



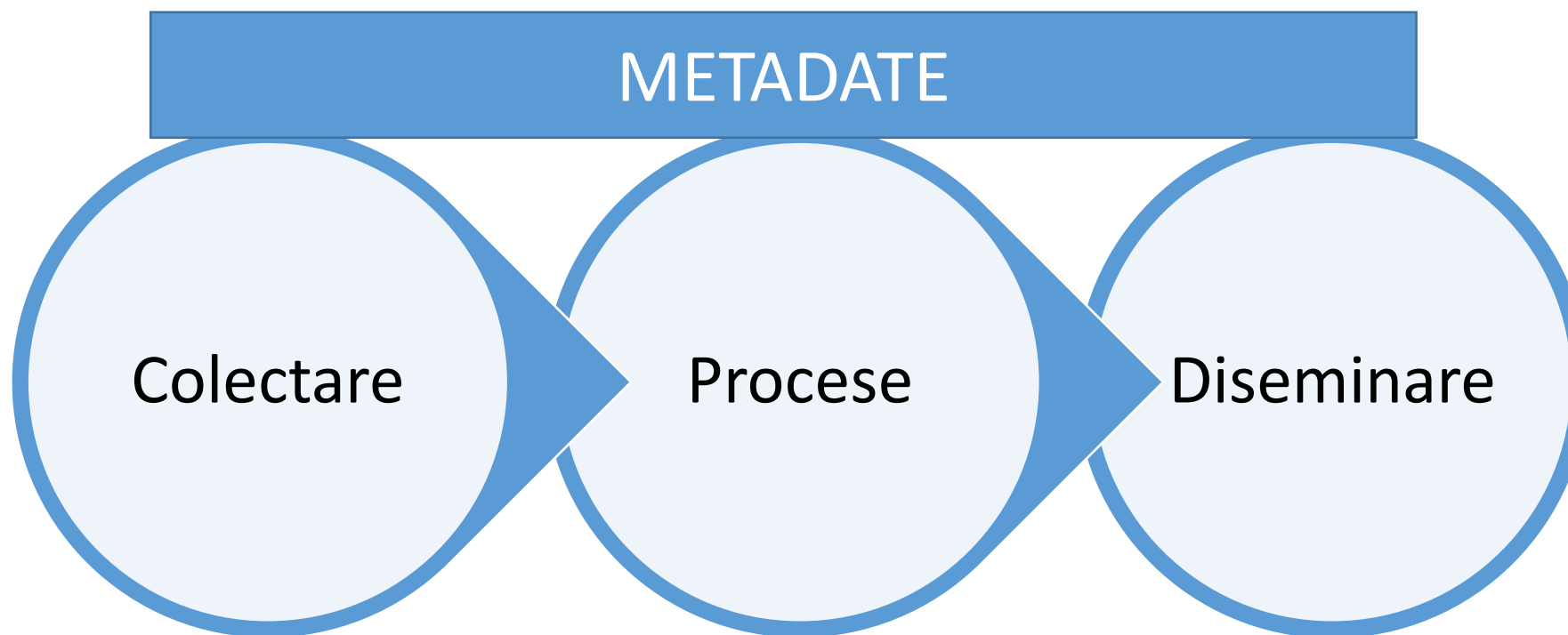
Sistemul Informațional Automatizat Integrat (Statistic) (IAIS)

Vasile Bujor, NBS

Prezentarea rezultatelor proiectului

*5 iulie 2022, Palatul Republicii, Chișinău, Republica
Moldova*

Fluxul de date a IAIS





Principiile IAIS

- Bazat pe metadate
- Standardizarea metodelor și proceselor
- Centralizarea stocării datelor
- Centralizarea analizei datelor
- Guvernare (armonizarea proceselor între cercetarile statistice)
- Securitate



