

# **Short introduction to EuroSDR current activities that could connect to research and innovation on Land Cover/Land Use**

**LAND COVER / LAND USE Workshop**  
**Bruxelles, November 15th, 2017**

Bénédicte Bucher,  
IGN, France, GI research department  
EuroSDR, Commission IV

# EuroSDR (European spatial data research)

a not-for-profit organisation

linking National Mapping and Cadastral Agencies with Research Institutes and Universities and Industry in Europe for

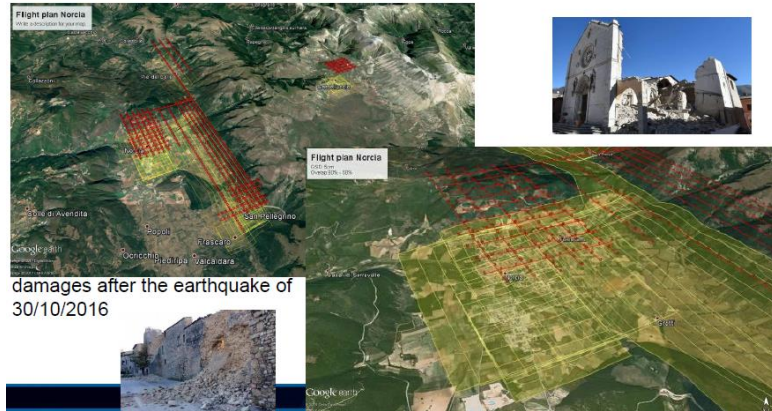
timely applied research and benchmarking in spatial data provision, management and delivery.

The screenshot shows the EuroSDR website's 'Commissions' page. At the top, there is a navigation bar with links for NEWS, PEOPLE, MEMBERS, PARTNERS, and CONTACT. Below this is a secondary navigation bar with links for About, Commissions, Research, Education, Workshops, and Publications. The 'Commissions' section is highlighted. The main content area lists six commissions, each with a title and a 'More info' link:

- Commission 1: Data Acquisition
- Commission 2: Modelling and Processing
- Commission 3: Updating and Integration
- Commission 4: Information Usage
- Commission 5: Business Models and Operation
- Commission 6: Knowledge Transfer

# BENCHMARKING NEW SENSORS

## ■ (SEMI-)OBLIQUE IMAGERY, HYPER-SPECTRAL



© Remondino



Classification of urban materials  
 out of hyperspectral imagery  
 (400-2400 nm)

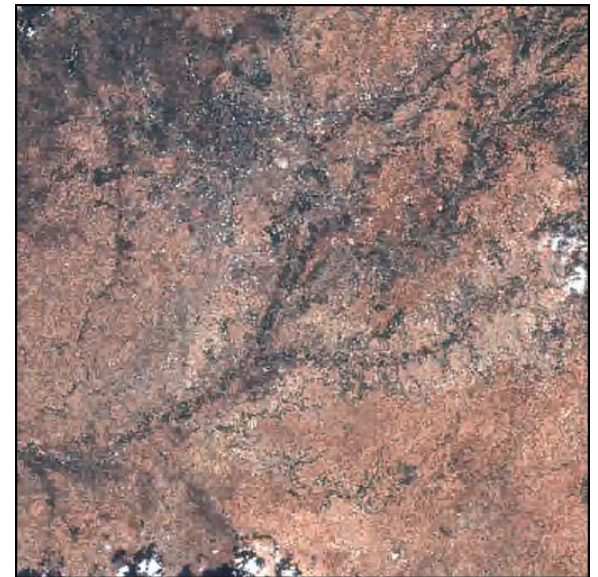
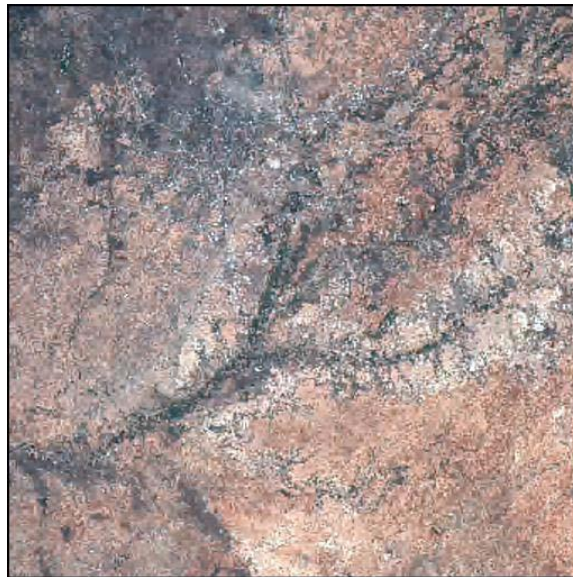
© Le Bris

