



Проект Horizon-2020 ERA-PLANET та участь України в ньому



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Проект H2020 ERA-PLANET



ERA-PLANET

THE EUROPEAN NETWORK FOR OBSERVING OUR
CHANGING PLANET

H2020 Topic

SC5-15-2015: Strengthening the European Research Area in the
domain of Earth Observation

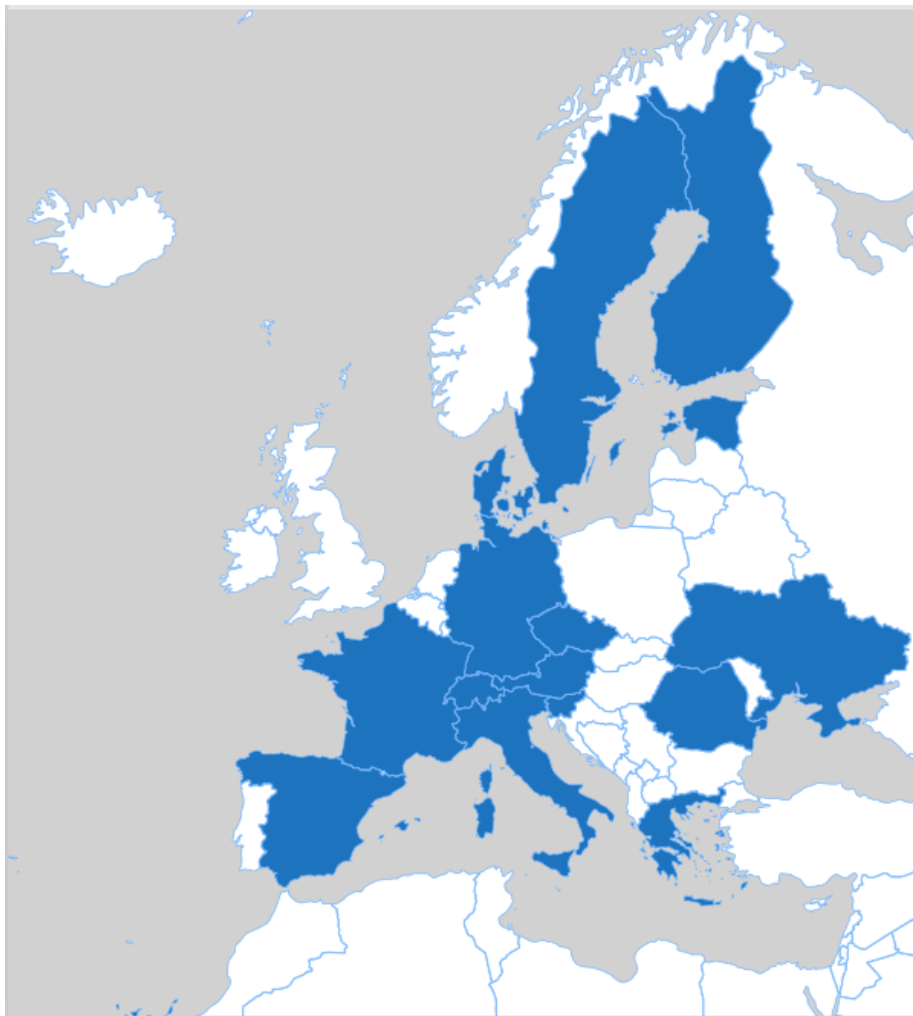
Мета проекту **ERA-PLANET** – створити Європейський дослідницький простір (European Research Area) в сфері дослідження Землі, підсиливши участь Європи в програмах групи Group on Earth Observation (GEO) та Copernicus.

The **overarching goal** of **ERA-PLANET** is to strengthen the European Research Area in the domain of Earth Observation in coherence with the European participation to Group on Earth Observation (GEO) and the Copernicus.

Завдання – підсилити лідируючу роль Європи в виконанні робочого плану GEO 2015-2025 Work Plan.