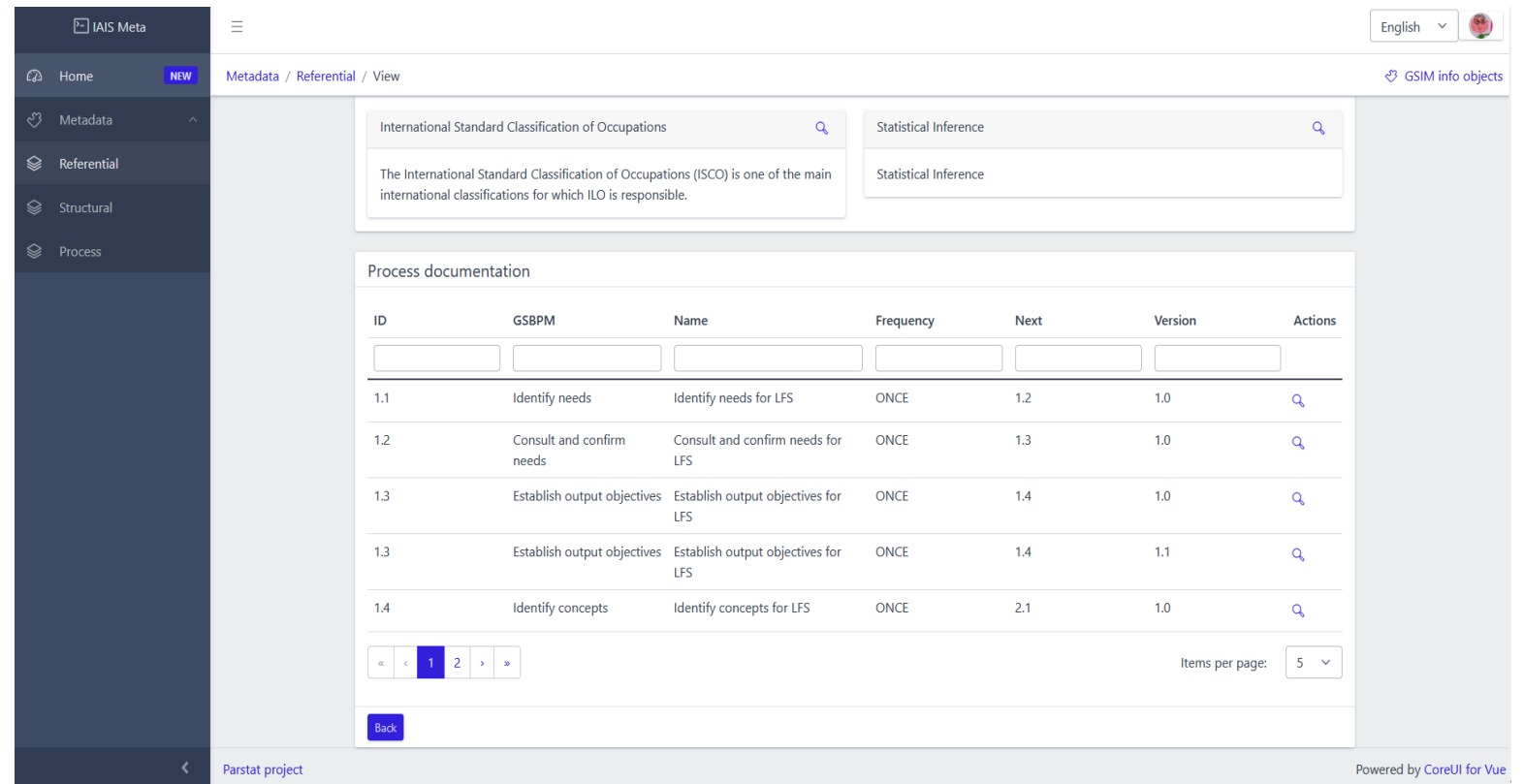
Modulele IAIS

- Metadata
 - Referențiale
 - Structurale
- Colectare
 - Sistem de introducere a datelor
 - Monitorizarea activității în teren (dashboard)
 - Sistem de management
- Proces
 - Sistem centralizat de procesare a datelor
- Diseminare
 - Baza de date statistică (statbank)



