



ASDI Data Informational Session:

Japan Meteorological Agency

Himawari-8

on AWS

July 8, 2020 | 10 AM ET



The **Amazon Sustainability Data Initiative** significantly reduces the cost, time, and technical barriers associated with analyzing large datasets to generate sustainability insights.

Meaningful, timely and data-driven insights



Sustainability

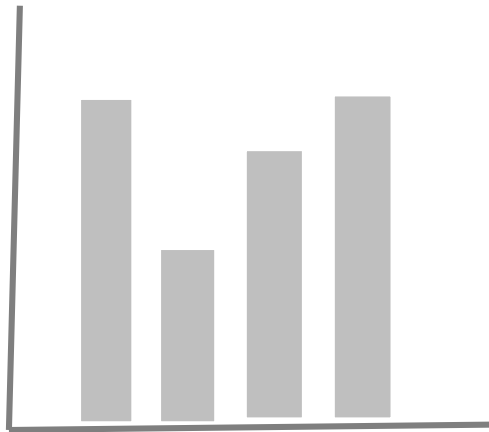
Removing undifferentiated heavy lifting

"...data must be organized, well-documented, consistently formatted, and error free. Cleaning the data is often the most taxing part of data science, and is frequently 80% of the work."

— Data Driven by DJ Patil and Hilary Mason

Building an ecosystem for change

Amazon Sustainability Data Initiative



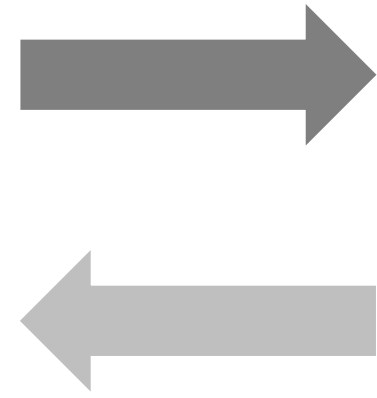
democratize access to

data



enable access to

analytics



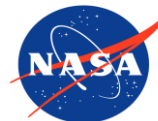
promote

knowledge exchange

Enabling easier and faster access to foundational data

When data lives in the cloud – on remote, internet-connected servers – anyone can see it and analyze it without having to procure their own copy or worry about keeping it up to date. This is powerful because it allows researchers and innovators to experiment much more quickly and at lower cost, which leads to more insights.

- **ASDI Data Catalog:** over 50 datasets discoverable through the Registry of Open Data on AWS.



AWS Public Datasets

The AWS Public Dataset Program covers the cost of storage for publicly available high-value cloud-optimized datasets. We work with data providers who seek to:

- Democratize access to data by making it available for analysis on AWS.
- Develop new cloud-native techniques, formats, and tools that lower the cost of working with data.
- Encourage the development of communities that benefit from access to shared datasets.