Учасники проекту



35 установ з бюджетом **11 мільйонів Євро** від Єврокомісії (EC-European Commision)

Co-Fund Action: 1 частка від ЕС – 2 частки від країн-учасників

Від **України** координатор – Інститут космічних досліджень НАНУ-ДКАУ

ERA-PLANET Strands



ERA-PLANET

STRAND 1

Smart cities and
resilient
societies



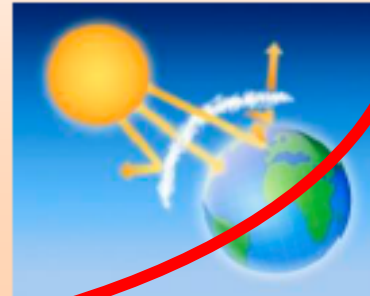
STRAND 2

Resource
efficiency &
environmental
management



STRAND 3

Global change
and
Environmental
treaties



STRAND 4

Polar areas and
natural
resources



Projects



SMURBS
ERA-PLANET

SMart URBan Solutions for air
quality, disasters and city growth

GEOESSENTIAL
ERA-PLANET

Essential Variables workflows for
resource efficiency and
environmental management

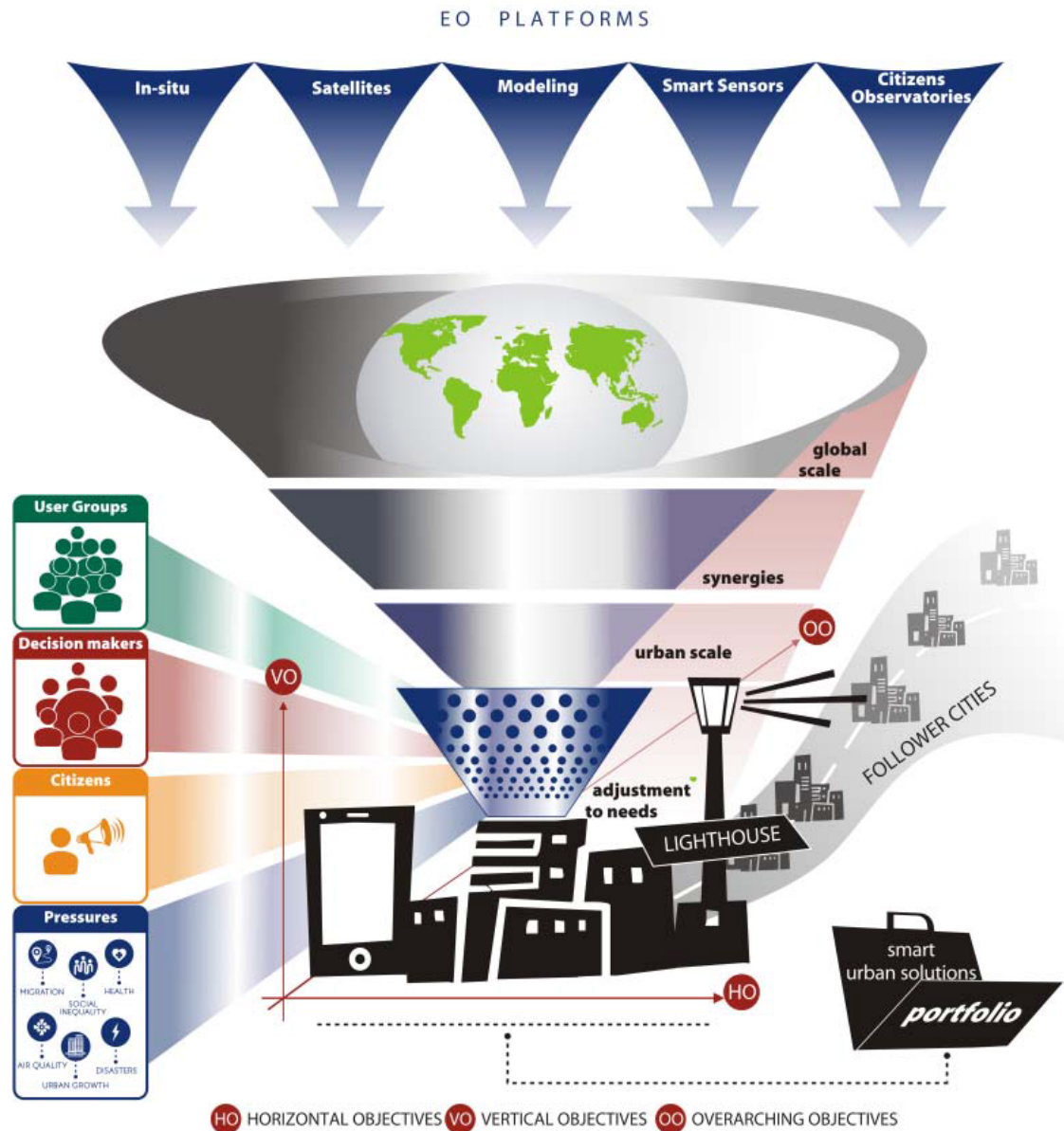
iGOSP
ERA-PLANET

Integrated Global Observing
Systems for Persistent Pollutants

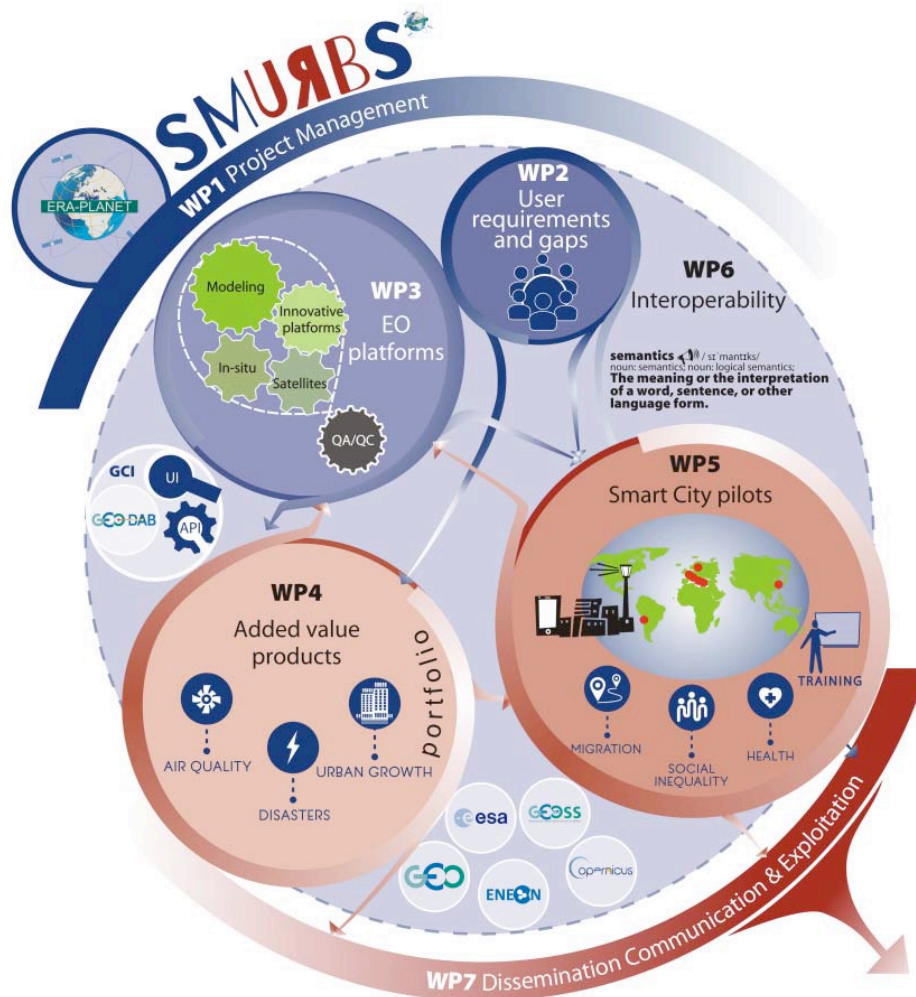
iCUPE
ERA-PLANET

Integrative and Comprehensive
Understanding on Polar
Environments

SMURBS – General concept



SMURBS project - “Smart cities”



SMURBS - SMart URBan Solutions for air quality, disasters and city growth

Coordination of national and regional programs in environmental monitoring of Smart Cities.