Metadata

- Documentarea standardizată a cercetărilor (cercetări statistice) după GSBPM și GSIM
- [Link](#)



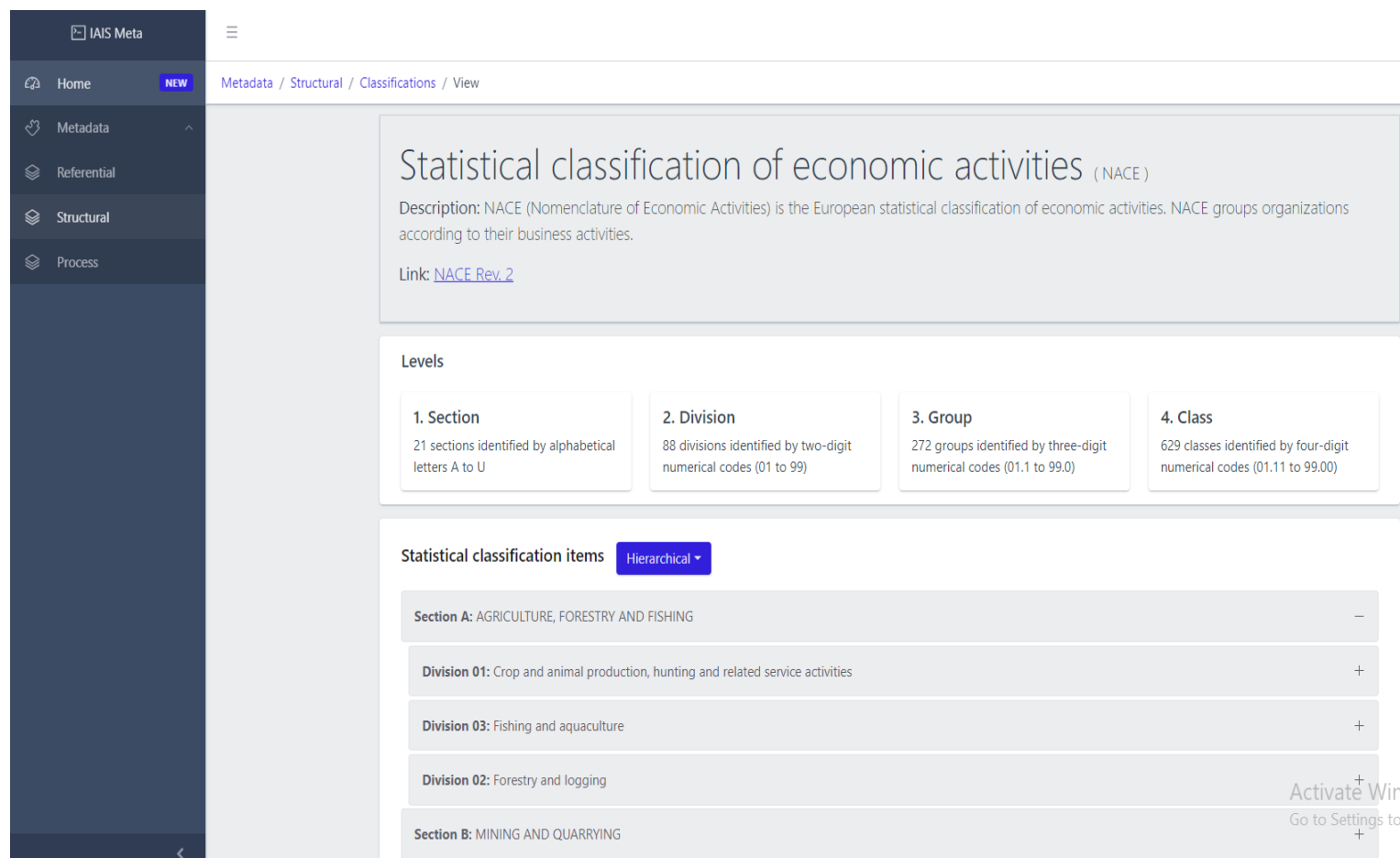
The screenshot shows the IAIS Meta web application interface. The main content area displays the metadata for the International Standard Classification of Occupations (ISCO). It includes a search bar, a description of the ISCO, and a table of process documentation.

