SATELLIGENCE

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HOW TO START YOUR OWN **REMOTE SENSING** COMPANY

SATELLIGENCE

BAD NEWS

You will fail

GOOD NEWS

Life is not fun without failure

INGREDIENTS

Satellite Data

Tools

Infrastructure

Trends

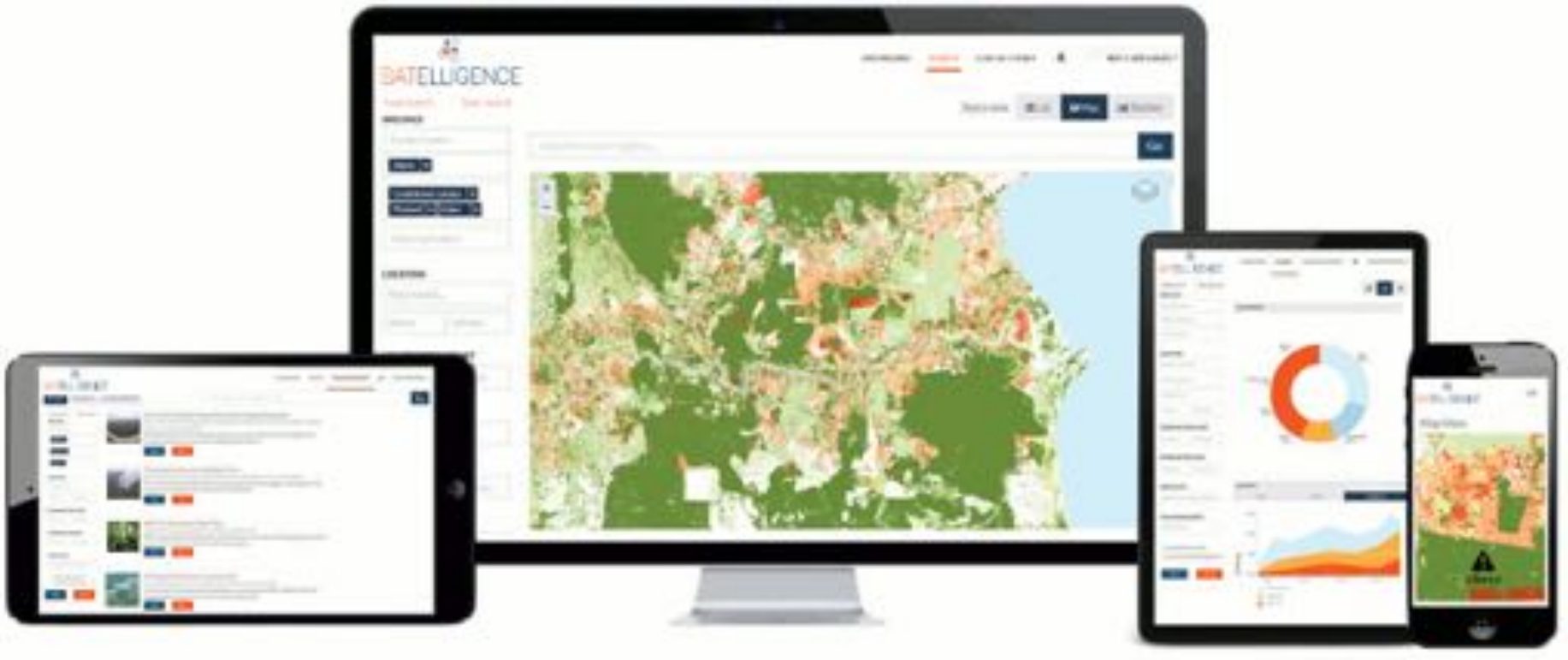
SMART FOREST & COMMODITY **ANALYTICS**

SATELLIGENCE

FOOD SECURITY

How to **feed** 2 billion more mouths in 2030?

