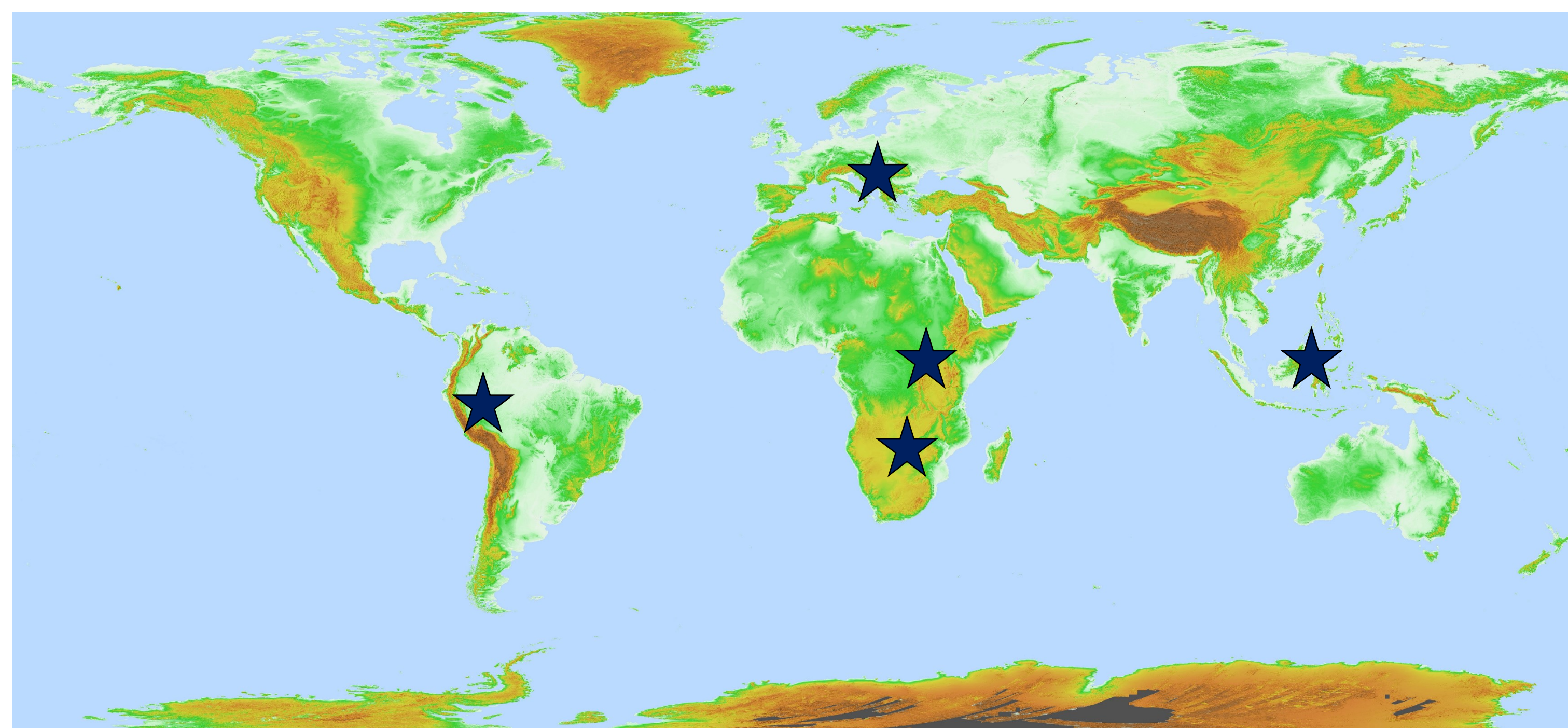


Activities



Base Map: ASTER GDEM

Current Joint Research Projects

- Pb Contamination Assessment in Kabwe, Zambia (2016 –)
- Sustainable Mining Development in Bor, Serbia (2015 -)

Past & Trial Projects

- Wetland System Monitoring in Kampala, Uganda (2017)
- CO2 Emission in Boalemo, Indonesia (2015 - 2017)
- Peruvian Amazon Monitoring in Madre de Dios, Peru (2015)

Sustainable Mining in Serbia 2016

- **Mining Sites** in Bor, Serbia was open 1903
- **Serious environmental issues**
- This project is for developing methods of mine waste and water managements & recycle of mine waste products
- We invited Serbian members a training program in Japan, November, 2015 & May, 2016
 - Spectral Measurements
 - GIS Analyses
 - Database Foundation for GIS, etc.

