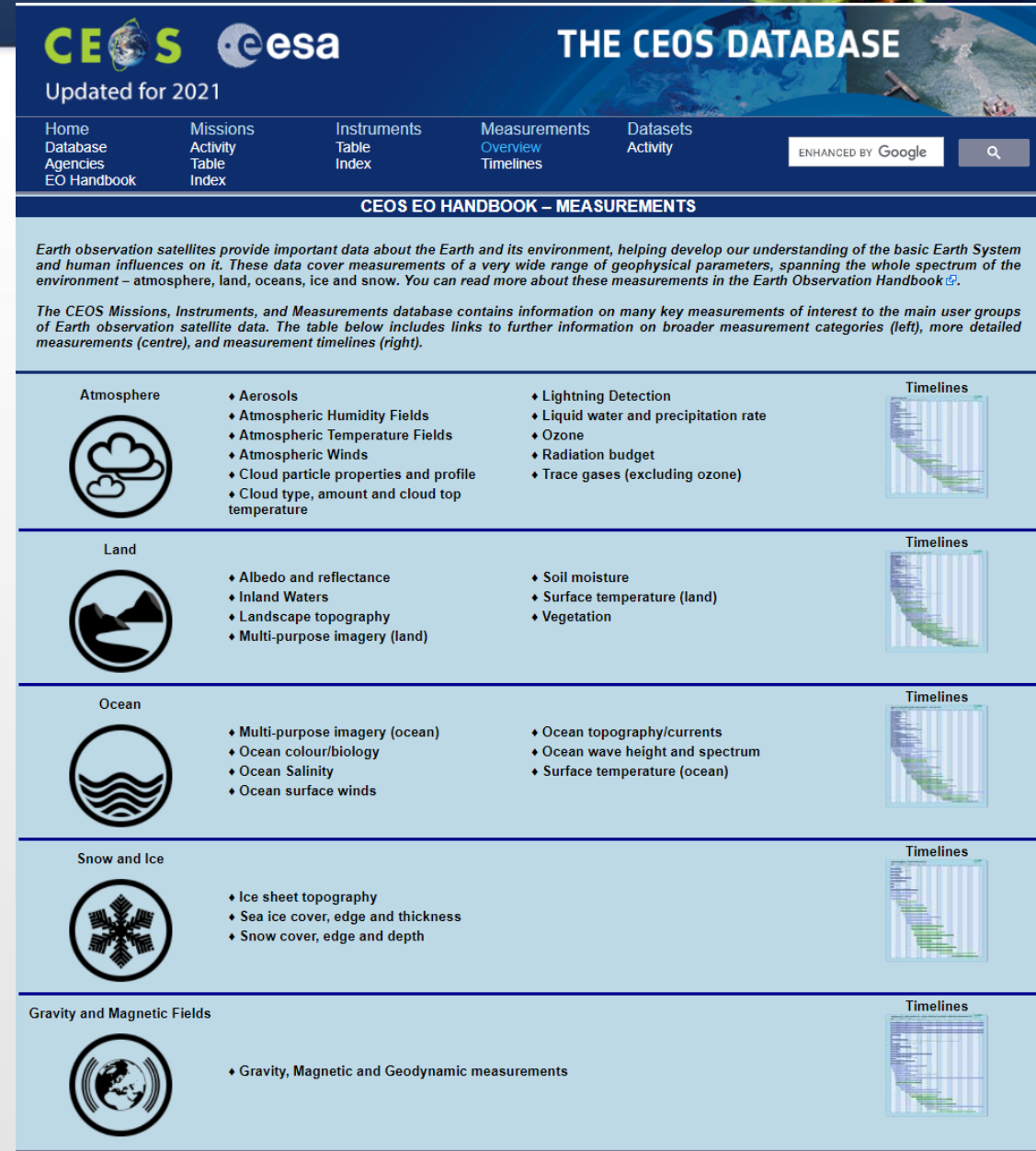


New target: Community of users that are less familiar with satellite missions and instruments, but that have a good knowledge of specific phenomena (e.g. volcanoes) and/or measurements.