ID	GSBPM	Name	Frequency	Next	Version	Actions
1.1	Identify needs	Identify needs for LFS	ONCE	1.2	1.0	Q
1.2	Consult and confirm needs	Consult and confirm needs for LFS	ONCE	1.3	1.0	Q
1.3	Establish output objectives	Establish output objectives for LFS	ONCE	1.4	1.0	Q
1.3	Establish output objectives	Establish output objectives for LFS	ONCE	1.4	1.1	Q
1.4	Identify concepts	Identify concepts for LFS	ONCE	2.1	1.0	Q

Metadate

- Documentație standardizată a seturilor de date, indicatori, variabile, clasificările statistice, concepte statistice etc.

- [Link](#)



IAIS Meta

Home **NEW** Metadata / Structural / Classifications / View

Statistical classification of economic activities (NACE)

Description: NACE (Nomenclature of Economic Activities) is the European statistical classification of economic activities. NACE groups organizations according to their business activities.

Link: [NACE Rev. 2](#)

Levels

Level	Description
1. Section	21 sections identified by alphabetical letters A to U
2. Division	88 divisions identified by two-digit numerical codes (01 to 99)
3. Group	272 groups identified by three-digit numerical codes (01.1 to 99.0)
4. Class	629 classes identified by four-digit numerical codes (01.11 to 99.00)

Statistical classification items

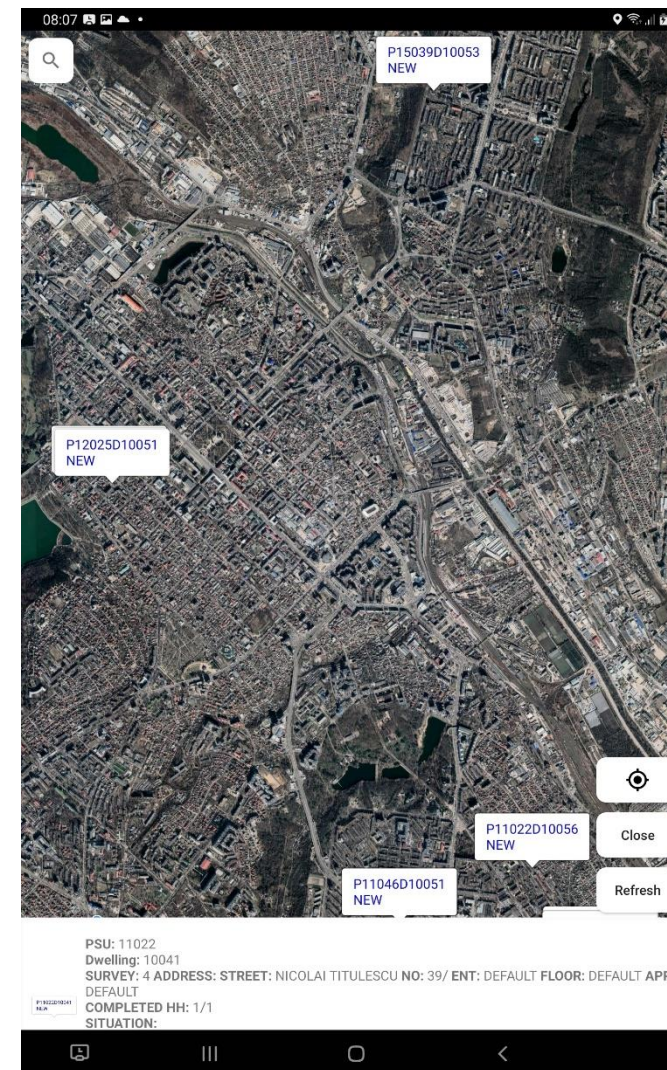
Hierarchical

- Section A: AGRICULTURE, FORESTRY AND FISHING
- Division 01: Crop and animal production, hunting and related service activities
- Division 03: Fishing and aquaculture
- Division 02: Forestry and logging
- Section B: MINING AND QUARRYING



