Soil Organic Carbon: -

https://nsidc.org/data/smap_I4_c_anc_soc_rst/versions/1#anchor-2

Data type: - HDF5

Surface SOIL Moisture: -

GES DISC Dataset: AMSR2/GCOM-W1 surface soil moisture (LPRM) L2B V001 (LPRM AMSR2 SOILM2 001) (nasa.gov)

Soil Nitrogen/Carbon: -

Global Organic Soil Carbon and Nitrogen (Zinke et al.), https://doi.org/10.3334/ORNLDAAC/221

Soil Microbial Biomass Carbon, Nitrogen, and Phosphorus Data

A Compilation of Global Soil Microbial Biomass Carbon, Nitrogen, and Phosphorus Data , https://doi.org/10.3334/ORNLDAAC/1264

Land Surface Diagnosis: -

<u>GES DISC Dataset: MERRA-2 tavg1 2d Ind Nx: 2d,1-Hourly,Time-Averaged,Single-</u> Level,Assimilation,Land Surface Diagnostics V5.12.4 (M2T1NXLND 5.12.4) (nasa.gov)

Soil Texture Data: -

SMAPVEX08 Soil Texture Data, Version 1 | National Snow and Ice Data Center (nsidc.org)

This collection consists of land surface diagnostics, such as baseflow flux, runoff, surface soil wetness, root zone soil wetness, water at surface layer, water at root zone layer, and soil temperature at six layers:

<u>GES DISC Dataset: MERRA-2 tavg1 2d Ind Nx: 2d,1-Hourly,Time-Averaged,Single-</u> Level,Assimilation,Land Surface Diagnostics V5.12.4 (M2T1NXLND 5.12.4) (nasa.gov)

Global Gridded Surfaces of Selected Soil Characteristics (IGBP-DIS)

Global Gridded Surfaces of Selected Soil Characteristics (IGBP-DIS) , https://doi.org/10.3334/ORNLDAAC/569

Soil temperature

A Compilation of Global Soil Microbial Biomass Carbon, Nitrogen, and Phosphorus Data

A Compilation of Global Soil Microbial Biomass Carbon, Nitrogen, and Phosphorus Data, https://doi.org/10.3334/ORNLDAAC/1264

ATMOSPHERE

ASF data search VERTEX :- ASF Data Search (alaska.edu)

Example search for muzaffarpur :-

The data identifier

S1A_IW_GRDH_1SDV_20231108T001203_20231108T001228_051118_062A3
7_5DE2 corresponds to a **Sentinel-1A** radar image. Let's break it down:

- **S1A**: Refers to the **Sentinel-1A** satellite.
- **IW**: Indicates the **Interferometric Wide Swath** mode, which provides high-resolution radar imagery.
- **GRDH**: Stands for **Ground Range Detected High Resolution**, which means the data has been processed to ground range geometry.
- **1SDV**: Represents the **Single Look Complex** product type.
- **20231108T001203_20231108T001228**: The acquisition time in UTC format.
- 051118 062A37 5DE2: Additional information related to the product.

The spatial resolution of Sentinel-1 GRDH L1 data is approximately 10 meters by 10 meters¹. This means that each pixel in the image represents an area of 10 meters by 10 meters on the ground.

If you're interested in exploring this specific dataset further, you can find more details in the <u>metadata</u> provided by the European Space Agency.

Feel free to ask if you have any more questions!