Objective:

- Increase the awareness of non-EO specialists.
- Show that remote sensing is a valuable and reliable additional source of information, that can benefit multiple domains

Today, there is no indication of types of hazards

The screenshot shows the CEOS Database website interface. At the top, it features the CEOS and ESA logos, the text 'Updated for 2021', and the title 'THE CEOS DATABASE'. A navigation menu includes links for Home, Database, Agencies, EO Handbook, Missions, Activity, Table, Index, Instruments, Measurements, Overview, Timelines, and Datasets, Activity. A search bar is labeled 'ENHANCED BY Google'. Below the navigation is a section titled 'CEOS EO HANDBOOK – MEASUREMENTS'. The main content area contains a table of measurement categories, each with an icon, a list of specific measurements, and a 'Timelines' link with a small chart icon.

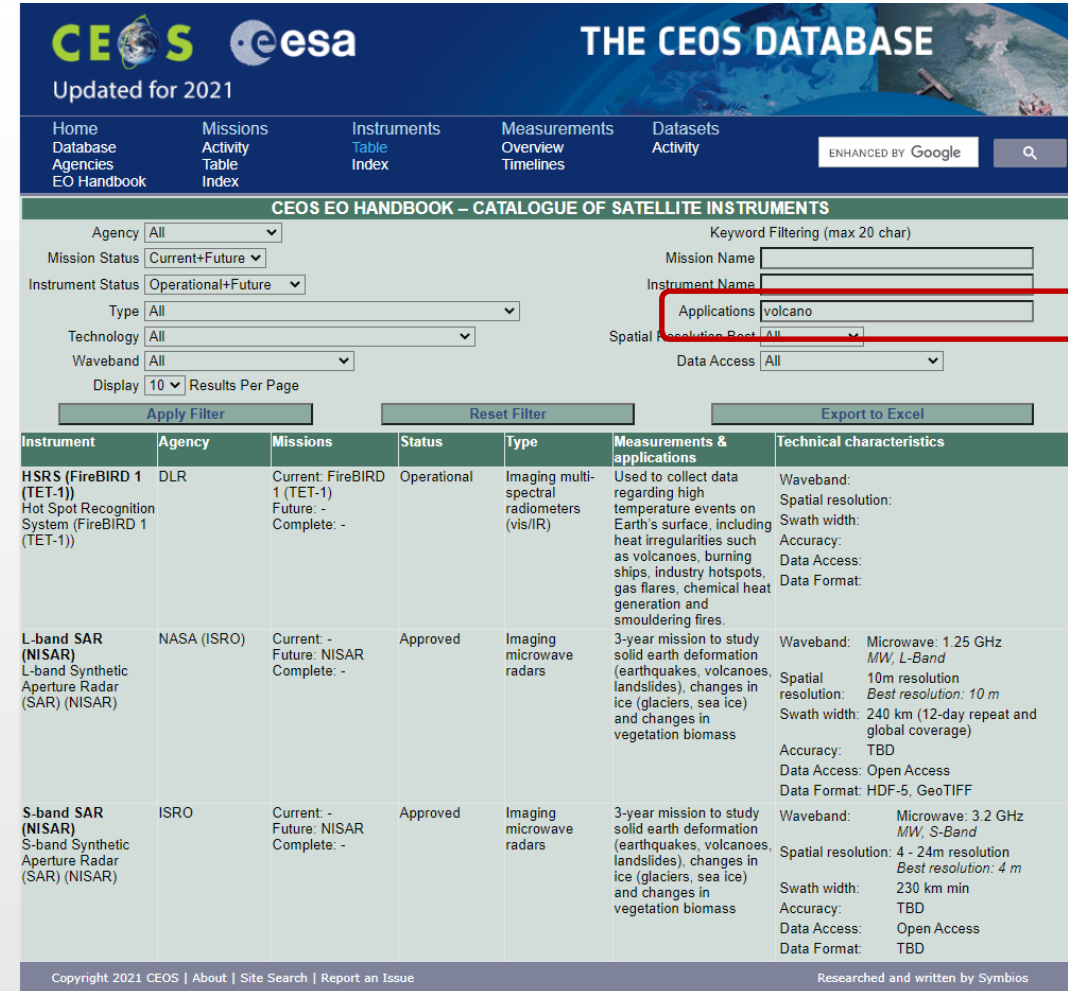
Category	Measurements	Timelines
Atmosphere	<ul style="list-style-type: none"> ♦ Aerosols ♦ Atmospheric Humidity Fields ♦ Atmospheric Temperature Fields ♦ Atmospheric Winds ♦ Cloud particle properties and profile ♦ Cloud type, amount and cloud top temperature 	<ul style="list-style-type: none"> ♦ Lightning Detection ♦ Liquid water and precipitation rate ♦ Ozone ♦ Radiation budget ♦ Trace gases (excluding ozone)
Land	<ul style="list-style-type: none"> ♦ Albedo and reflectance ♦ Inland Waters ♦ Landscape topography ♦ Multi-purpose imagery (land) 	<ul style="list-style-type: none"> ♦ Soil moisture ♦ Surface temperature (land) ♦ Vegetation
Ocean	<ul style="list-style-type: none"> ♦ Multi-purpose imagery (ocean) ♦ Ocean colour/biology ♦ Ocean Salinity ♦ Ocean surface winds 	<ul style="list-style-type: none"> ♦ Ocean topography/currents ♦ Ocean wave height and spectrum ♦ Surface temperature (ocean)
Snow and Ice	<ul style="list-style-type: none"> ♦ Ice sheet topography ♦ Sea ice cover, edge and thickness ♦ Snow cover, edge and depth 	
Gravity and Magnetic Fields	<ul style="list-style-type: none"> ♦ Gravity, Magnetic and Geodynamic measurements 	