opendata.aws

MODIS

GFS

NOAA GHE

GEOS-Chem

CBERS

UKMet

OpenStreetMap

HRRR

ECMWF ERA5

GEFS

Sentinel-1

NAIP

AfSIS Soil Chemistry

OFS

Terrain Tiles

GOES-16

eBird

HIRLAM

NASA NEX

Sentinel-2

ISD

ARPEGE

NREL Wind Integration

NOAA ERI

SILAM Air Quality

LandSat 8

GHCN

NREL Solar Radiation

NWM

OpenAQ

Registry of Open Data on AWS

NEXRAD

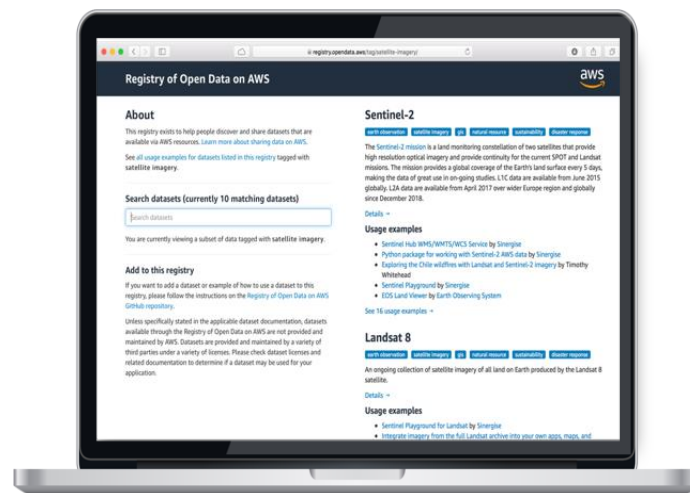
AROME

<https://registry.opendata.aws>

GOES-17

CESM LENS

USGS 3DEP LiDAR



Enabling easier and faster access to foundational data

- **Cloud Data Optimization:** collaboration with the Earth Science Information Partners ([ESIP](#)) Cloud Computing Cluster
- **Data Informational Sessions:** address the knowledge gap between those who produce sustainability foundational datasets and those consuming the data.

Building an ecosystem for change

Amazon Sustainability Data Initiative

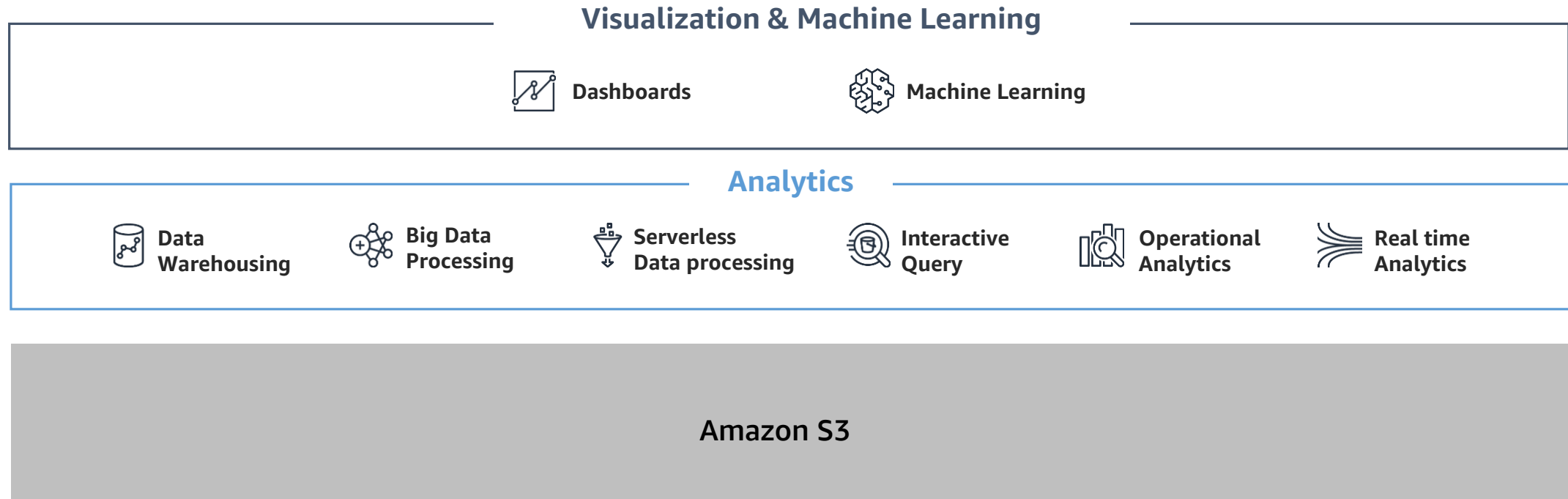


enable access to

analytics

Enabling better access to analytics

Removing obstacles to experimentation will lead to more innovation in the field of sustainability.



Open call for proposals – cloud grants to support cloud-based prototyping

Promoting knowledge exchange

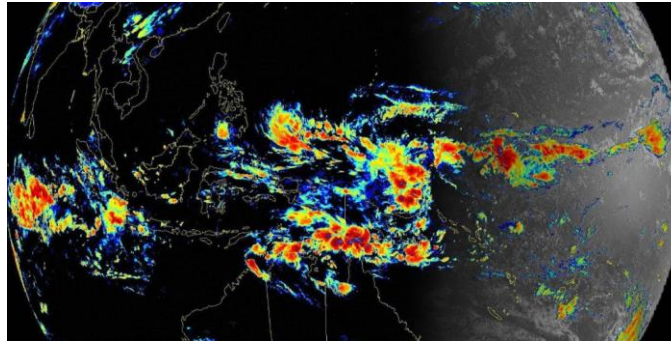
Build literacy in the sustainability community and encourage users to learn from each other.