	Tile
	Slate
	Metal 1
	Metal 2
	Gravel
	Plastic
	Fiber-cement
	Stone pavement
	Asphalt
	Railway
	Bare soil
	Meadow
	Trees
	Water
	Shadow

- WHAT IS NEEDED FOR SUCCESSFUL BENCHMARKS :  
 Access to ground truth, sensors, acquisition data, simulated data,  
**experts assessing what needs to be surveyed**
- Commission 1 chair : Jon Mills, [jon.mills@newcastle.ac.uk](mailto:jon.mills@newcastle.ac.uk)

# NEW DATA WITH HIGHER TEMPORAL RESOLUTION

- SENTINEL-2 Series of **workshops**
- National collaborative ground segments, mirror site, geometric and atmospheric corrections, high revisit rate
- Next one late 2018, Oslo (Norwegian Space Centre).

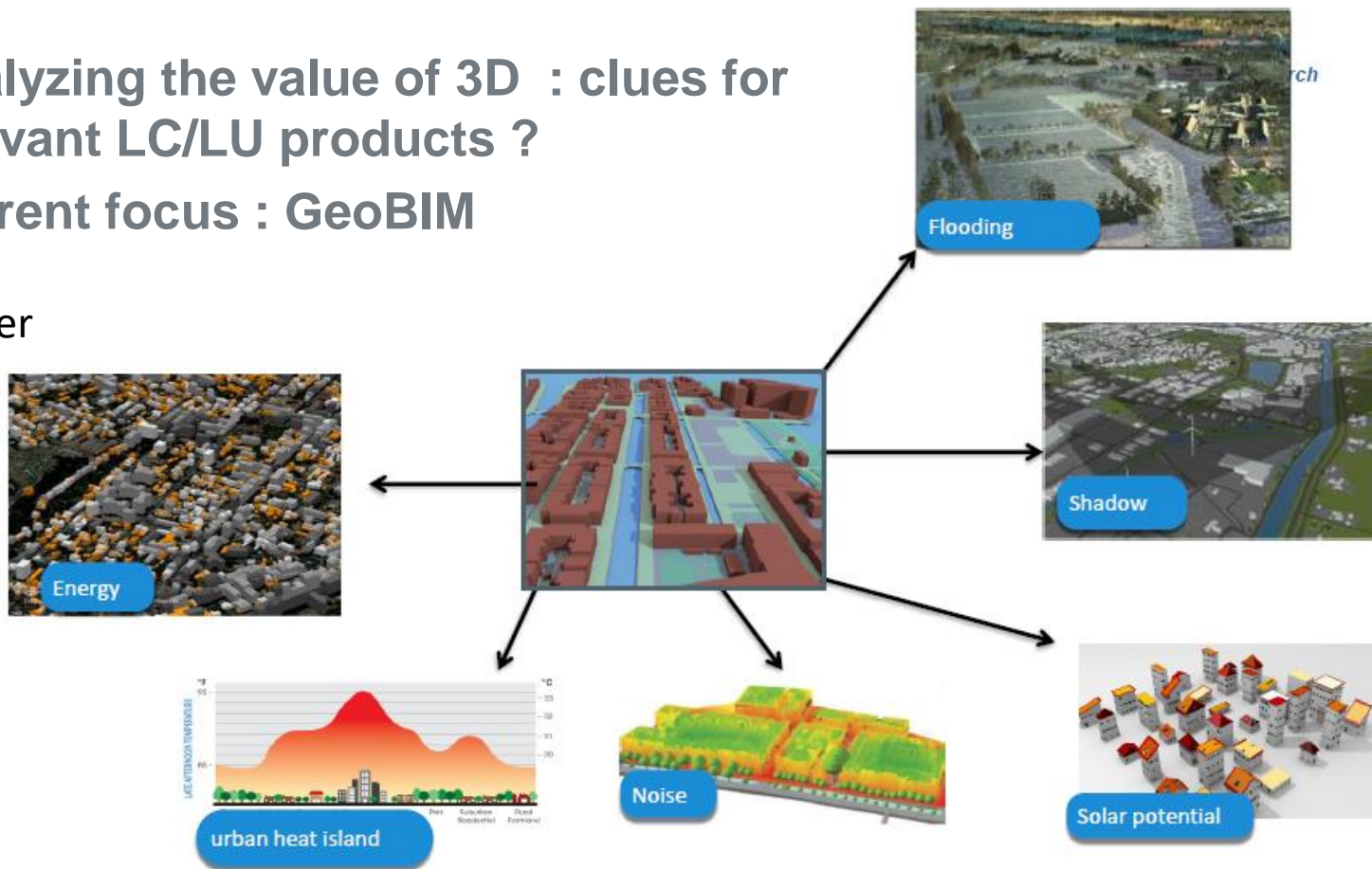