- Currently, CEOS MIM has no dedicated “Applications” tab
 - only “Missions”, “Instruments”, “measurements”
- **“Applications” query field gives limited results e.g.**
 - **Floods:** 1 mission, 3 instruments
 - **Volcanoes:** 3 missions, 3 instruments



.... due to insufficient information attached to individual mission and instrument



CEOS EO HANDBOOK – CATALOGUE OF SATELLITE INSTRUMENTS

Agency: All | Mission Status: Current+Future | Instrument Status: Operational+Future | Type: All | Technology: All | Waveband: All | Display: 10 Results Per Page

Keyword Filtering (max 20 char): Applications: volcano

Instrument	Agency	Missions	Status	Type	Measurements & applications	Technical characteristics
HSRS (FireBIRD 1 (TET-1)) Hot Spot Recognition System (FireBIRD 1 (TET-1))	DLR	Current: FireBIRD 1 (TET-1) Future: - Complete: -	Operational	Imaging multi-spectral radiometers (vis/IR)	Used to collect data regarding high temperature events on Earth's surface, including heat irregularities such as volcanoes, burning ships, industry hotspots, gas flares, chemical heat generation and smouldering fires.	Waveband: Spatial resolution: Swath width: Accuracy: Data Access: Data Format:
L-band SAR (NISAR) L-band Synthetic Aperture Radar (SAR) (NISAR)	NASA (ISRO)	Current: - Future: NISAR Complete: -	Approved	Imaging microwave radars	3-year mission to study solid earth deformation (earthquakes, volcanoes, landslides), changes in ice (glaciers, sea ice) and changes in vegetation biomass	Waveband: Microwave: 1.25 GHz MW, L-Band Spatial resolution: 10m resolution Best resolution: 10 m Swath width: 240 km (12-day repeat and global coverage) Accuracy: TBD Data Access: Open Access Data Format: HDF-5, GeoTIFF
S-band SAR (NISAR) S-band Synthetic Aperture Radar (SAR) (NISAR)	ISRO	Current: - Future: NISAR Complete: -	Approved	Imaging microwave radars	3-year mission to study solid earth deformation (earthquakes, volcanoes, landslides), changes in ice (glaciers, sea ice) and changes in vegetation biomass	Waveband: Microwave: 3.2 GHz MW, S-Band Spatial resolution: 4 - 24m resolution Best resolution: 4 m Swath width: 230 km min Accuracy: TBD Data Access: Open Access Data Format: TBD

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1. WGDisasters to work with CEOS MIM team (ESA , Symbios) to define the improvements to be brought to CEOS MIM to better serve the Disaster Risk Management community (*decision-makers, practitioners, scientists, disaster experts, organisations...*)