- We installed GDIS, August, 2016
- We Upgraded GDIS August, 2017



Pb Contamination in Zambia 2016

- Lead (Pb) contamination is a serious issue around Kabwe, Zambia.
- This project is for making clear contamination mechanisms & impacts to ecosystems & human beings
- We characterize soil & plants by **remote sensing techniques**
 - Identifying Pb contamination mechanisms
 - Visualizing health hazards & economic risks
- We collected over 60 samples around Kabwe
 - We are analyzing & using them for data classification
- We held **Capacity Building** @ Univ. of Zambia
 - 3-day training for basic remote sensing & GIS utilization
- We are designing **Network System & GDSS**

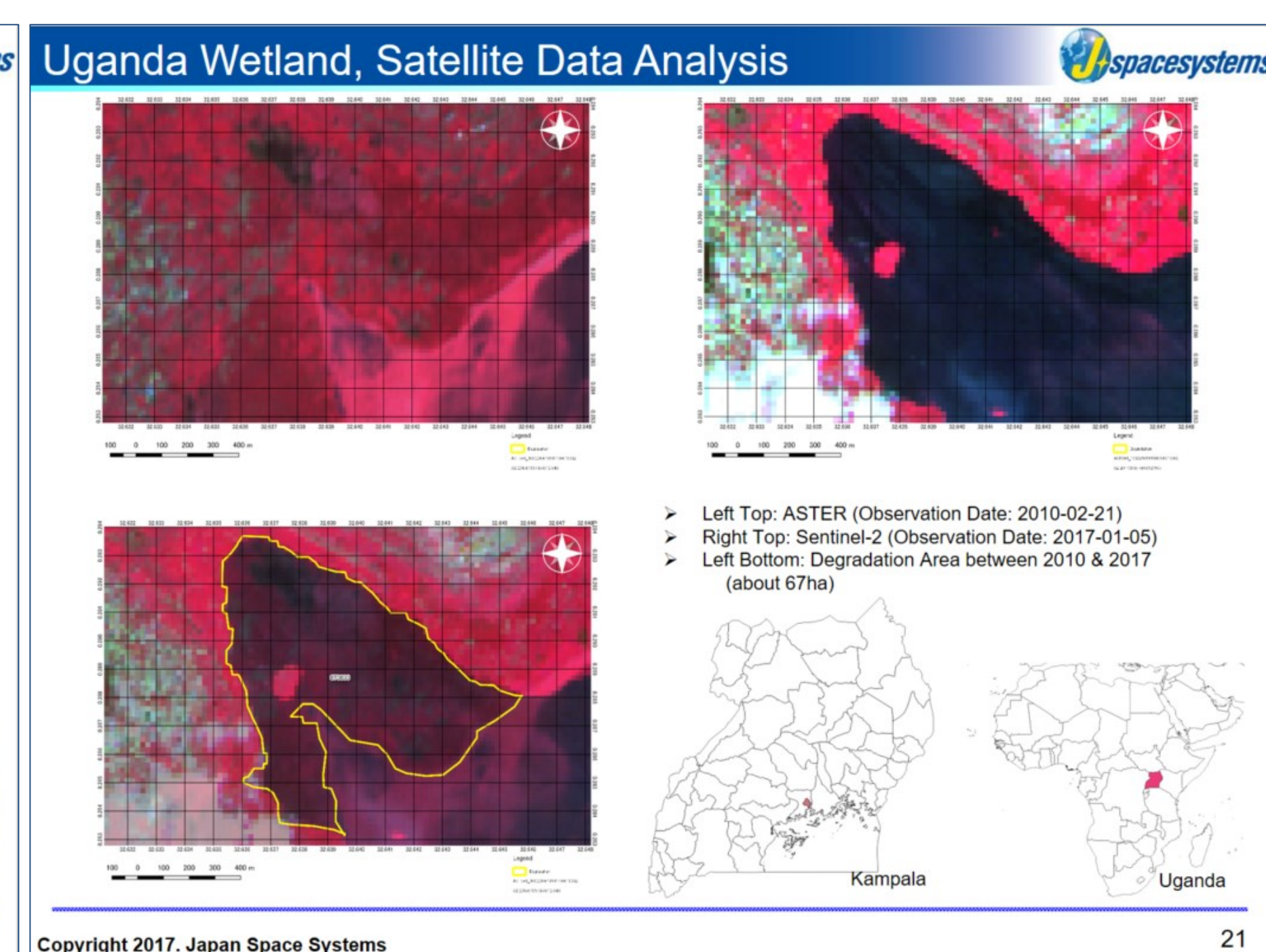
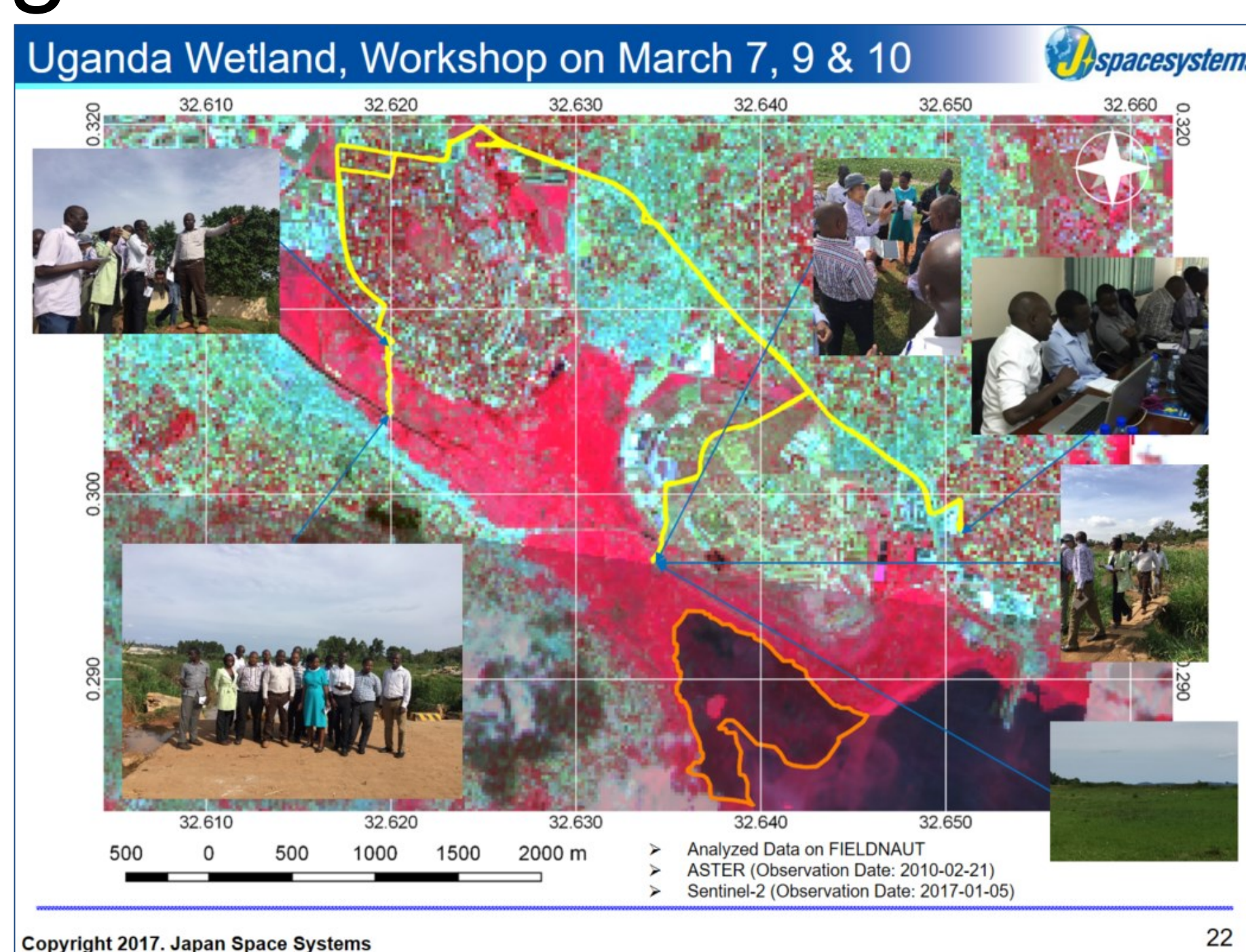


