

DDI-CDI Process Description Application Prototype



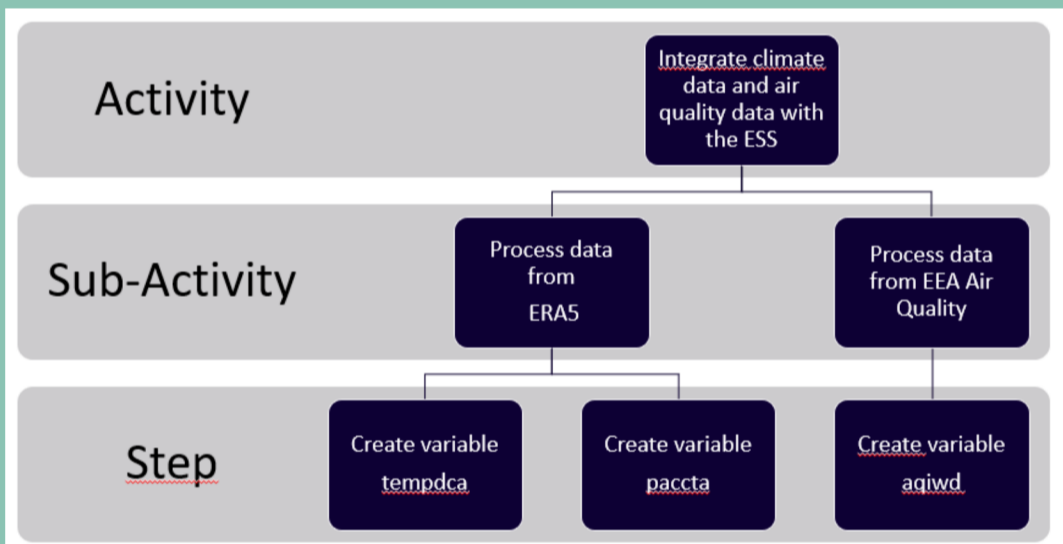
COMBINE DATA FROM DIFFERENT DOMAINS



The 'Climate Neutral and Smart Cities' Science Project combines data from the European Social Survey with environmental data from the EEA and Copernicus ERA5. This integration, from initial access to final production, is fully documented using the DDI-CDI metadata specification via a dedicated application.

The prototype app details every step in the workflow, including the construction of each indicator variable. Users can explore inputs and outputs, understand the variable computation, and access the programming code used in the computation.

<https://eosc-provenance.sikt.no/>



DOCUMENT ALL STEPS OF THE DATA INTEGRATION USING THE DDI-CDI PROCESS MODEL

Understand Data Ingestion, Processing, and Analysis Through Smart Metadata

```

ess-labs-data-sp9 / era5-prepare.py
Code Blame 265 lines (214 loc) · 8.16 KB
14 def create_data_column(df):
15     """ Create a column for population in meters """
16     df["pop"] = df["pop"] * 1000000 # convert population to meters
17     return df
18
19 def groupby_data(df_in: pd.DataFrame) -> pd.DataFrame:
20     """
21     Calculate grid-based daily values
22     """
23     daily_groupby = df_in.groupby(["region", "grid_id", "date"])
24     df = pd.DataFrame(
25         {
26             "pop": daily_groupby["pop"].first(),
27             "tempdc": daily_groupby["tempdc"].mean(numeric_only=True),
28             "tempdm": daily_groupby["tempdc"].max(),
29             "tempdmn": daily_groupby["tempdc"].min(),
30             "paccta": daily_groupby["pac"].sum(),
31             "singl0ex": daily_groupby["singl0"].max()
32         }
33     )
34     return df
    
```

Temperature in degrees Celcius, date average Ordered by mean

