Vision for the Department of Bioeconomy and Systems Analysis

Rafał Pudełko

Department of Bioeconomy and Systems Analysis

2015.07

Agronomists

Geographers

GIS analysts

Agricultural economists

-> 2015

BioBoost - Biomass based energy intermediates boosting biofuel production (**7FP, 2012-2015**), **Budget – 480 000 €**

CATCH-C - Compatibility of Agricultural Management Practices and Types of Farming in the EU to enhance Climate Change Mitigation and Soil Health (**7FP, 2012-2015**); Budget – **200 000 €**

S2BIOM - Delivery of sustainable supply of non-food biomass to support a „resource-efficient" Bioeconomy in Europe
(**7FP, 2013-2017**) - **Budget – 58 000 €**

B-FIRST - Implementation of remote sensing data and models in optimizing the localisation of renewable energy sources on the example of biofuel crops with respect to ecological constraints (**PECS, 2012-2015**) - **Budget – 50 000 €**

2015 ->

LCAgri – Support for low carbon agriculture – able to adapt to observed climate change in the perspective of 2030 and 2050 (2015-2018) **Budget – 3 000 000 €;**

BioEcon - New Strategies on Bio-Economy in Poland (2015-2020) **Budget – 2 400 000 €;**

MACSUR2 - Modelling European Agriculture with Climate Change for Food Security – a FACCE-JPI knowledge hub (ERA-NET, 2015-2017)

SustainFARM - Innovative and sustainable intensification of integrated food and non-food systems to develop climate-resilient agro-ecosystems in Europe and beyond, (ERA-NET Co-fund SURPLUS, 2016-2019) **Budget – 200 000 €**

http://www.susza.iung.pulawy.pl/en/ ..... 2008 - now

The Drought Monitoring System (DMS) for Poland is provided by IUNG on behalf of the Ministry of Agriculture and Rural Development.

DMS supports the fulfilment of an insurance policy established by the Polish Government, according to the Act of 7 July 2005 on subsidies to the insurance of agricultural crops and farm animals

(Dz. U No. 150, item 1249, 2006, No. 120, item 825).

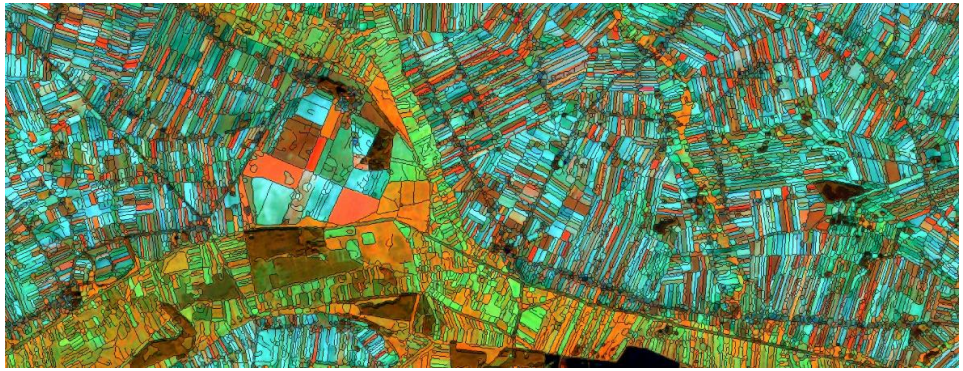
Vision for the Department of Bioeconomy and Systems Analysis

The main tasks:

1. Collecting and processing of statistical and spatial data concerning agriculture, energy (in the context of renewable sources of energy) and nature conservation.
2. Building the geographical information system for bioeconomy research.
3. Development of interactive Internet applications to obtain, model and disseminate refined knowledge in the field of bioeconomy.
4. Research and development of IT decision support systems for implementation of prosumer model in agricultural production.
5. Development of deterministic and stochastic models of phenomena and processes.