Directions:

Air quality

Urban growth

Disasters (peat fires)

SMURBS services we are involved



Precursors of our services:

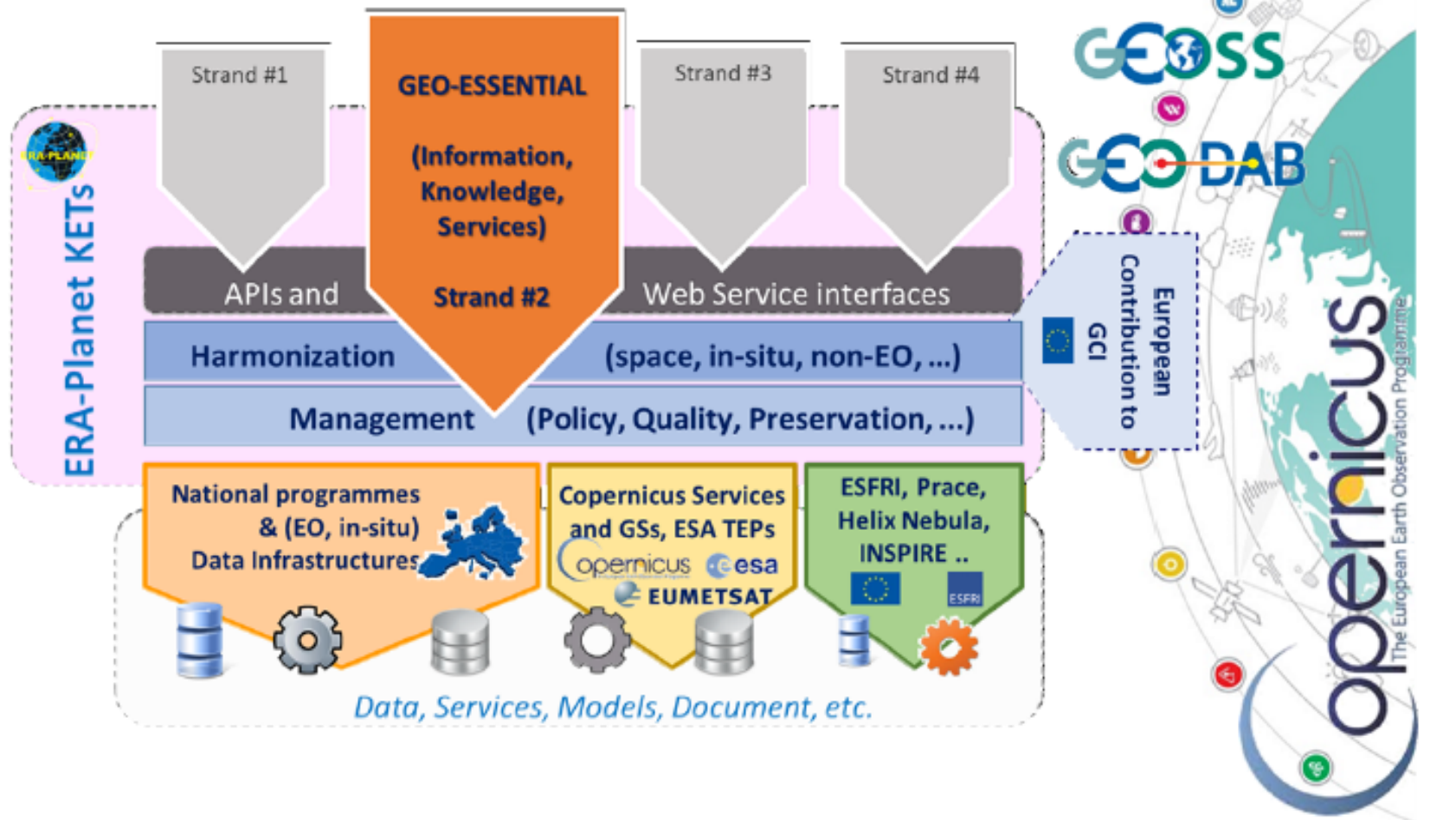
- **Air quality** – PM, chemical contaminations (more details in “Smart City” section)
- **Urban growth** – CLMS Urban Atlas extension
- **Disasters** – peat fires monitoring based on thermal bands of satellite data