CONTINUOUSLY UPDATED COMMODITY MAP OF THE WORLD



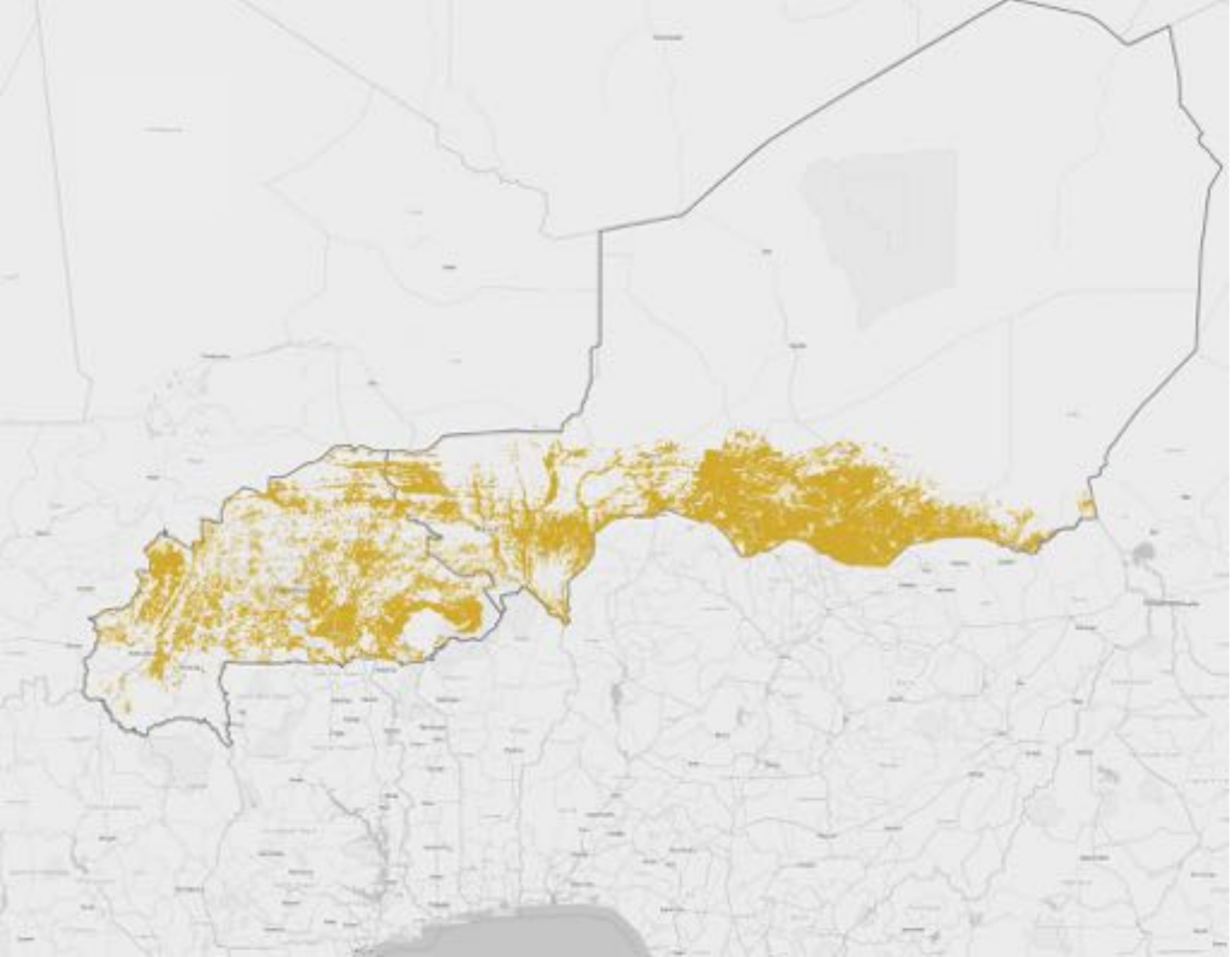
?

