

French-Lebanese Summer School on Remote Sensing

Nicolas Baghdadi

INRAE, UMR TETIS, Montpellier, France



Dissemination and capacity-building
using Copernicus as well as Theia
data and value-added products



Sponsors

➤ This event is supported by

1. The European Union's Caroline Herschel Framework Partnership Agreement on Copernicus User Uptake.

➤ Action 2019-1-40 «Dissemination and capacity-building using Copernicus data and the algorithms and value-added products from the French Land data center Theia».

2. The French Land Data and services center THEIA

3. The AgHive Lab for Remote Sensing and Smart Irrigation - Department of Agriculture (American University of Beirut)



Objectives

- Promoting and facilitating the use of space data, for science and public actors
 - imagery
 - Added-value products

- Increase socio-economic benefits by promoting the use of Earth observation in applications and services

- Developing networks of competences

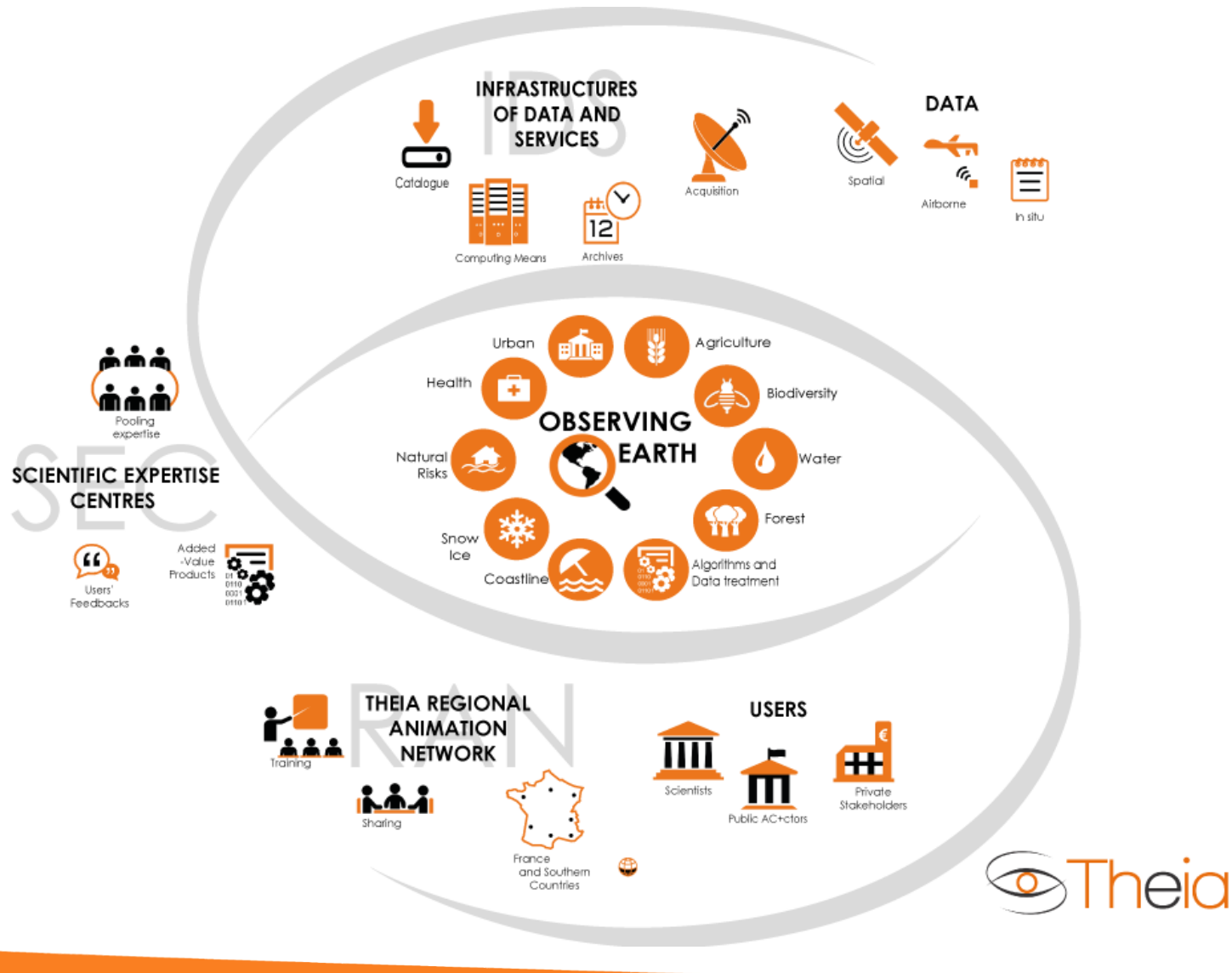
- Networking scientists and users



The French Land Data and services center THEIA



Theia organisation



THEIA organisation

Theia is structuring the French science community through

- 1) a mutualized Service and Data Infrastructure (SDI) distributed between several centers, allowing access to a variety of products;

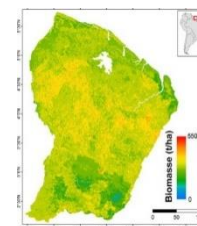
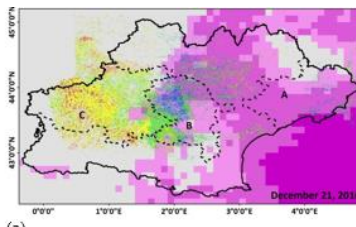
Authentication

Access
interface

Web portal

Metacatalogue

- 2) Scientific Expertise Centers (SEC) clustering virtual research groups on a thematic domain.

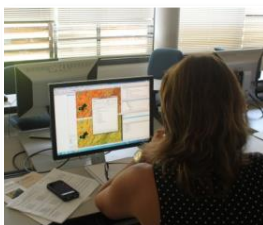


- Pooling several French labs' work
- Bringing together scientists committed to develop innovating algorithms for value-added products
- Examples of outcomes : Land cover classification; soil moisture, vegetal biophysical variables ; Imperviousness ; ...



THEIA organisation

3) The setup of Regional Animation Networks (RAN) to federate users (scientists and public / private actors)



- To provide facilitation to satellite data and products at regional level involving scientists, public and private users in order to :
 - Exchange information
 - Collect needs
 - Organize training
- Networks spread in/at domestic and overseas level



Added Value Products from Science Expertise Centres (~ 25 SEC)

Products	Area	Period	Access
Sentinel-2 reflectances	Western Europe and other regions worldwide	2015 - present	Free and open
Landsat reflectances	Time series France	2005 - 2011 - 2013 - présent	Free and open
Venus reflectances	110 sites	2017 - 2019	Free and open
Land cover (OSO SEC)	France	2009 - present	Free and open
Snow coverage	Pyrenees, High Atlas, French Alps	July 2016 - present	Free and open
Hydroweb	Lakes and Rivers height (Jason, Sentinel-3, ...)	1992 - present	Free and open
Soil moisture	Global	2002 - 2010 - present	Free and open
	Régionale	Sept 2016 - present	
Forest biomass, canopy height	French Guiana Madagascar	One date	Free and open