- AWS Public Sector Blogposts ([monthly Sustainability Series](#))

Encourage trailblazer AWS customers to share lessons learned with others,



[Enabling rapid COVID-19 and air pollution analysis across the globe with OpenAQ and AWS](#)



[Himawari-8: Enabling access to key weather data](#)



[Communicating a national flood risk assessment using AWS](#)

- ASDI Community of Practice
- Training and tutorials (more [here](#))
- Events (workshops, conferences and webinars)

Solcast

Producing real-time, historical and forecast estimates of solar radiation



Process imagery from five geostationary weather satellites (e.g., GOES) – a large volume of data

Solcast computes nearly 600 million forecasts every hour via a probabilistic ensemble, to capture a range of outcomes for the near-term availability of cloud cover (up to four hours ahead).

[Solcast: Solar irradiance forecasting for the solar powered future](#)

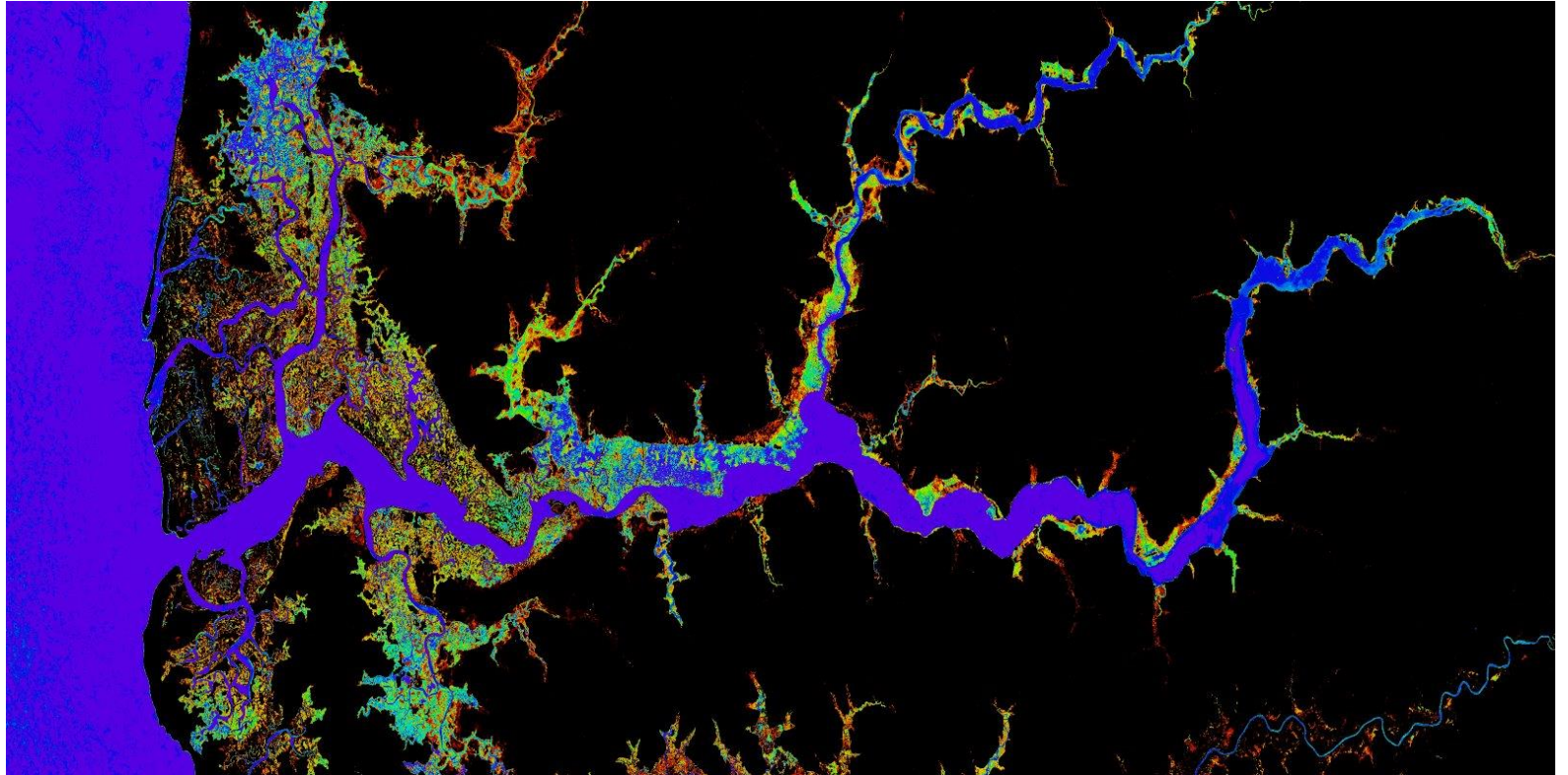
Digital Earth Africa

Enabling insights for better decision-making

Data availability, accessibility, quality, usability, disaggregation, timeliness, and capacity are still challenges for many countries.

The [Open Data Cube \(ODC\)](#) enables continental-scale analyses and web-service-driven visualizations over complete time-series of data

DE Africa delivers a continental-scale platform that democratizes the capacity to process and analyze satellite data.



[Digital Earth Africa: Enabling insights for better decision-making](#)

Radiant Earth Foundation

MLHub Earth Commons for Earth Observation



[Geo-Diverse Open Training Data as a Global Public Good](#)

The **MLHub** is a central repository of open labeled training data, models, and standards for machine learning and EO.

The goal is to establish a community focused on advancing the application of EO data to solve the challenges in the Global South using machine learning techniques.

Leverage EO data to innovate for sustainable development globally

Focus on generating thematic training datasets through a collaborative effort by aggregating existing ground truth data, augmenting ground truth data with machine learning predictions, and taking advantage of transfer learning methods

Japan Meteorological Agency

Himawari-8

on AWS

JMA Himawari-8

<https://registry.opendata.aws/noaa-himawari/>

