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Characterizing ecology and Monitoring ecological / human interactions from Space: the KALIDEOS Bretagne framework



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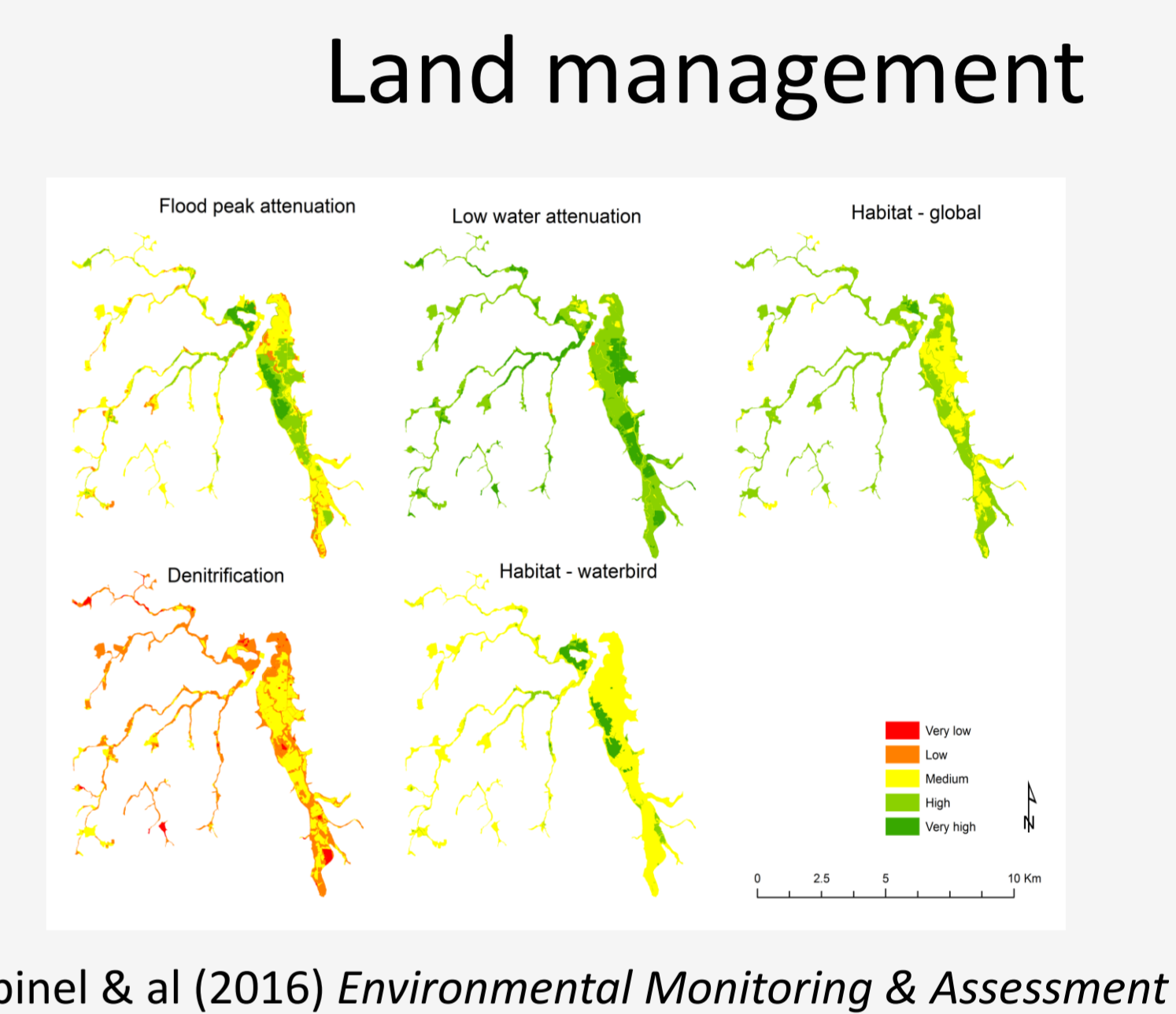