Burkina Faso

Niger

Burkina Faso

Niger

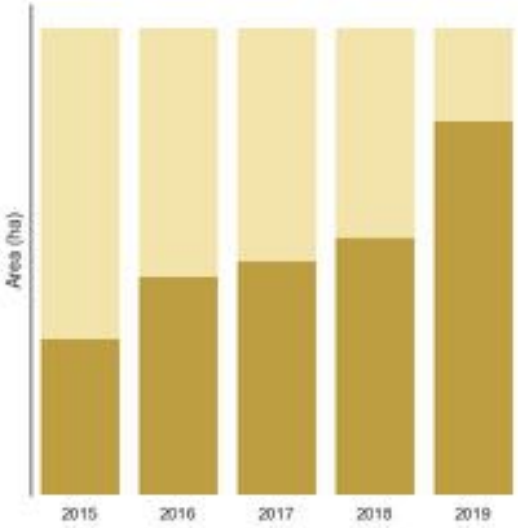


Cultivated area

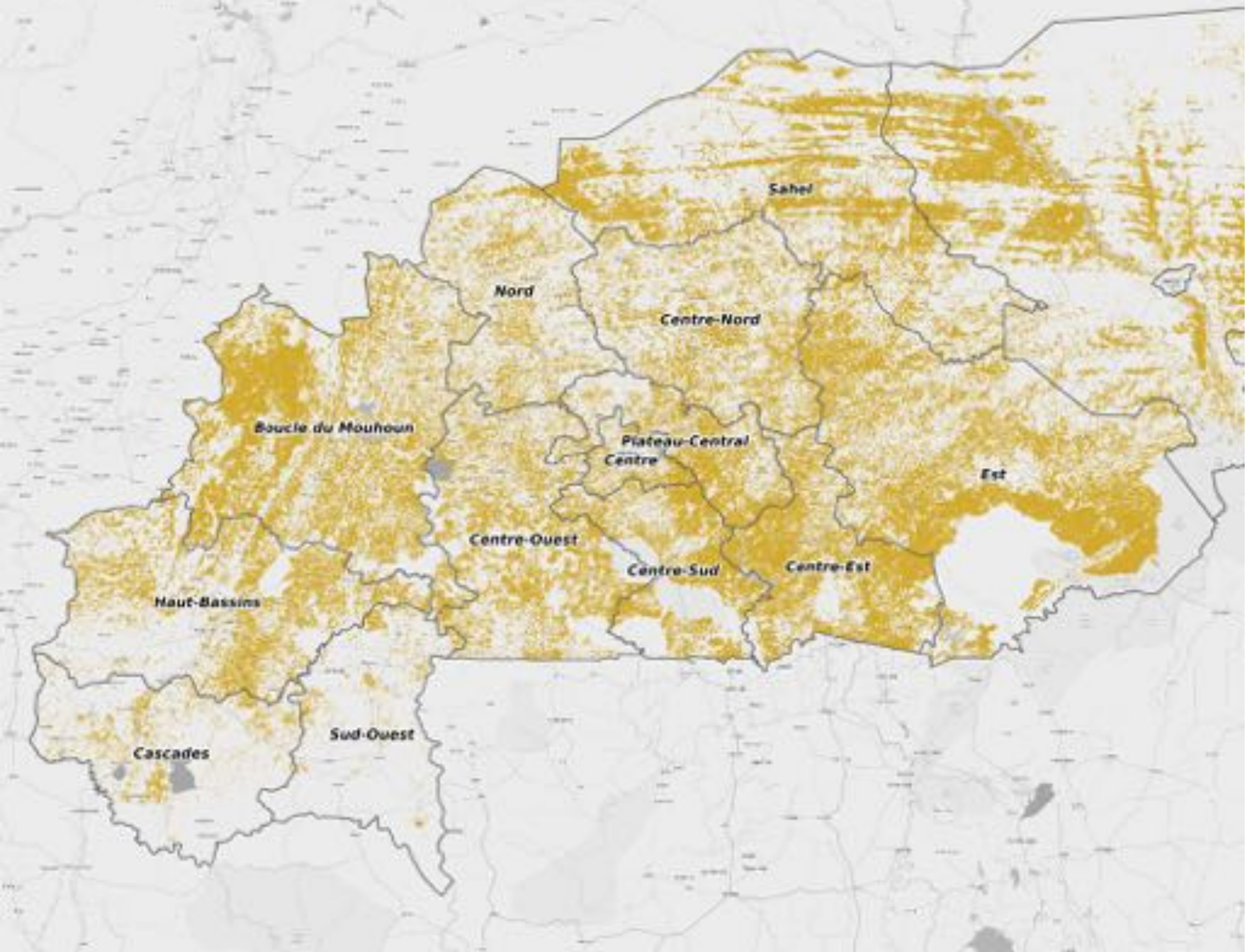
Cultivated area

Analytics

Historical trends



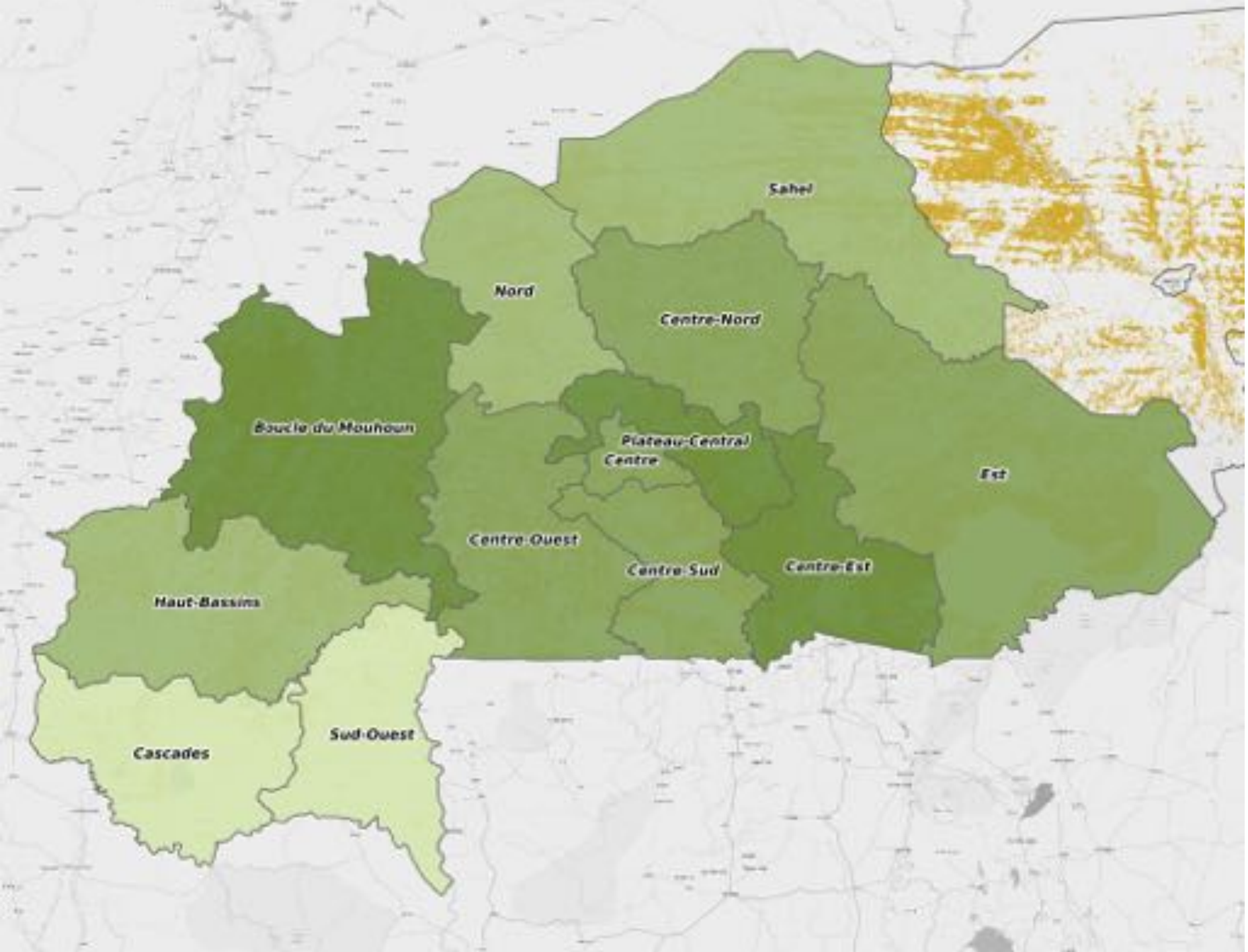
Cultivated area



Analytics