- Commission 3 chair : Jon Arne Trollvik [Jon.Arne.Trollvik@kartverket.no](mailto:Jon.Arne.Trollvik@kartverket.no)

# 3D DATA : IMPORTANT FOR SOME LC/LU PRODUCTS?

- Analyzing the value of 3D : clues for relevant LC/LU products ?
- Current focus : GeoBIM

© Stoter



- Commission 2 chair : Jantien Stoter, [j.e.stoter@tudelft.nl](mailto:j.e.stoter@tudelft.nl)

## ■ GUI FOR HISTORICAL DATA

- New retrieval and new browsing paradigms



© Breton

- Community and crowd sourced registration and vectorization

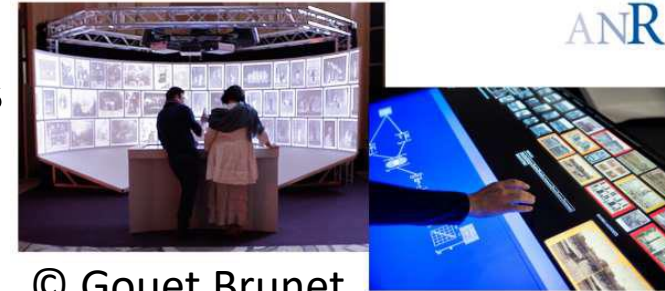


© Produit

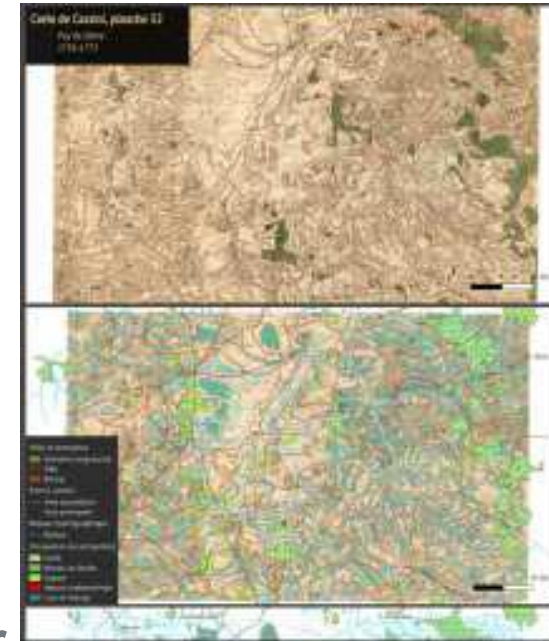
- Constitute a **technical group**

around **shareable software and protocols**

- Commission 4 chair : [Benedicte.Bucher @ ign.fr](mailto:Benedicte.Bucher@ign.fr)