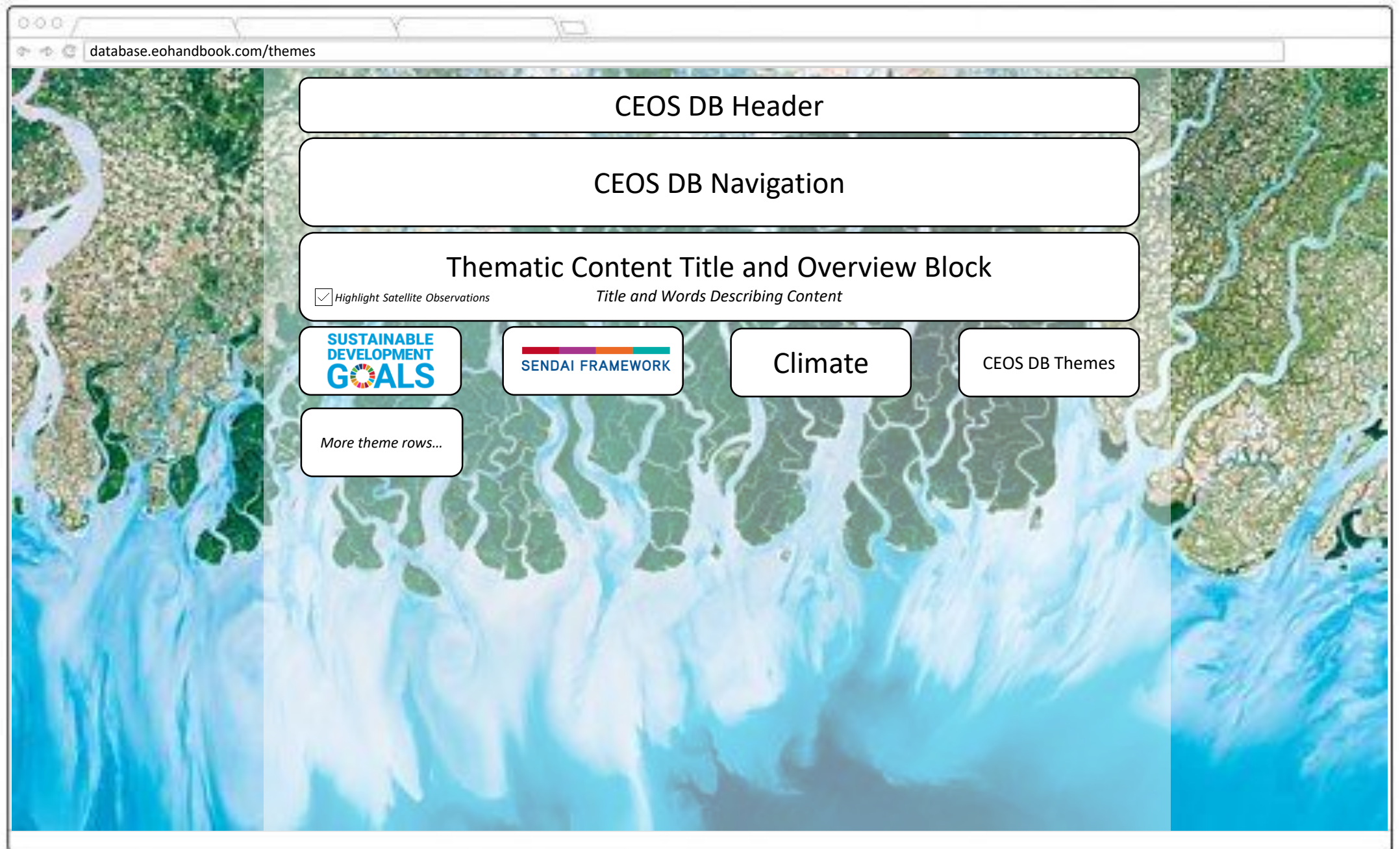
- “Applications” tab ? Other ?
- Query results pointing to ..? Datasets, Missions, Instruments, Measurements, other ,.... ?