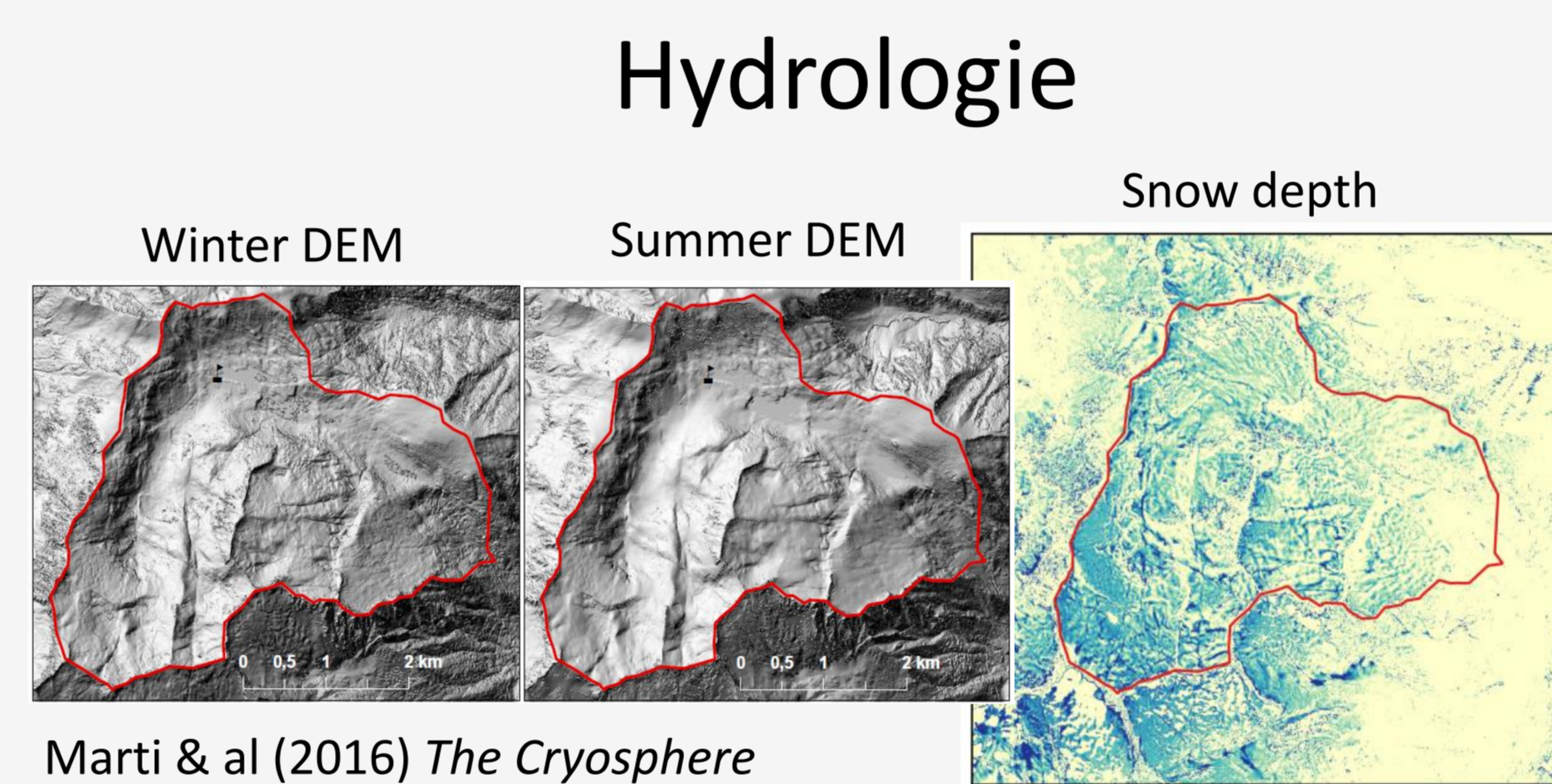
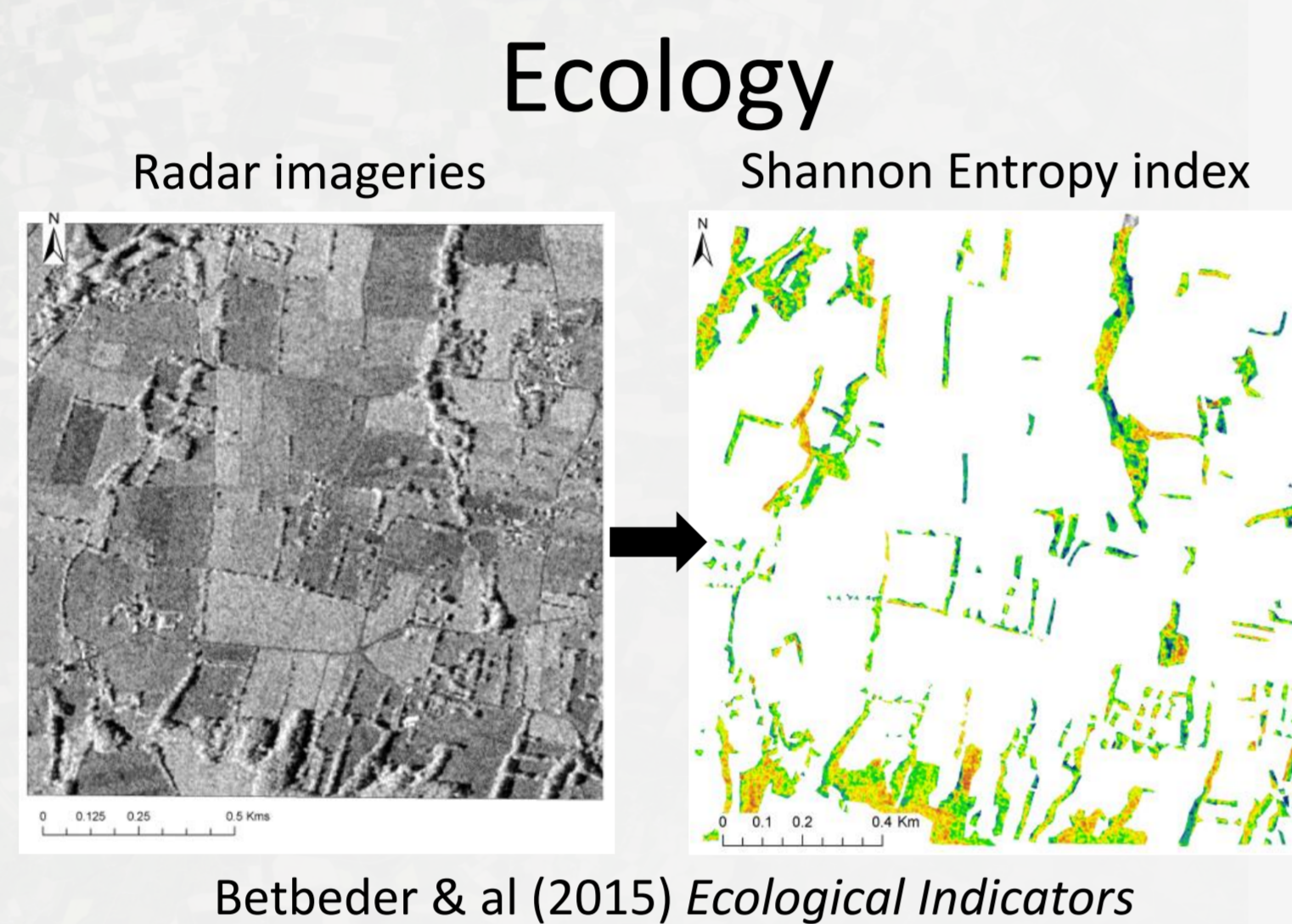
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Objectives and rationale

