



REPUBLIC OF ESTONIA
LAND BOARD



European Union
European Regional
Development Fund



Investing
in your future

ESTHub

Ants Vain

06.11.2017

Motivation

- Easy access to Copernicus data:
 - ✓ less users,
 - ✓ faster data download,
 - ✓ stable connection.
- Boost the use of remote sensing data amongst Estonian public institutions and private companies.
- Be part of the regional cooperation.
- Reduce investments in hardware.

Collaborative agreement with ESA



potential CoIGS activities.

Republic	ondrej.svab@mcdcr.cz	potential CoIGS activities.
Denmark	Kenan Vilic (Danish Meteorological Institute), kev@dmi.dk	Denmark and ESA are discussing potential CoIGS activities.
<u>Estonia</u>	Mr Silver Lätt (ETAg), Silver.Latt@eas.ee	Estonia and ESA have signed a Technical Arrangement for the Sentinel data access cooperation in September 2016. Enterprise B plans to set-up a national Sentinel data mirror. Read the Technical Arrangement

13.09.2016

What is ESTHub?

- Centralised national data hub for downloading, processing and distributing Copernicus data.
- Users can view and freely download satellite data (registration is required).
- Limited access to processing capability for public institutions and private companies who develop services for public institutions.
- Bring processing where the data is not the other way around.

ESTHub project

- 430 000 euros from European Union European Regional Development Fund;
- Procurement procedure is ongoing;
 - ✓ Hardware for data storage and processing;
 - ✓ Software solution for data dissemination and processing.
- Hopefully up and running in the mid 2018

Data in ESTHub

- Sentinel 1, 2, 3, 4, 5, 5P and 6 data:
 - ✓ S1 and S2 – about 200 km from border,
 - ✓ S3 – Baltic Sea and surrounding area.
- Landsat 8 data (about 200 km from border).
- Additional datasets used in processing (lidar, DTM, DSM, weather radar data etc).
- Temporarily hold data all over the world for 2 weeks (if needed).

Hardware

- Processing servers that can hold up to 320 TB of data;
- Cluster on VM servers that service the software and users VMs;
- Data storage for duplication of data and storing products from S2 (400 TB):
 - ✓ RGB composite;
 - ✓ False color image composite
 - ✓ NDVI composite

Software

- DHuS for browsing and downloading data.
- SNAP functionalities;
- QGIS, SAGA-GIS, FMASK, Python (programmes can be added if needed – open source).

Otsi

Kihid

⏪ ⏩ 🗨 ? Kaart Kaart/Foto Hübi

Eesti
Maakond
Vald
Põllumassiiv
Kataster
Põld

- Kaardikihid**
- Põllumassiivid
 - Põllumassiivid 01.11.2016
 - Katastripiirid
 - Maastikuelemendid
 - Arheoloogiamälestised
 - Looduse üksikobjektid
 - Pärandkultuuriobjektid
 - Kooslused 2007-2013
 - Kooslused 2014-2020
 - Natura 2000 alad
 - Mesilad
 - Loomakasvatushooned
 - Nitraaditundlikud alad
 - Muld turvas
 - Muld erodeeritud
 - Veekaitsevööndid
 - Keskkonnatundlik püsirohumaad
- Haldusjaotus**
- Taotletud põllud**
- Niitmise tuvastamine (testimisel)**
- Niitmata
 - Määramata
 - Hilinenult niidetud
 - Madal biomass
 - Niidetud
- Abiinfo kihid**



📍 Link
X: 6596212 Y: 645880
B: 59.4784 L: 26.5745
500 m



ESTHub user(s)

- Using Sentinel 1 and 2 in forestry (clear-cut areas, tree species)
- Sentinel 1 for ice service (Estonian sea coast and Lake Peipsi)
- Monitoring peat fields with Sentinel 1





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Thank You!

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ants.vain@maaamet.ee