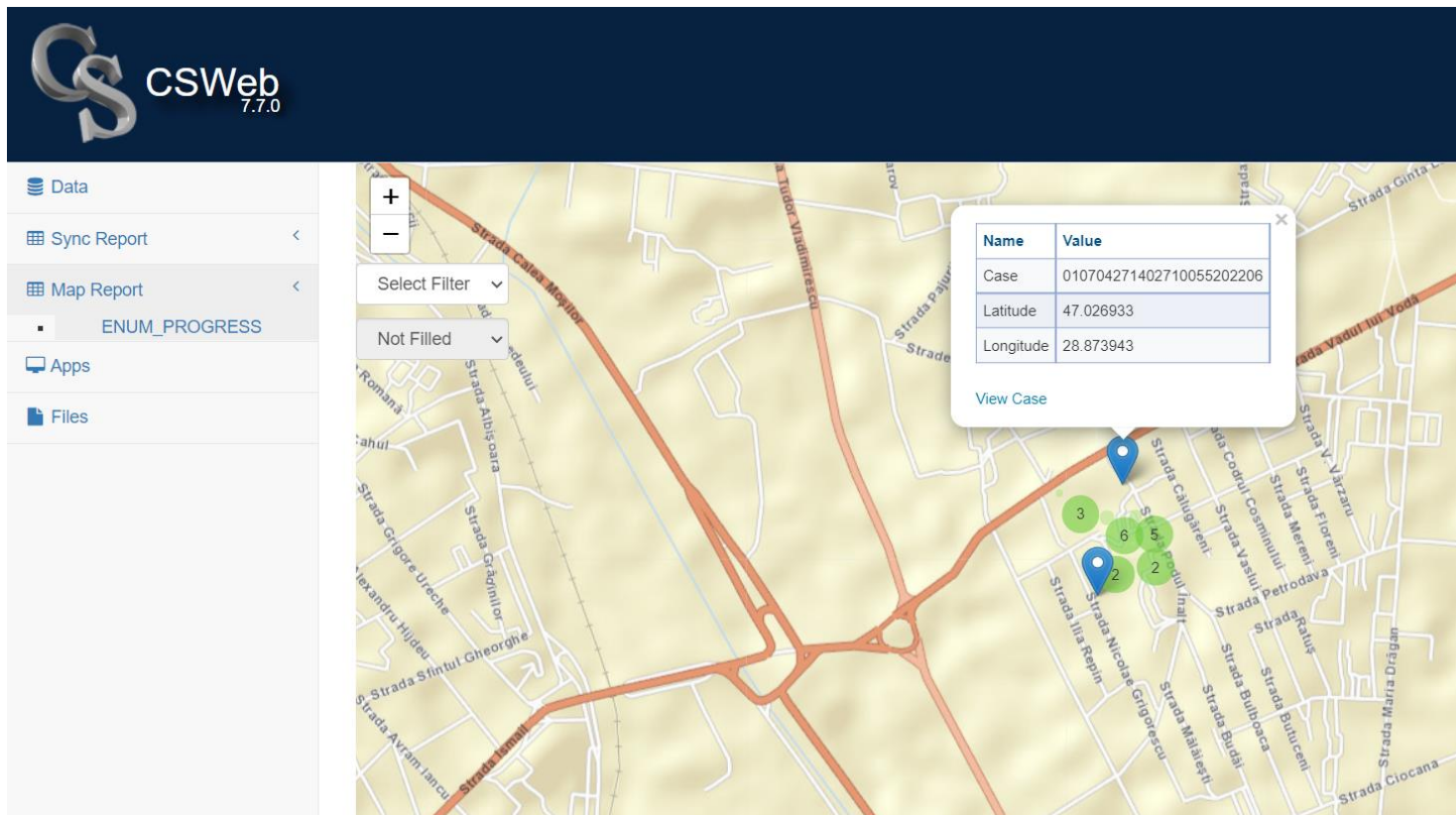
Colectarea datelor

- Trecerea la CAPI pentru anchetele în gospodării folosind CPro
- CAPI (Colectarea datelor digital) avantaje
 - Mai multe tipuri de întrebări
 - Mai multe dispozitive într-unul singur
 - Salturi automatizate între întrebări
 - Verificarea consistenței în timp real a răspunsului întrebării
 - Sincronizarea și evaluarea datelor în timp real
 - Monitorizarea muncii pe teren



Colectarea datelor

- Sincronizarea datelor în timp real