Wetland System Monitoring in Uganda 2017

- **Wetland system in Uganda** has been **damaged** by **agricultural developments**
- Population Increasing, they need food
- Making **a balance** between developing and maintaining is **important for sustainable development**

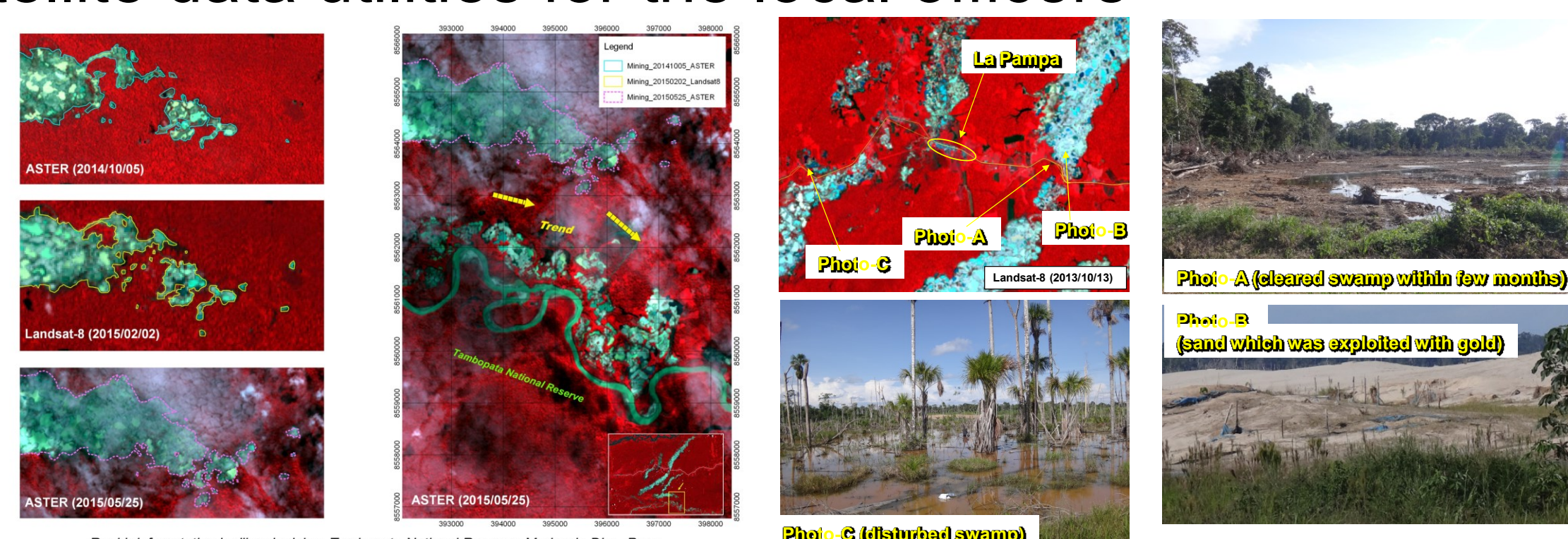
In March, 2017

- We visited the Ministry of Water & Environment
- We had a three-day workshop for monitoring wetland system in Uganda & field survey



Monitoring Amazon in Peru 2015

- **77 national parks** in Peru, & SERNANP which is a park office under the Peruvian ministry named MINAM.
- In each SERNANP office, **few members maintain huge area** as Tokyo Metropolitan
- **Illegal deforestation, illegal mining**, land development, etc. are **serious problems** for the Peruvian national parks.
- MINAM wants to collect data from SERNANP & to strength monitoring each national park.
- We visited & developed GDSS in Tambopata National Reserve since December 2014.
- We also provided a **training programs** about field survey & satellite data utilities for the local officers



Illegal Deforestation around Tambopata National Reserve

REDD+ Project in Indonesia 2015

- Farmers make corn by **slash & burn** in Boalemo, Indonesia
- They slash every tree on each mountain & burn, & they plow corn fields there
 - **Huge amount of green house gas** (CO₂) is emitted
- As Solution, Conversion to Cacao from Cone
- We calculate amount of CO₂ emission by area of cacao fields.
- We visited there & installed **GDIS as a data sharing tool**.
- We also provided a training program for field survey & data calculation.



GDSS Development & Capacity Building in Indonesia