Instrument	Status/Accuracy	Instrument Description	Measurement Technology	Timeline
Advanced MI Advanced Meteorological Imager	Operational	Continuous monitoring capability for the near real-time generation of high-resolution meteorological products and long-term change analysis of sea surface temperature and cloud coverage	Multi-purpose imaging Vis/IR radiometer	
AEISS Advanced Electronic Image Scanning System	Operational	High resolution imager for land applications of cartography and disaster monitoring	High resolution optical imager	
AEISS-A Advanced Electronic Image Scanning System-A	Operational	High resolution imager for land applications of cartography and disaster monitoring	High resolution optical imager	
AGRI Advanced Geosynchronous Radiation Imager	Operational free & open	A multiple channel radiation imager, one of the primary instruments aboard FY-4. Technically featured by a precisely designed two-mirror structure, capable of accurate and flexible sensing in two dimensions, and minute-level fast sector scanning. Frequent Earth imaging over 14 bands with off-axis three reflections of the primary optic system. On-board black body available for IR calibrations at very short time intervals.	Multi-purpose imaging Vis/IR radiometer	
ASTER Advanced Spaceborne Thermal Emission and Reflection Radiometer	Operational free & open	Surface and cloud imaging with high spatial resolution, stereoscopic observation of local topography, cloud heights, volcanic plumes, and generation of local surface digital elevation maps. Surface temperature and emissivity. ASTER SWIR detectors are no longer functioning due to anomalously high SWIR detector temperatures. ASTER SWIR data acquired since April 2008 are not useable, and show saturation of values and severe striping. All attempts to bring the SWIR bands back to life have failed, and no further action is envisioned.	High resolution optical imager	

CEOS EO HANDBOOK – INSTRUMENT SUMMARY - MSI (Sentinel-2) - M			
Full Name	Multi-Spectral Instrument (Sentinel-2)	Status	Operational
Instrument Agencies	ESA ¹ , COM ²	Maturity	
Instrument Type	High resolution optical imagers	Geometry	Push-broom scanning
Instrument Technology	High resolution optical imager	Sampling	Imaging
Data Access	Open Access	Data Format	
Measurements and Applications			Optical high spatial resolution imagery over land and coastal areas for GMES operational services.
Resolution Summary	10 m for 4 bands in VNIR, 60 m for 3 dedicated atmospheric correction bands, 20 m for remaining bands (Best Resolution: 10m)		
Swath Summary	290 km (Max Swath: 290 km)		
Accuracy Summary	Absolute radiometric accuracy for Level 1C data: 3 - 5%		
Waveband Summary	13 bands in the VNIR-SWIR VIS (-0.40 µm - -0.75 µm) SWIR (-1.3 µm - -3.0 µm)		
Instrument Measurements	Category	Parameter	Accuracy
Albedo and reflectance	Multi-purpose imagery (land)	Photoynthetically Active Radiation (PAR)	
		Fractionally absorbed PAR (FPAR)	
Radiation budget	Land surface imagery	Earth surface albedo	
		Fire area	
Vegetation	Vegetation type	Upwelling (Outgoing) spectral radiance at TOA	
		Normalized Differential Vegetation Index (NDVI)	
Soil type	Soil type	Leaf Area Index (LAI)	
		Vegetation type	
Thematic Links			
GCOS			
ECV	ECV Product (Physical Quantity)	ECV Inventory Dataset Name (RecordID)	
Glaciers and Ice Caps	2D Vector Outlines, Delineating Glacier Area (Vector Area/outline)	Global Land Ice Measurements from Space (GLIMS) (Vector Area/outline)	
SDGs	Indicator	Data and Observations	
15. Life on Land	15.4.1. Change in the extent of wetlands	6.6.1. Aq.	
Instrument Missions			
Sentinel-2 A - Sentinel-2 A (2015 - 2022) ³			
Sentinel-2 B - Sentinel-2 B (2017 - 2024) ⁴			
Sentinel-2 C - Sentinel-2 C (2021 - 2029) ⁵			

2. In operations, WG Disasters responsible for filling the CEOS MIM database with the relevant information, and keep it up to date.

CEOS DB Thematic Interface Wireframe – Top Level



CEOS DB Thematic Interface Wireframe – SDGs Level 1

database.eohandbook.com/themes/sdg

CEOS DB Header

CEOS DB Navigation

Thematic Content Title and Overview Block

Highlight Satellite Observations *Title and Words Describing Content*

SUSTAINABLE DEVELOPMENT GOALS

Blurb on satellite capabilities: TBA

More Themes...