- CSWeb harta de monitorizare



The screenshot displays the CSWeb 7.7.0 interface. On the left, a sidebar menu includes options for Data, Sync Report, Map Report, ENUM_PROGRESS, Apps, and Files. The main area shows a map with several data points marked by colored pins (green and blue). A pop-up window is open over one of the pins, displaying the following information:

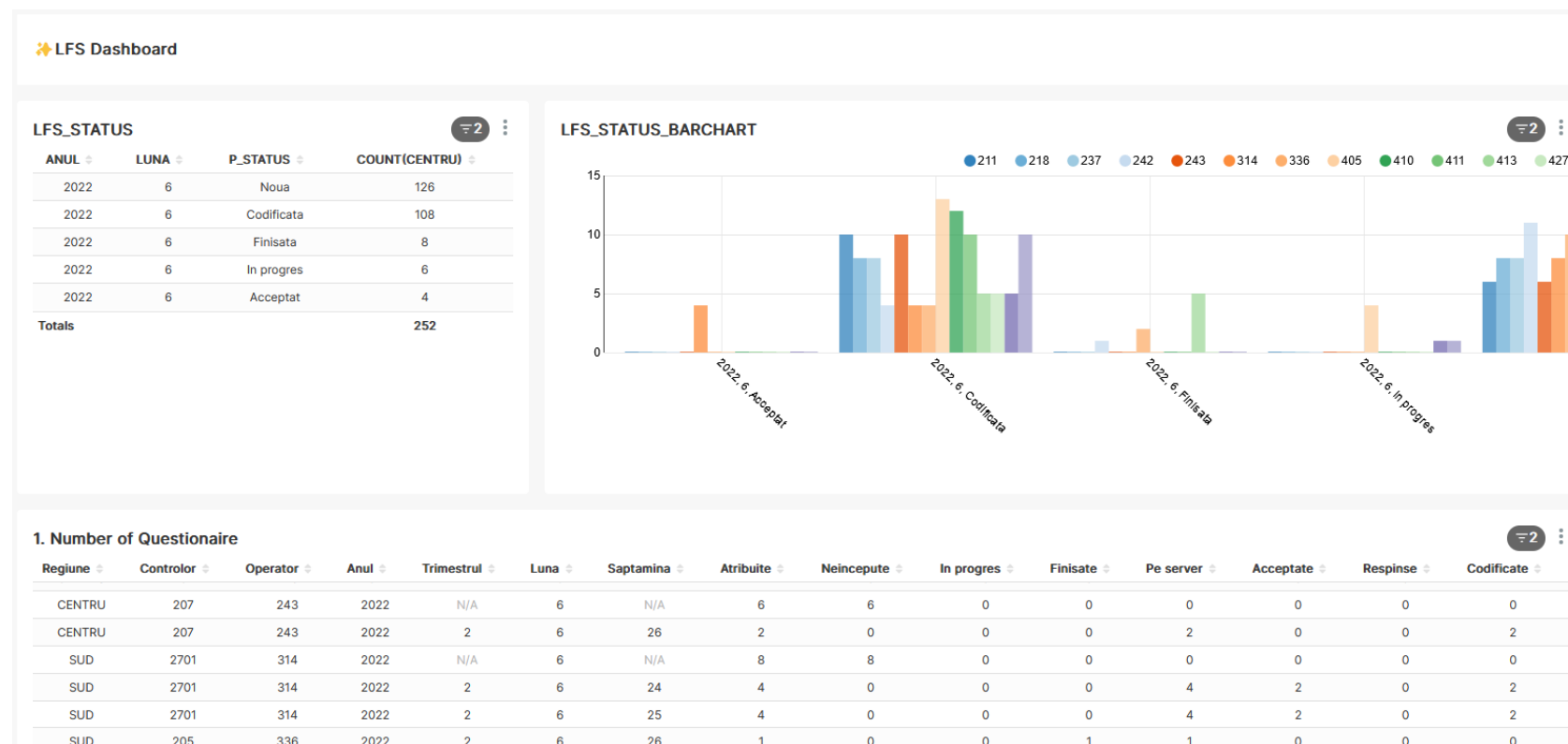
Name	Value
Case	010704271402710055202206
Latitude	47.026933
Longitude	28.873943