© Gouet Brunet

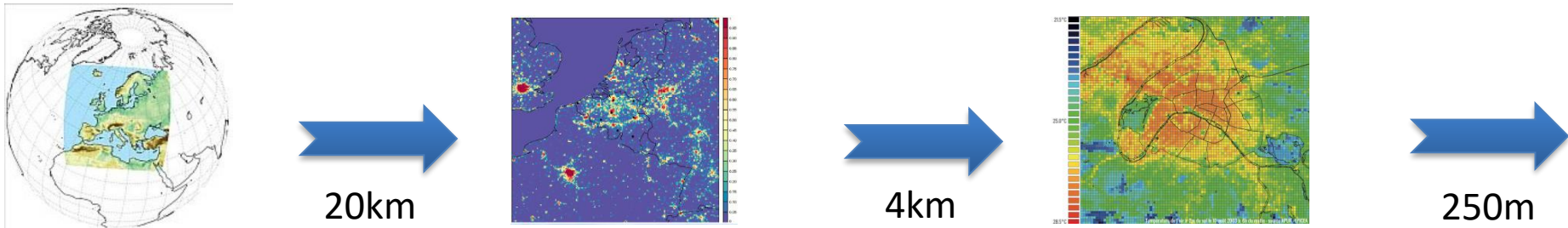


© Perret

- **APPROACH** : IDENTIFY **REAL PROBLEMS** THAT CAN BE SHARED BETWEEN SCIENTISTS, DEVELOPERS and PRACTITIONERS
- **REAL PROBLEM** : a difficult task illustrated by real data that scientists can use in their proves of concepts, in a meaningful way for practitioners
- **3 CATEGORIES OF REAL PROBLEMS IDENTIFIED TO STRUCTURE THE ACTIVITY**
  - Catalogues and metadata → a metadata sandbox – [geometadata-labs.eu](http://geometadata-labs.eu)- to produce real about user-oriented access to expert data (next slide)
  - Integration and visualization → multiscale, cross border, cross domain
  - Proposing generic data mediation processes –complementary to federated schema approach- that can be adapted to produce relevant information products for a given application → **LC/LU seems to offer many real problems in this area**
- **Commission 4 chair** : Benedicte.Bucher @ ign.fr

# USER-ORIENTED METADATA ABOUT DATA PRODUCTS AND PROCESSES

- A metadata sandbox –<https://geometadatalabs.eu>- to produce real about user-oriented access to expert data
- Use case : European ER4CS URCLIM project. Climate change scientists require **land use products (or the recipe to produce them)** to down-scale their models, and **land cover products (or the recipe to produce them)** to evaluate impacts.
- Downscaling from regional climate models to city scale & assesment of uncertainties, multi-criteria impacts evaluation, communication to stakeholders



© Masson

- Urban heat island & heat waves, precipitation, snow cover, economy,...)
- Use case : Toulouse, Gent, Brussels, The Ranstad, Bucarest, Helsinki, Paris
- Commission 4 chair : [Benedicte.Bucher @ ign.fr](mailto:Benedicte.Bucher@ign.fr)



# **Short introduction to EuroSDR current activities that could connect to research and innovation on Land Cover/Land Use**

**LAND COVER / LAND USE Workshop**  
**Bruxelles, November 15th, 2017**

Bénédicte Bucher,  
IGN, France, GI research department  
EuroSDR, Commission IV