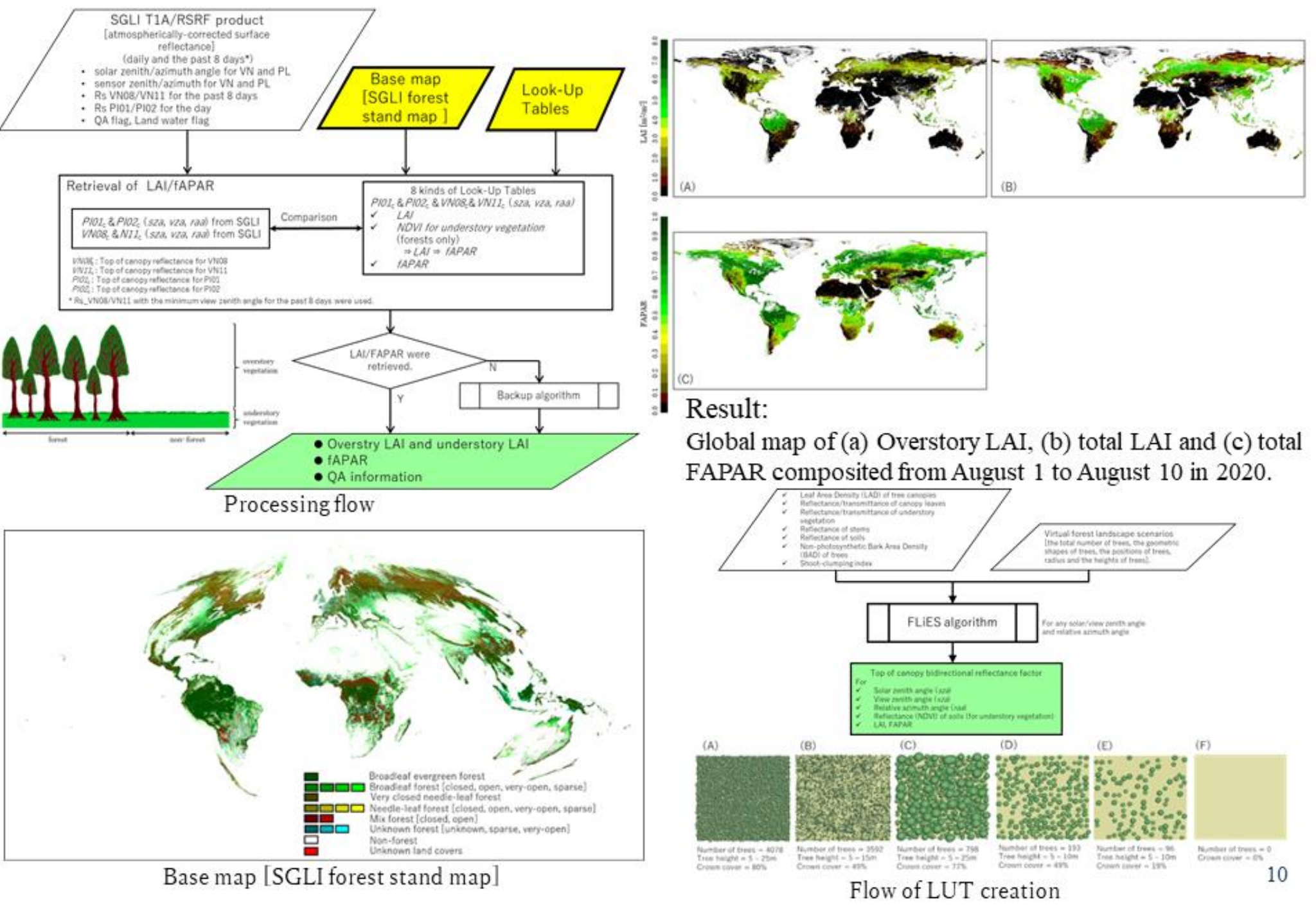
PRI and NDVI in Mongolian grassland



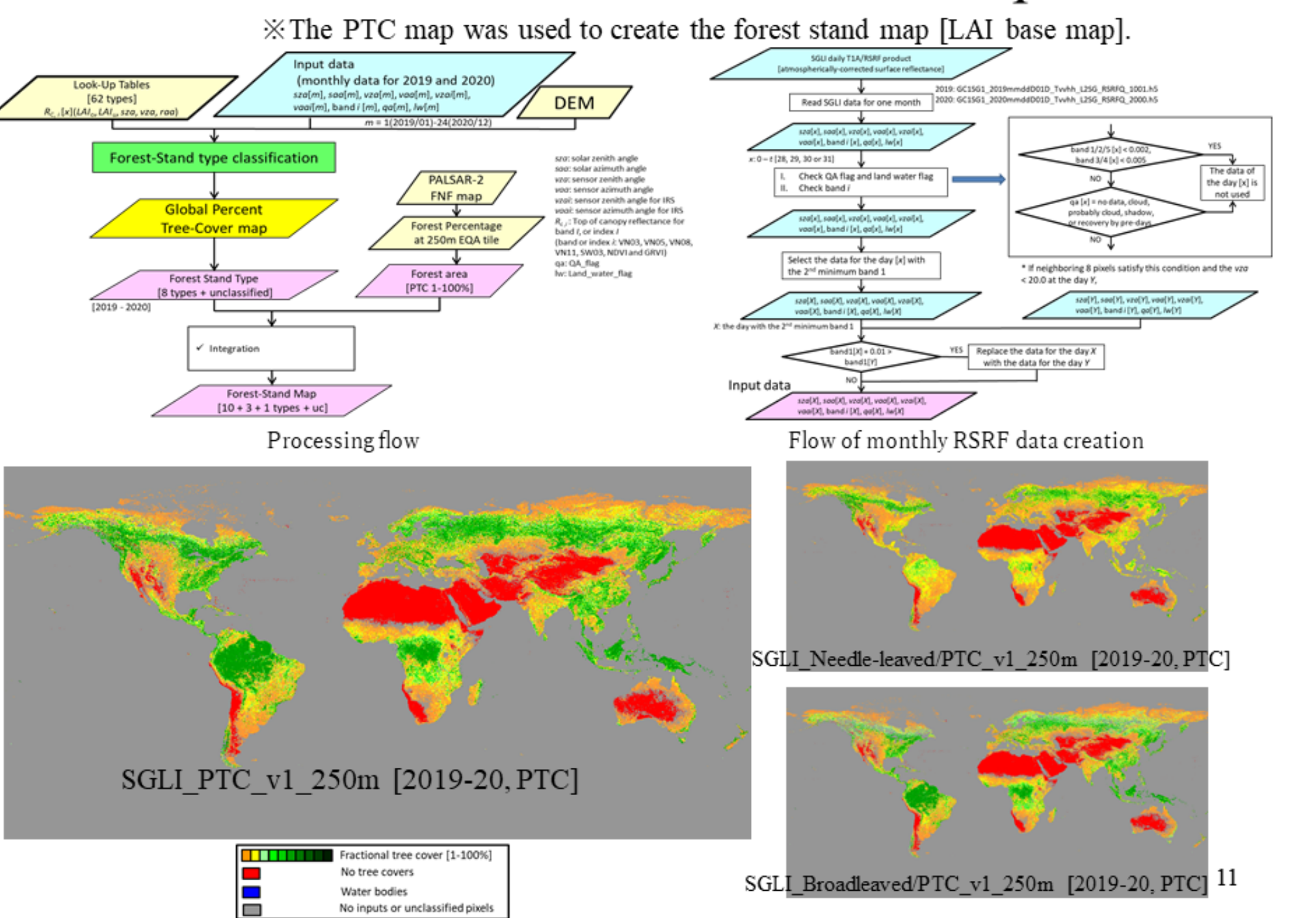