Urban related essential variables and SDG indicators

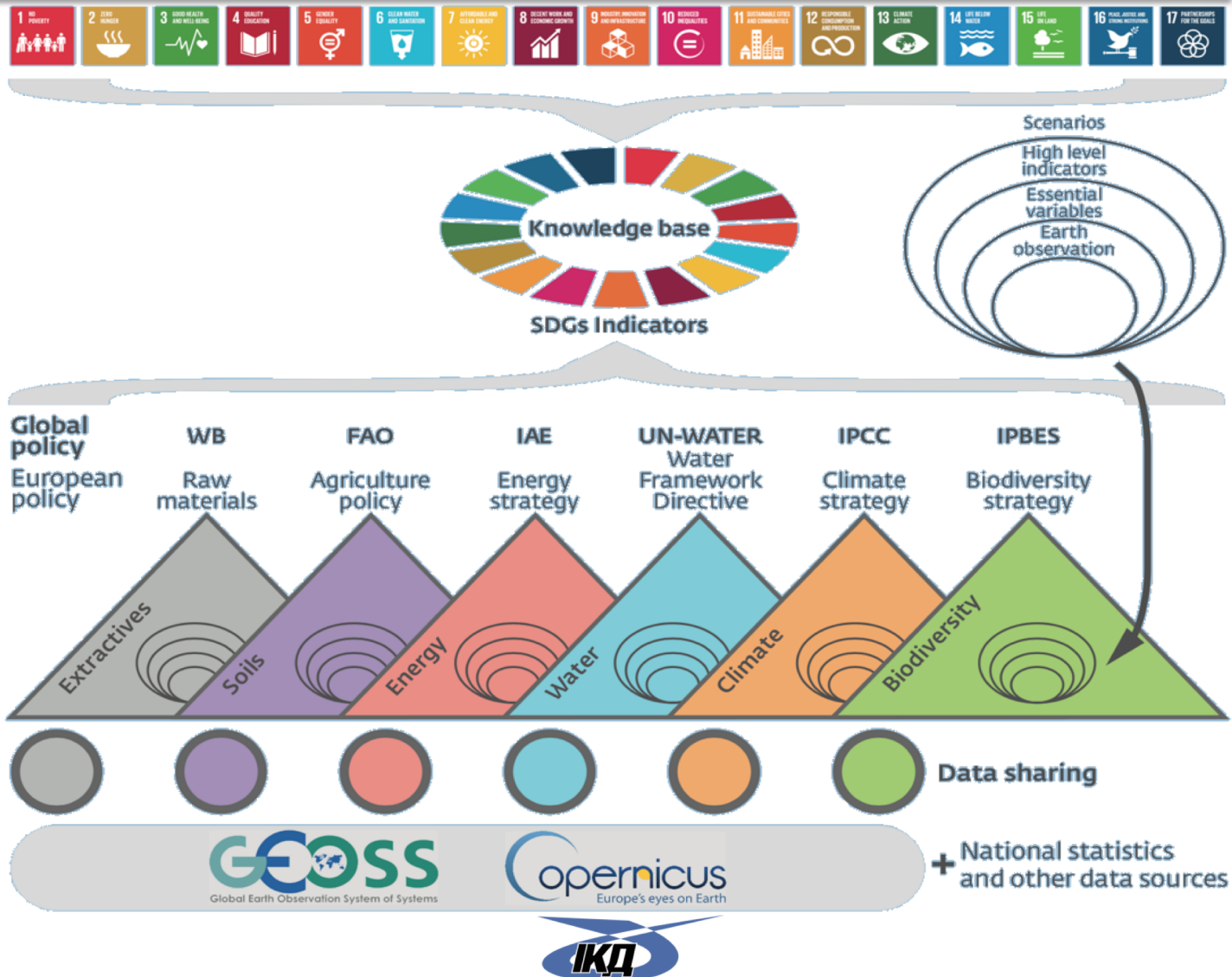
Dashboard

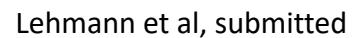


Interoperability

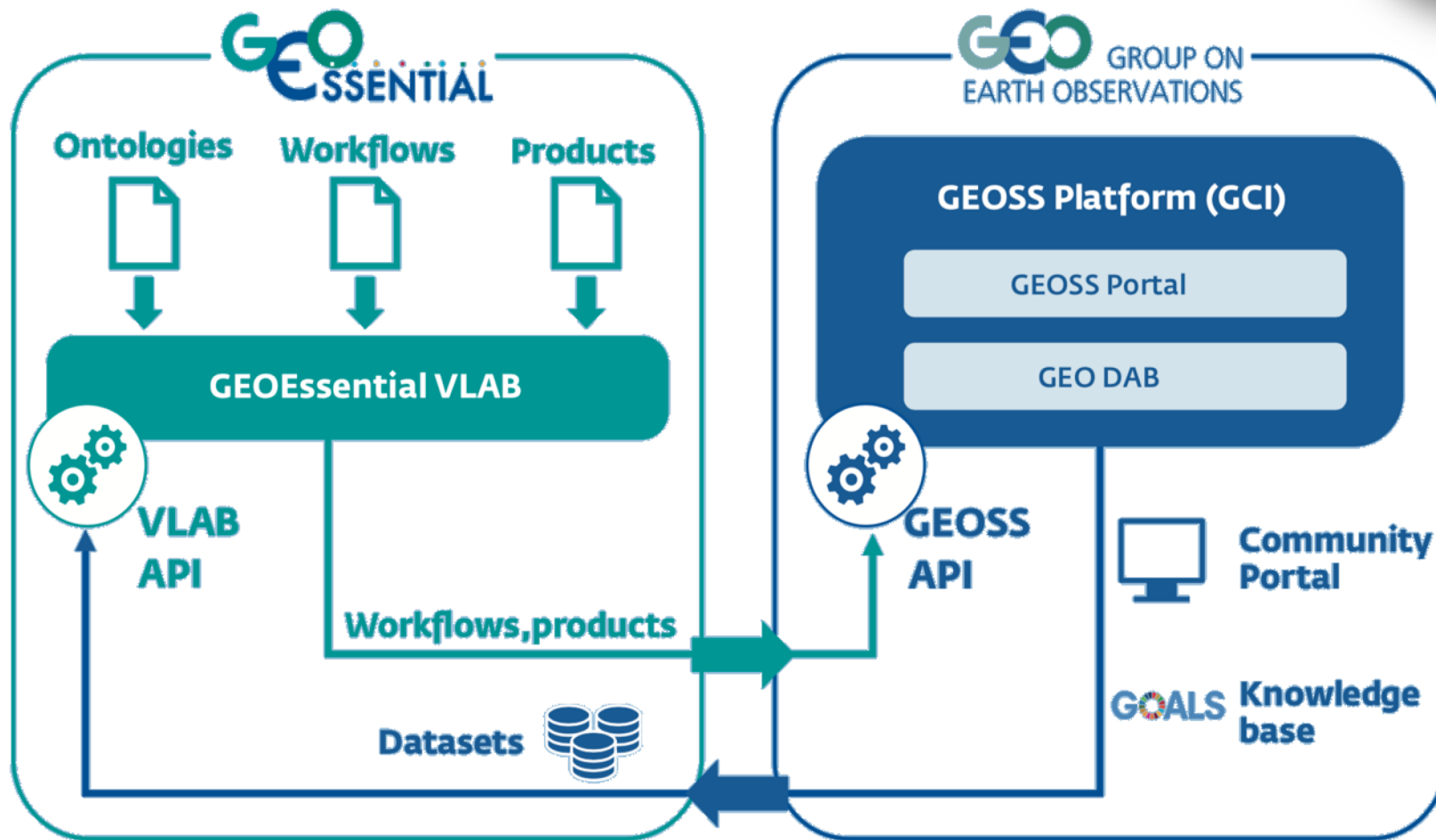


Generalisation of the EV concept across SBAs and knowledge base





GEOEssential VLab



DKAN as a dashboard interface



Home icon | <https://www.drupal.org/project/dkan> | ... | | |

Download & Extend

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DKAN

[View](#) | [Version control](#)

Posted by [DKAN](#) on 2 October 2012, updated 21 February 2018

This project is not covered by Drupal's [security advisory policy](#).



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Welcome to DKAN

DKAN is an open-source data management platform. It treats data as content so that you can easily publish, manage, and maintain your open data no matter the size of your team or the level of technical expertise.