New challenges

Copernicus Programme - the world's largest single earth observation programme and directed by the EC in partnership with the ESA



Sentinel-1A, Sentinel-1B
Synthetic Aperture Radar
Launch data: 25 April 2016

Mission Objectives:
- Land monitoring of forests, water, soil and agriculture
- Climate change monitoring

Repeat Cycle: 12 days

Resolution and Swath Width:

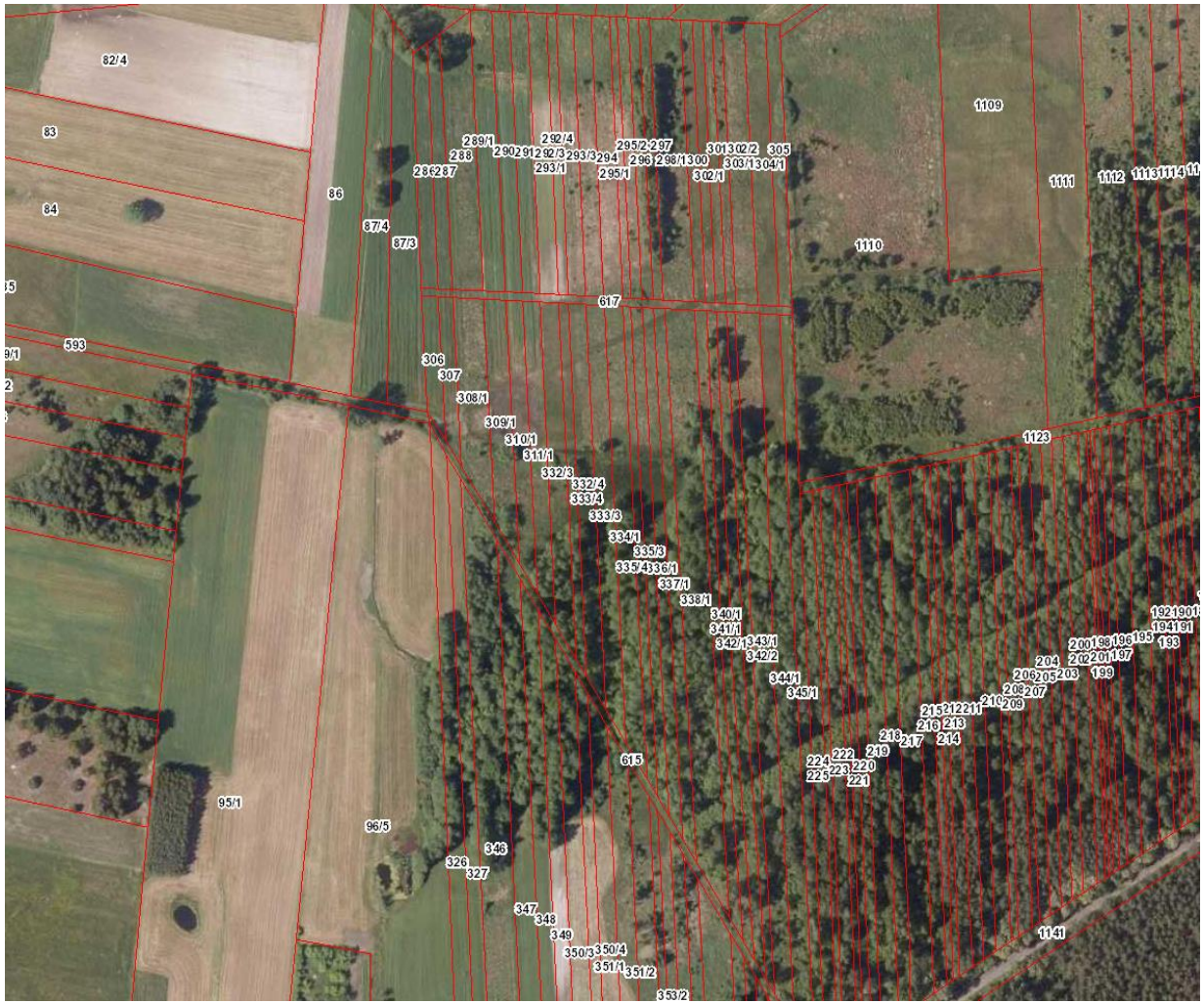
Interferometric Wide Swath: 250 km
Spatial resolution: 5x20 m