Providing high resolution spatial and temporal remotely sensed imageries to

- (1) **characterize ecological properties of landscapes** (habitat mapping, ecological metrics...)
- (2) **monitor land use and land cover changes and their ecological implications** at various spatial and temporal scales
- (3) **produce and transfer replicable products** dedicated to researchers and decision makers to facilitate the understanding, management and adaptive governance of territories and natural resources.

As remote sensing provide innovations for ...



The KALIDEOS Bretagne framework

END-USERS REMOTELY SENSED DATA PROVIDED

Optical / Thermal

Pléiades (0.7m – 2.4m / monthly)
SPOT 6-7 (6m / monthly)
Sentinel-2 (10m / 5 days)
Landsat (30m / 15 days)

Radar

Sentinel 1 ()
ALOS 2 ()
TerraSarX (1.5m /)

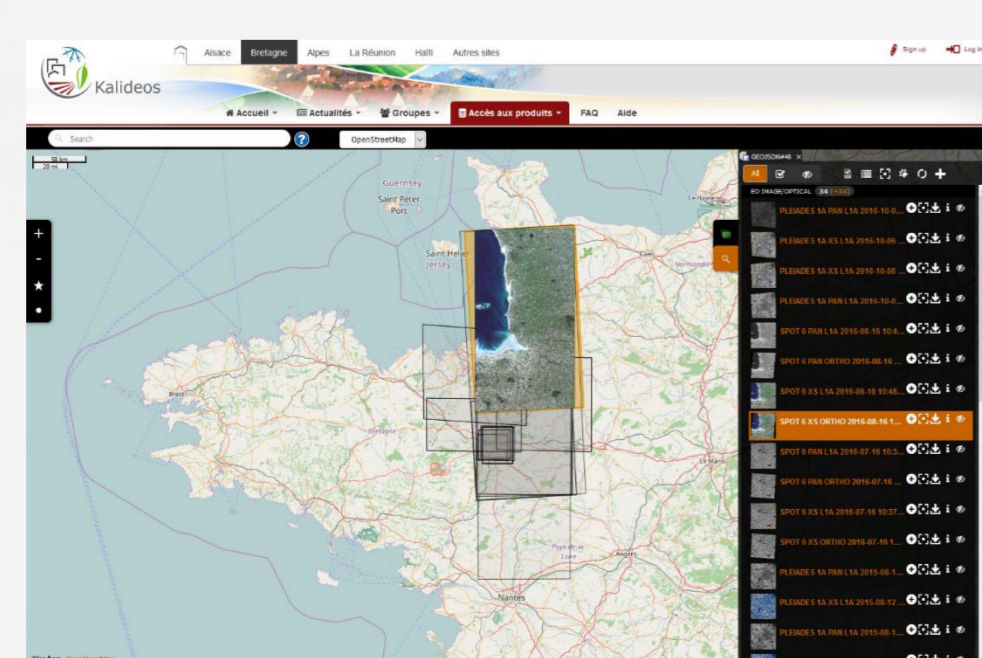
+ UAVs

3D

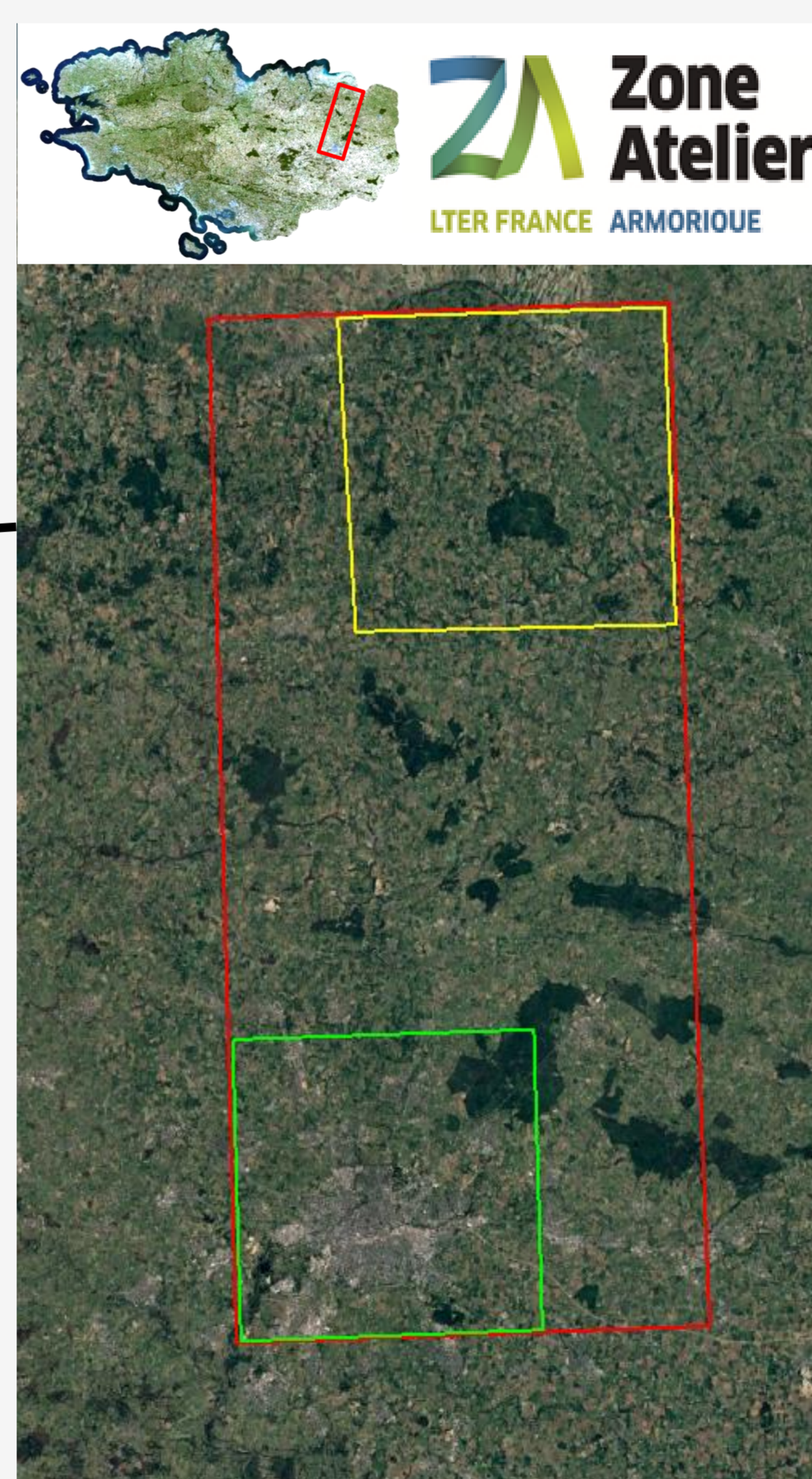
Tri-stéréo Pléiades (summer / winter)
Stereo-SPOT6-7 (Summer / winter)

A PROJECT-BASED INITIATIVE

Remote Sensing data a **freely** provided for Research and Development projects on request
Provided by CNES using a web interface



<https://bretagne.kalideos.fr/drupal/>



EDUCATION AND PROSPECTS

Master degrees are implicated for educational prospects
We support new companies and startup

A CLOSE COUPLING WITH ZA ARMORIQUE

Applications on Rural landscapes (yellow), Rennes Urban area (green) and urban/rural gradient (red)
Over 15 years of scientific data
Collaborations of scientists in ecology, geography, hydrology, climatology, agronomy, geology...

ON GOING PROJECTS

Urban sprawl and related environmental implications

Mapping vegetation, materials, urban heat island, ecological corridors

Ecological networks in urban / rural landscape

Land cover mapping, characterizing habitats in lowlands, identifying agricultural practices, assessing functions of wetlands, Blue and green corridors

Methodological developments

Time-series, big data, fusion of multisource data, deep-learning

Innovative proposals

Nighttime corridors / light pollution mapping, monitoring air quality with RS, invasives plants detection, agricultural land uses (yields, fertilizing...)

JOIN OR SUPPORT US !

You've got a project / an idea ?
We've got the data and experienced partners!
We promote collaborative initiatives