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

CEOS DB Thematic Interface Wireframe – SDGs Level 2

database.eohandbook.com/themes/sdg/goal15/indicator15.3.1

CEOS DB Header

CEOS DB Navigation

Thematic Content Title and Overview Block


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SUSTAINABLE DEVELOPMENT GOALS

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15 LIFE ON LAND


*Indicator 15.3.1 Proportion of land that is degraded over total land area
Blurb on satellite capabilities: TBA*



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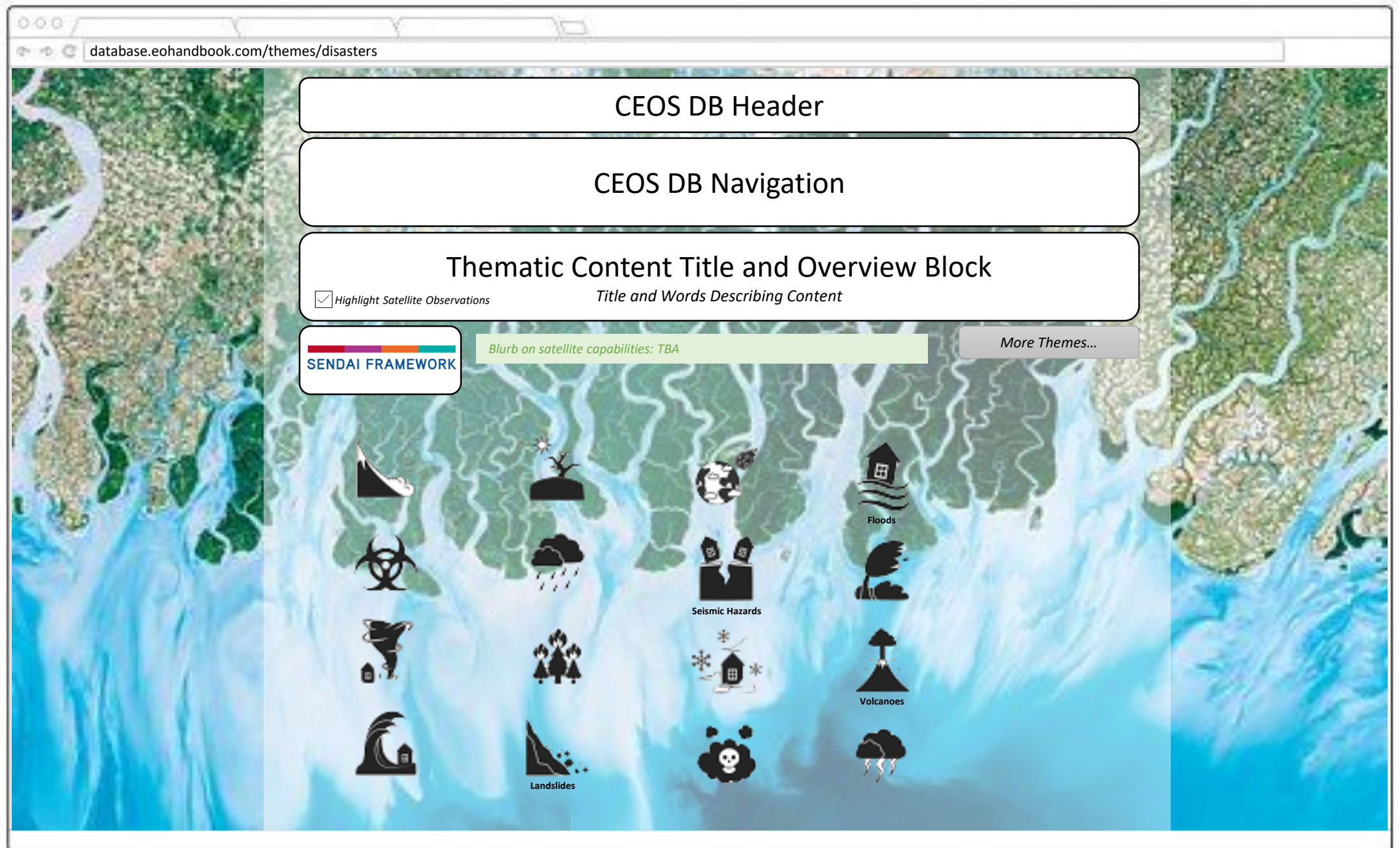


Copernicus: Sentinel-2

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CEOS DB Thematic Interface Wireframe – Disasters Level 1



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CEOS DB Navigation

Thematic Content Title and Overview Block

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SENDAI FRAMEWORK

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Landslides

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