Flowering Phenology detected by SGLI



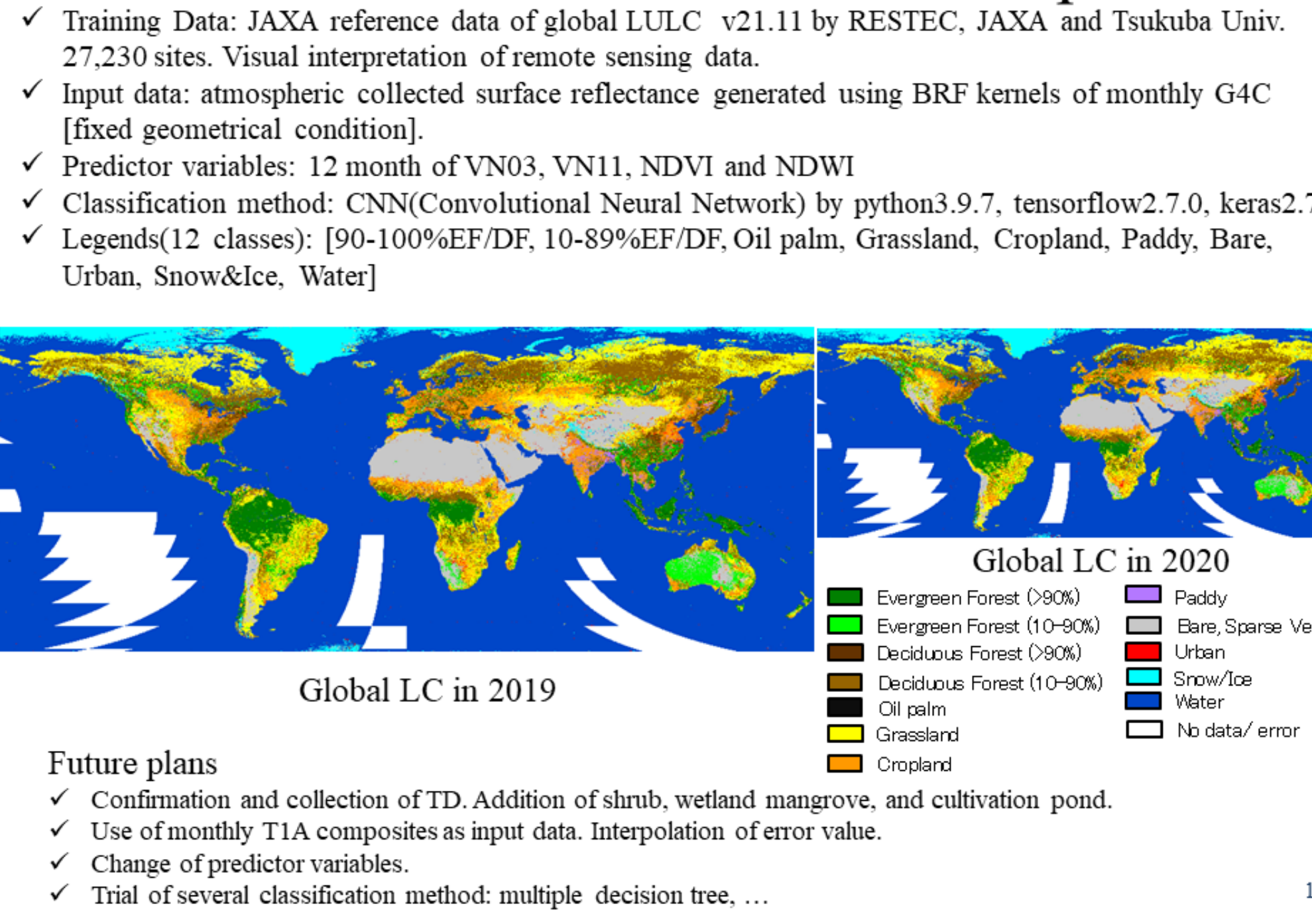