Zoom in to compare provinces

Cultivated area



Analytics

Zoom in to compare provinces

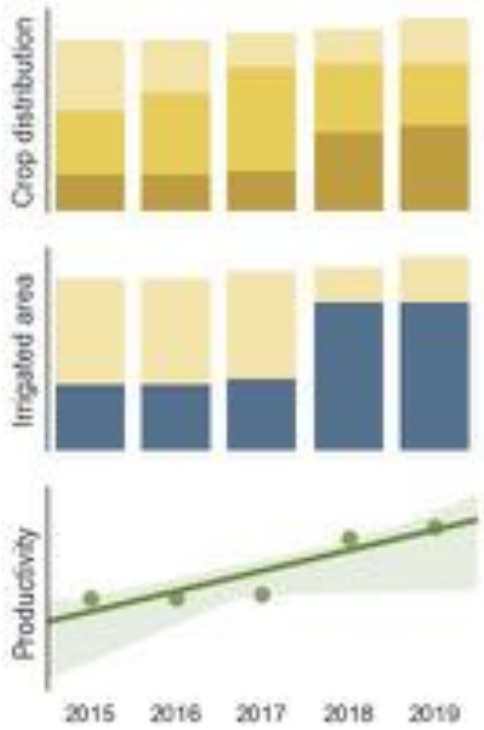
Add data components like **productivity**

And get **reports**

Cultivated area

Est

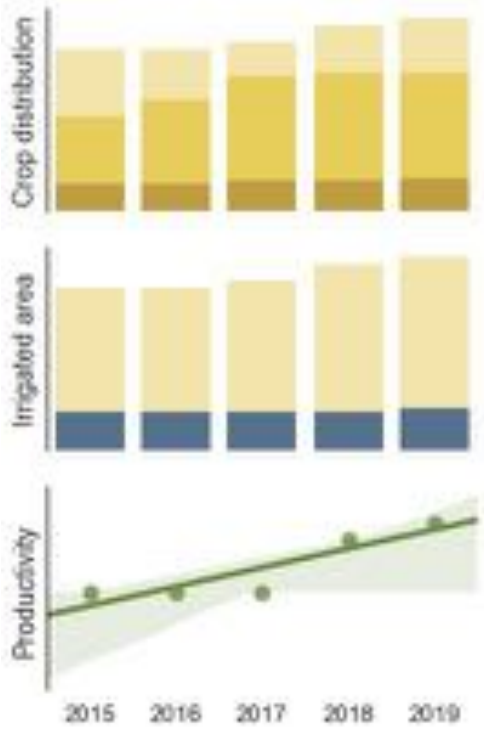
analytics



- Cultivated area
- Maize
- Rice
- Irrigated area

Nord

analytics



- Cultivated area
- Maize
- Rice
- Irrigated area

ABOUT OUR POSITIVE IMPACT

We create **actionable** information from space data to enable our clients to **feed the world** while protecting the world's **natural resources**