Below the table, there is a "View Case" link. The map also shows a "Select Filter" dropdown menu and a "Not Filled" dropdown menu.



Colectarea datelor

- Monitorizarea activității în teren utilizând Apache Superset
- Calcularea indicatorilor de lucru pe teren



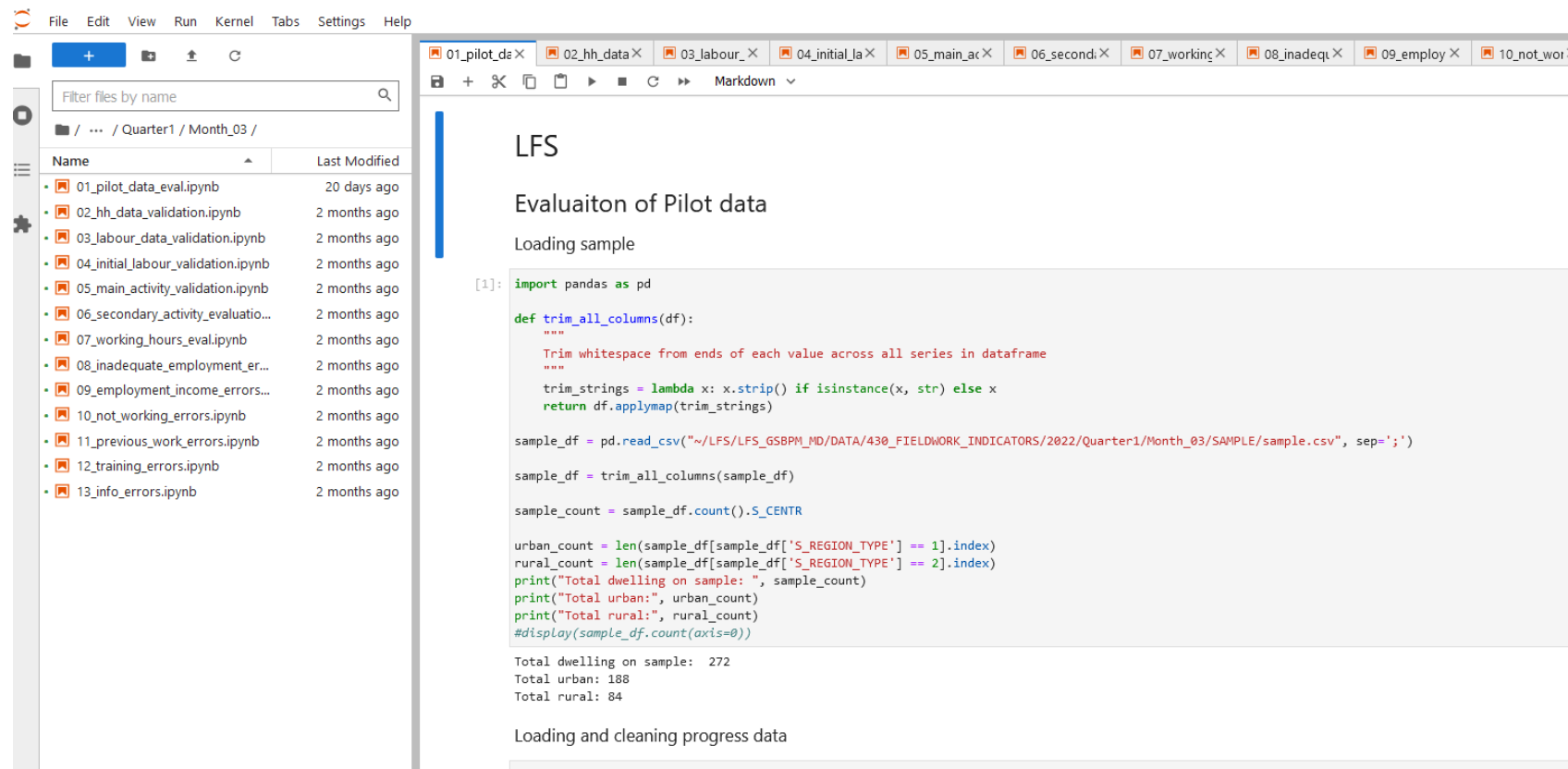


Procesarea datelor

- Sistem de procesare a datelor folosind notebook-uri Jupyter:
 - Standardizarea proceselor
 - Armonizarea proceselor
 - Organizarea proceselor (conform fazelor GSBPM)
- Suporta toate limbajele de programare statistică gratuite (R, Python, Julia, SQL, Spark... etc)
- Procesarea datelor pe server.
- Securitatea și prevenirea pierderii datelor



Procesarea datelor



The screenshot shows a Jupyter Notebook environment. On the left, a file explorer displays a directory structure with files named '01_pilot_data_eval.ipynb' through '13_info_errors.ipynb'. The main area shows a code cell with the following Python code:

```
[1]: import pandas as pd

def trim_all_columns(df):
    """
    Trim whitespace from ends of each value across all series in dataframe
    """
    trim_strings = lambda x: x.strip() if isinstance(x, str) else x
    return df.applymap(trim_strings)

sample_df = pd.read_csv("~/LFS/LFS_GSBPM_MD/DATA/430_FIELDWORK_INDICATORS/2022/Quarter1/Month_03/SAMPLE/sample.csv", sep=';')

sample_df = trim_all_columns(sample_df)

sample_count = sample_df.count().S_CENTR

urban_count = len(sample_df[sample_df['S_REGION_TYPE'] == 1].index)
rural_count = len(sample_df[sample_df['S_REGION_TYPE'] == 2].index)
print("Total dwelling on sample: ", sample_count)
print("Total urban:", urban_count)
print("Total rural:", rural_count)
#display(sample_df.count(axis=0))

Total dwelling on sample: 272
Total urban: 188
Total rural: 84

Loading and cleaning progress data
```



Diseminare

- Automatizarea creării tabelelor de ieșire
- PxWeb/Statbank
- Noul website.



IAIS planuri de viitor

- Îmbunătățirea sistemului de metadate.
- Integrarea tuturor proceselor AFM în IAIS.
- Implementarea CAPI pentru toate cercetările sociale.
- Integrarea tuturor cercetărilor sociale în IAIS.
- Îmbunătățirea întregului sistem.

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Mulumesc pentru atenție!

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