Registry of Open Data on AWS



JMA Himawari-8

disaster response earth observation geospatial meteorological satellite imagery sustainability weather

Description

Himawari-8, stationed at 140E, owned and operated by the Japan Meteorological Agency (JMA), is a geostationary meteorological satellite, with Himawari-9 as on-orbit back-up, that provides constant and uniform coverage of east Asia, and the west and central Pacific regions from around 35,800 km above the equator with an orbit corresponding to the period of the earth's rotation. This allows JMA weather offices to perform uninterrupted observation of environmental phenomena such as typhoons, volcanoes, and general weather systems. For questions regarding Himawari-8 imagery specifications, visit the JMA site at https://www.data.jma.go.jp/mscweb/en/himawari89/space_segment/spsg_ahi.html. For examples of Full Disk Himawari-8 imagery coverage, visit the NOAA Himawari-8 data page at https://www.goes.noaa.gov/f_himawari-8.html.

Update Frequency

10 minutes for Full Disk, 2.5 minutes for Regions 1, 2, and 3, and .5 minutes for Regions 4 and 5.

License

Open Data. There are no restrictions on the use of this data.

Documentation

https://www.data.jma.go.jp/mscweb/en/himawari89/cloud_service/cloud_service.html
https://www.data.jma.go.jp/mscweb/en/himawari89/space_segment/spsg_ahi.html

Managed By



See all datasets managed by [NOAA](#).

Contact

noaa.bdp@noaa.gov

Resources on AWS

Description

Himawari-8 Imagery

Resource type

S3 Bucket

Amazon Resource Name (ARN)

`arn:aws:s3:::noaa-himawari8`

AWS Region

`us-east-1`

Description

New data notifications for Himawari-8, only Lambda and SQS protocols allowed

Resource type

SNS Topic

Amazon Resource Name (ARN)

`arn:aws:sns:us-east-1:123901341784:NewHimawari80bject`

AWS Region

`us-east-1`



Amazon Sustainability Data Initiative



JMA Himawari-8

Overview

- Update frequency
 - 30-seconds to 10-minutes
- License
 - Open Data. There are no restrictions on the use of this data.
- Data available
 - 2020-Present

Accessing the data on AWS

Via AWS Command Line Interface

- `aws s3 ls s3://noaa-himawari8/ --no-sign-request`
- `aws s3 cp s3://noaa-himawari8/AHI-L1b-FLDK/2020/01/31/2200/ . --recursive --no-sign-request`

Data are in a binary format

Thank you!

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