SATELLITE DATA

SATELLIGENCE

SATELLITE DATA

1. Open satellite data
   a. NASA: Landsat
   b. ESA: Sentinel 2, Sentinel 1

2. Sentinel 2 bands: true color, false color

3. Search & Download

SENTINEL 2

TRUE COLOR

10m

2018-06-30

SENTINEL 2

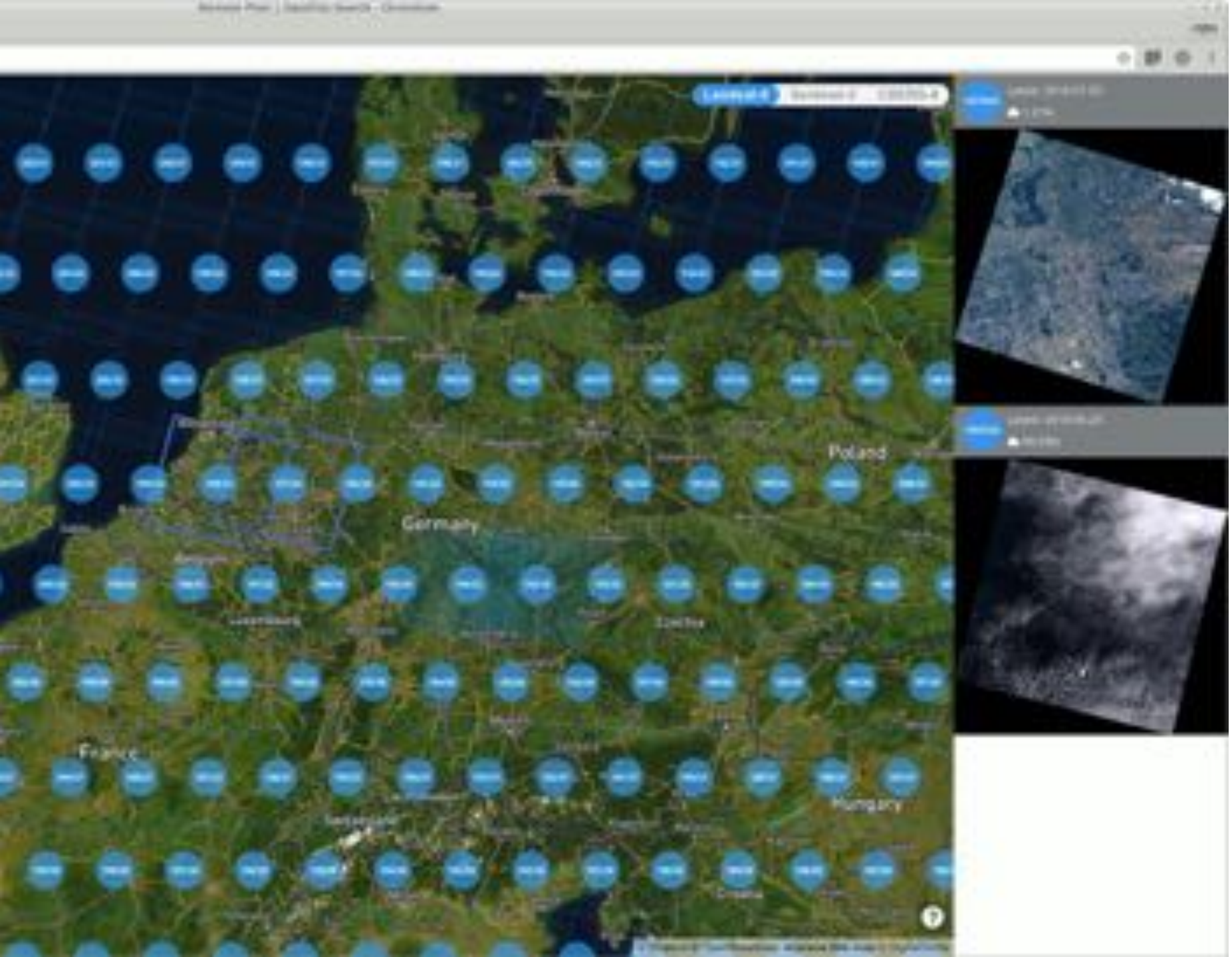
FALSE COLOR

20m

2018-06-30

SEARCH & DOWNLOAD

1. Remote Pixel search.remotepixel.ca
2. Copernicus Hub scihub.copernicus.eu



SEARCH

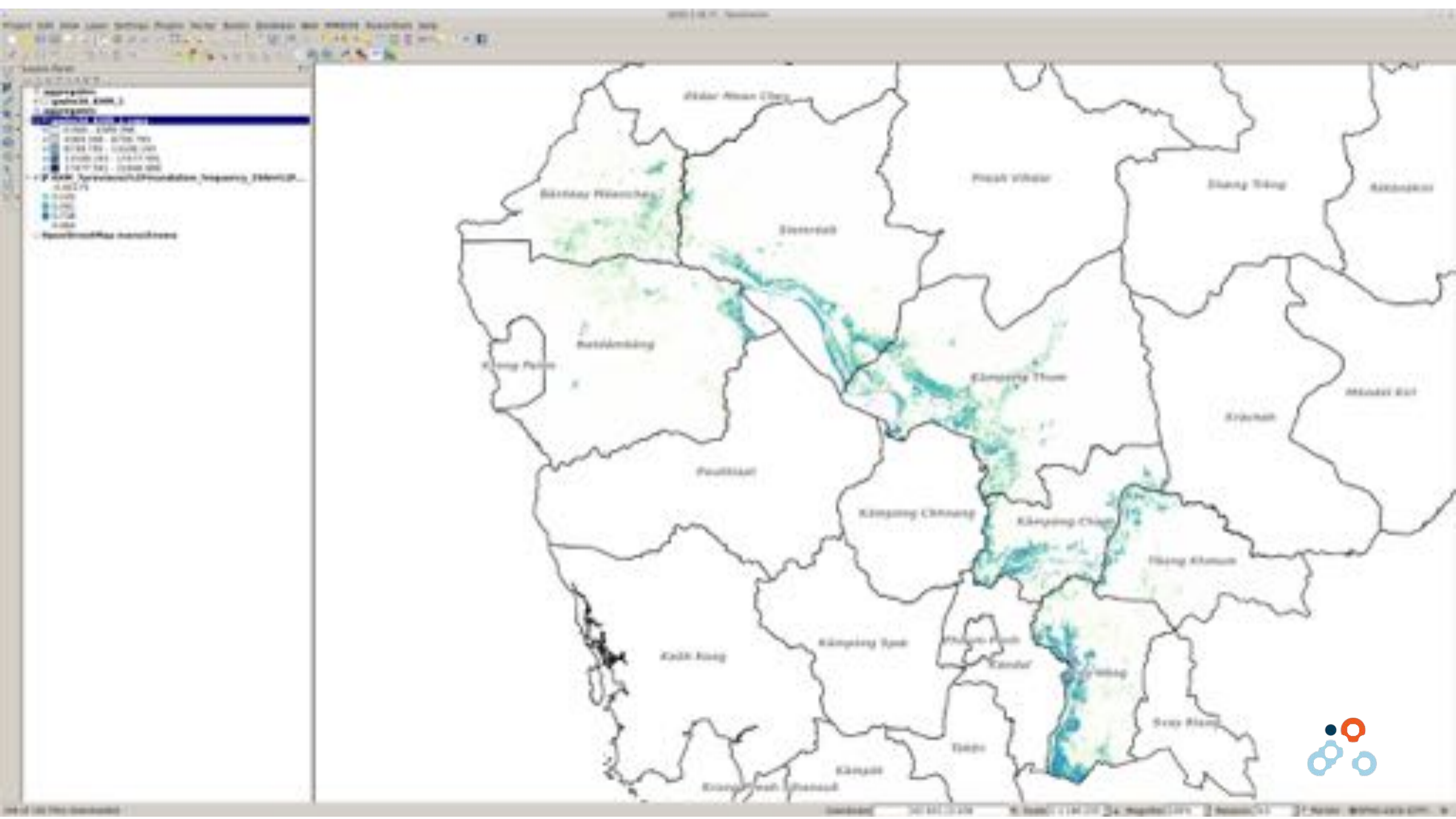
search.remotepixel.ca

Sentinel 2

Landsat

TOOLS

SATELLIGENCE



step
science toolbox exploitation platform

esa

SNAP

Feature Highlights

SNAP Frequently Asked Questions

2018

2017

TOOLS

SATELLIGENCE **CLASSIFIER**

XGBoost / Random Forest ML

https://gitlab.com/satelligence/classifier

TOOLS: PROGRAMMING

Python Python Python
Python Python
Numpy
Dask
Scipy
Pandas
Xarray
Python Python

INFRASTRUCTURE

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INFRASTRUCTURE DEV

Google Earth Engine
SentinelHub
Dias (ESA)

Cloud (AWS, GCE, Digital Ocean)

Your laptop

INFRASTRUCTURE PRODUCTION

Google Earth Engine
SentinelHub
Dias (ESA)

Cloud (AWS, GCE, Digital Ocean)

~~Your laptop~~