Development of GCOM-C/SGLI LAI and fAPAR algorithm



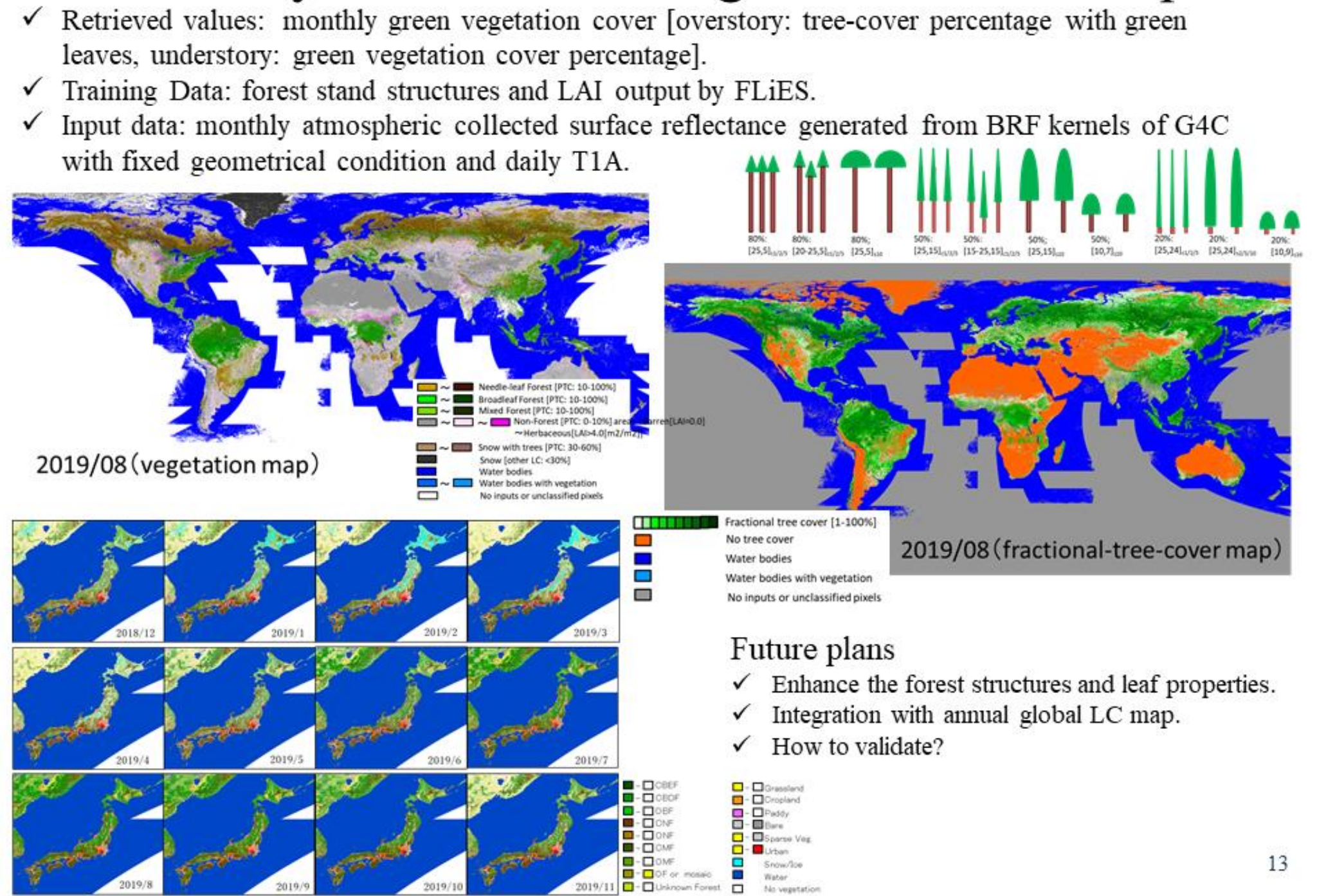
Global Percent Tree-Cover map



SGLI Global Land-Cover map



Monthly SGLI Global Vegetation Cover Map



Publications in 3 years