- Extra-Wide Swath Mode: 400 km Swath, 25 x 100 m spatial resolution
- Wave-Mode: 20 km x 20 km, 5 x 20 m spatial resolution

New challenges

Land-parcel Identification System (LPIS)

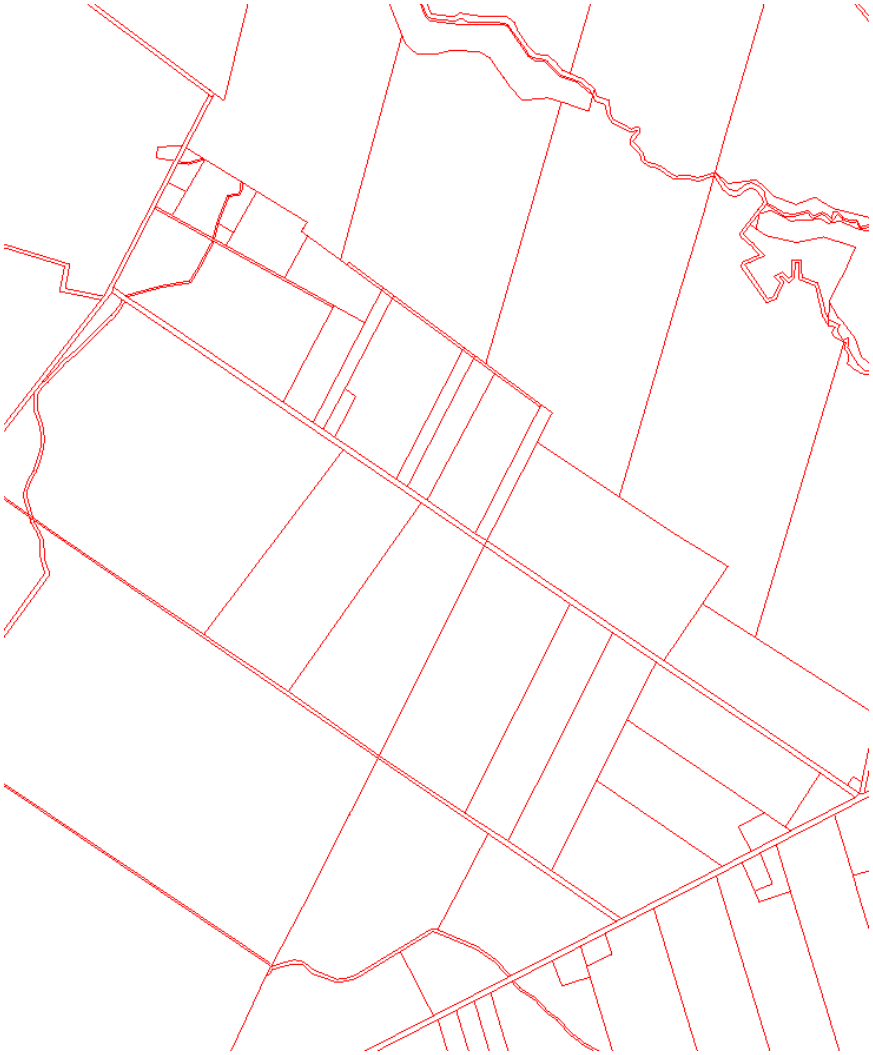
-system to identify land use



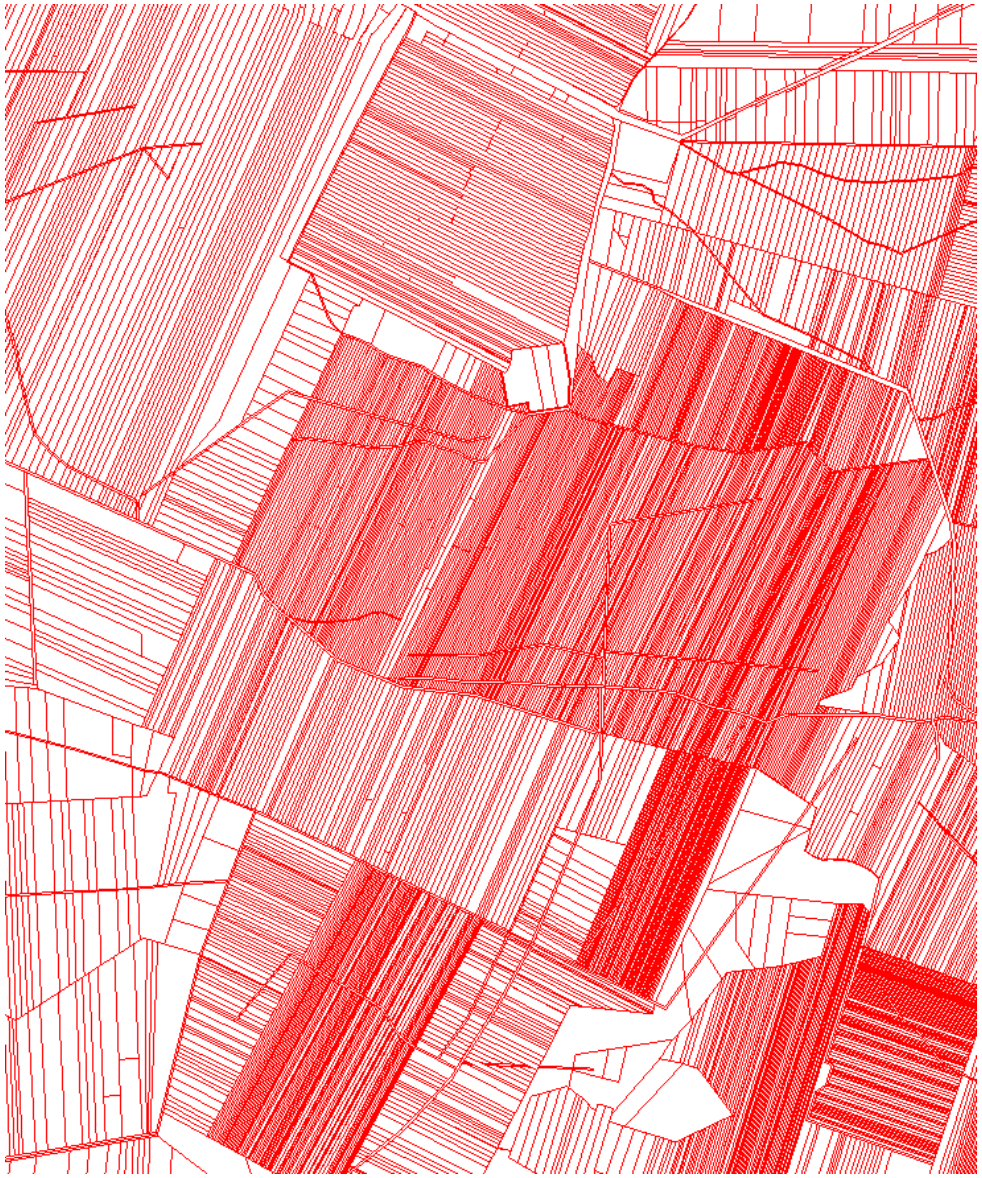
Number of Parcels – 34 696 000

Agricultural parcels – 9 935 000

New challenges

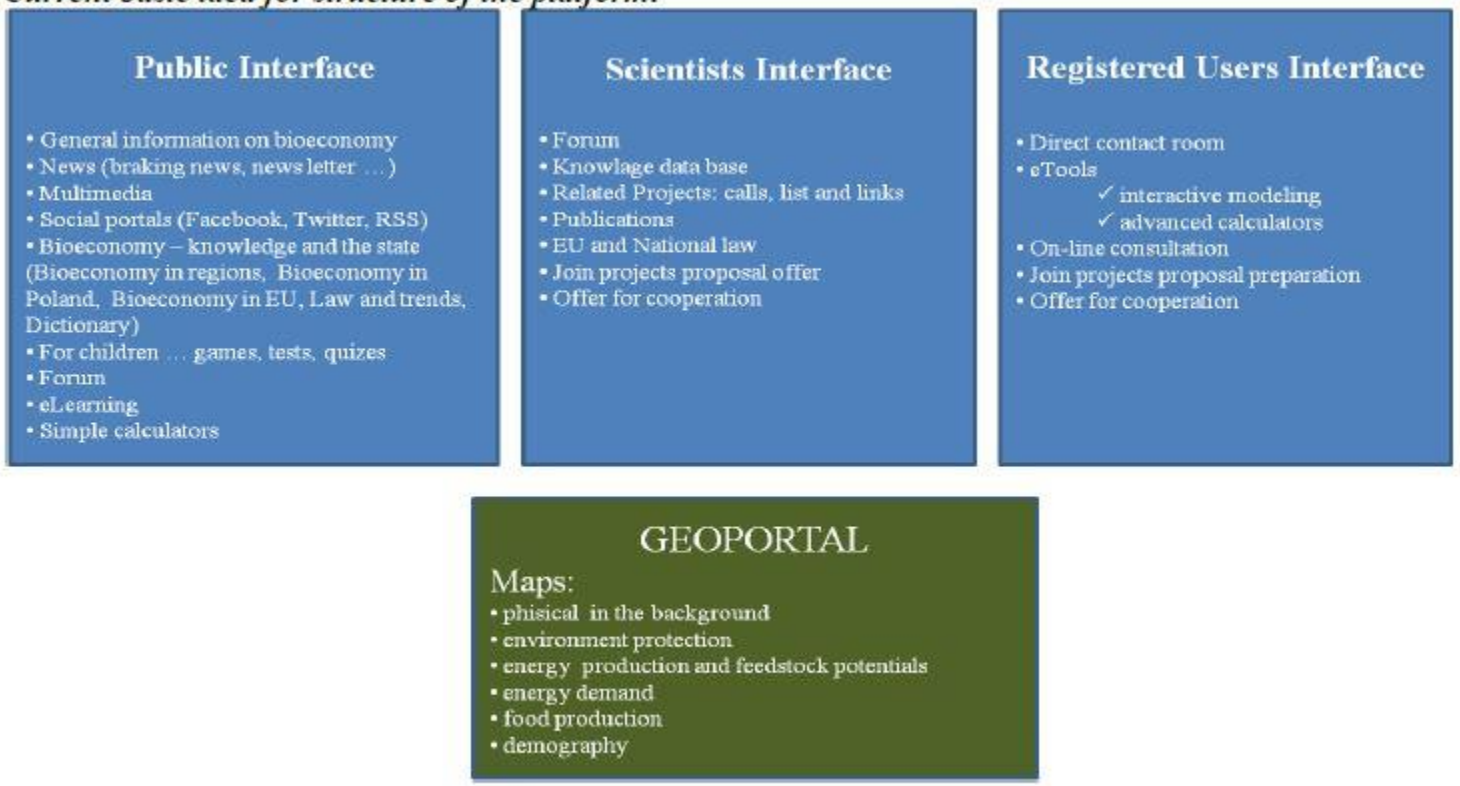


http://mapy.geoportal.gov.pl/



New challenges

Current basic idea for structure of the platform:



The BioEconomy Platform will start from bringing together the knowledge gained in the area of the Based Bio-Economy with an aim to improve exchange and cooperation between Polish <u>universities, stakeholders and ministry.</u>

The platform will be established as a networking platform with a mutual learning dimension and a strategic dimension. It will address issues of overarching strategic importance, such as the identity and role of bioeconomy, the synergy between national, intergovernmental and European research programming, and modalities for collaboration.

NEW strategies on Bioeconomy for agriculture in Poland

~ 2 M ha marginal soils
~ 0.5 M ha fallow land in good agricultural condition
1 082 000 farms of the area < 10 ha,
767 000 farms of the area < 5 ha,
312 000 farms of the area <2 ha,
34 000 farms of the area < 1 ha // CSO, 2013

There are no statistical data concerning abandoned farms,
Their area is estimated at about 1.5 million hectares

www.arimr.gov.pl/
www.stat.gov.pl