[Click Here](#)

★ 5

Maintainers for DKAN

[ahoppin](#) - 2 commits
last: 3 years ago, first: 4 years ago

[acouch](#) - 455 commits
last: 3 years ago, first: 5 years ago

[jday](#) - 42 commits
last: 3 years ago, first: 4 years ago

[dafeder](#) - 3 commits
last: 3 years ago, first: 3 years ago

[View all committers](#)

[View commits](#)

Documentation

No documentation guides

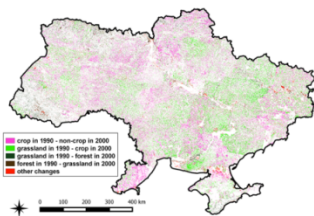
[External documentation](#)

Indicator 15.3.1 workflow realization in Vlab



Input data on the FTP

Land cover changes



Land productivity



Python
• GDAL
• NumPy

• Calculate
• Calculate
• Calculate
of

Description

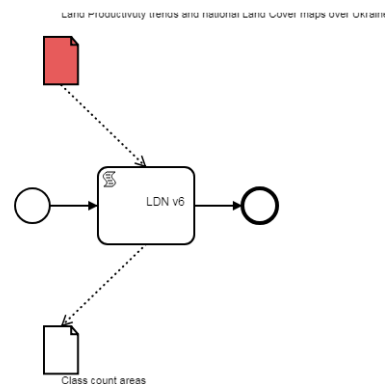
Simple vlab test for LDN estimates

Developed by

Name: Andrii Kolotii

Organization: Space Research Institute of Ukraine

Diagram



Land Productivity trends and national Land Cover maps over Ukraine *

URL to download input data

RUN

RUN DEFAULT

CHECK RUN

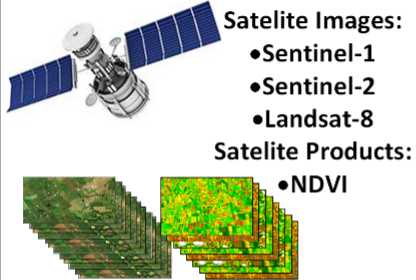
<http://vlab.geodab.eu/>



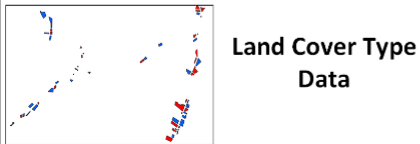
Essential variables monitoring workflow

Input Data

Remote Sensing Data



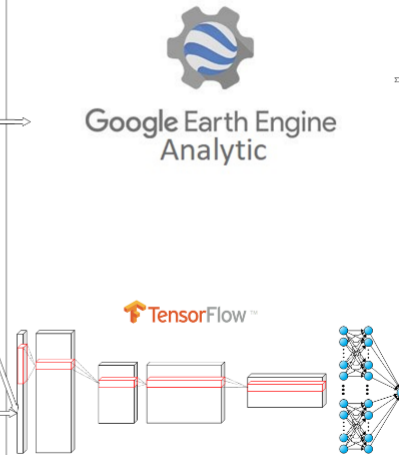
In-Situ Data



Weather Data Model



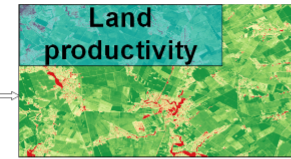
Nexus Approach Model



CGMS/WOFOST/WGEN



Models Outputs



CGMS/WOFOST/WGEN Outputs:

- Crop Leaf Area Index
- Crop Green Area Index
- Crops Development Stage
- Total Biomass
- Total Amount of Water in the Soil Profile
- Water Uptake
- Soil Water Content
- Daily Precipitation
- Cumulative Precipitation
- Soil Moisture
- Soil Evaporation
- Vapour Pressure
- Soil Surface Temperature
- Soil Temperature on Ground Level
- Air Temperature Min/Max
- Irradiation
- Wind Speed

Essential Variables

Food Variables

- Crop area, Crop type
- Crop Condition
- Crop phenology
- Crop yield

Water Variables

- Lakes, reservoir levels and aquifer volumetric change
- Groundwater
- Precipitation
- Soil moisture/temperature
- Evaporation and evapotranspiration

Energy Variables

- Surface atmospheric pressure
- Land surface temperature
- Surface air temperature
- Solar Surface Irradiance and its components
- Land use, Land cover
- Wind speed

Програма НАНУ “ERA-PLANET”



- Український внесок в Європейський проект
- Завдання і **результати** мають стати частиною **Європейського** проекту
- В кінці року результати будуть заслухані Науковою радою програми
- Плани на наступні роки доцільно заздалегідь узгодити з Європейською частиною проекту
- Перспектива розвитку в Horizon Europe

Дякую за увагу!
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