INFRASTRUCTURE CLOUD

The data is already there

Standards are moving to **cloud native geoprocessing** (trends)

TRENDS

SATELLIGENCE

TRENDS

Cloud Native Geoprocessing

- COG
- ARD
- SPAT

https://medium.com/@cholmes

Step-by-Step Guide to Building a Big Data Portal

https://medium.com/pangeo/step-by-step-guide-to-building-a-big-data-portal-e262af1c2977

Step-by-Step Guide to Building a Big Data Portal

1. Place your Big Data in cloud object storage in a self-describing, cloud-optimized format.
2. Congratulations! Your Big Data Portal is now complete. Take the rest of the day off.

https://medium.com/pangeo/step-by-step-guide-to-building-a-big-data-portal-e262af1c2977

TRENDS WHO TO FOLLOW

RadiantEarth

DevelopmentSeed

Mapbox

SUCCESS!

HOW TO START YOUR OWN **REMOTE SENSING** COMPANY

SATELLIGENCE

RECIPE

1. Download & explore **satellite images**
2. Get your **tools**
3. Pick your **platform**
4. Ride the **trend** wave
5. **Conquer world**

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WHY YOU WILL FAIL

Clouds & Haze

Sensor artefacts

Scaling (your laptop is too small)

Lack of training, calibration, validation data