

# Communicating **Actionable** Earth Science

at the **Earth Information Center**

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NASA Scientific Visualization Studio  
Outlier, June 12, 2024



NASA has partnered with **seven other Federal agencies** to bring **actionable data** to the via the Earth Information Center

Earth  
Information  
Center



FEMA



**USAID**  
FROM THE AMERICAN PEOPLE



# The EIC at NASA HQ has **four components**



**Space for Earth**

Immersive  
Projection  
Room



Data-driven  
LED chandelier

**Earth Pulse**



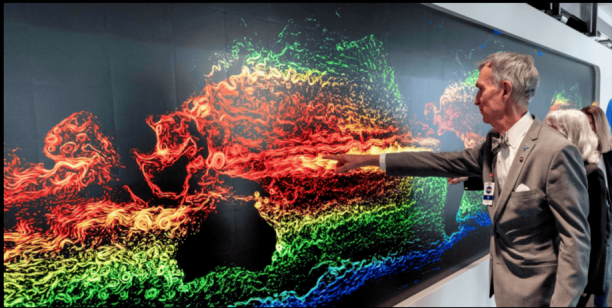
**Eyes on Earth**

Interactive  
Drafting  
Table  
Kiosks



The Hyperwall

**"Earth Mission Control"**







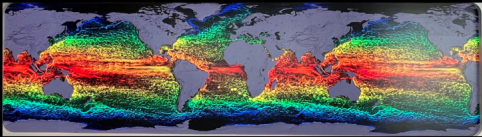
**Beauty Pieces**

**Narrated Stories**

**Dashboards**

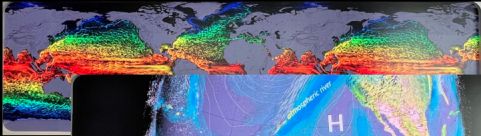
Hyperwall content is split into **three groups**:  
**beauty pieces**, narrated stories, and dashboards

**ocean flows**



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ocean flows

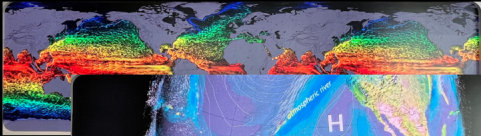


atmospheric  
river



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ocean flows



atmospheric river

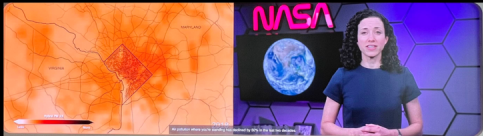


dixie fire



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beauty pieces, **narrated stories**, and dashboards

**air quality**



Hyperwall content is split into **three groups**:  
beauty pieces, **narrated stories**, and dashboards

air quality



hurricanes



Hyperwall content is split into **three groups**: beauty pieces, **narrated stories**, and dashboards

air quality



hurricanes

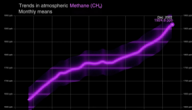


agriculture



Hyperwall content is split into **three groups**:  
beauty pieces, narrated stories, and **dashboards**

### animated charts/graphs



### big statistics

**Global Temperature**  
↑ 1.4°C  
since pre-industrial

**Sea Level**  
↑ 4"  
since January 1992

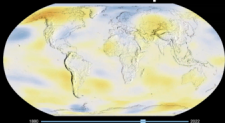
**Minimum Extent of Arctic Sea Ice**  
↓ 12.2%  
per decade since 1979

**Carbon Dioxide**  
↑ 427  
current parts per million

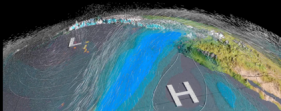
**Methane**  
↑ 1932  
current parts per billion

**Ice Sheets**  
↓ 408  
billion metric tons per year

### animated maps



### 3D models





# Dashboard content is categorized thematically

WEDNESDAY  
03/10/2021 4:00:01 12:02 AM

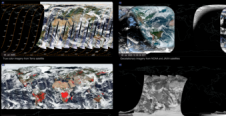
## Earth Now

Earth science provides data on Earth's land, ecosystems, water, air, temperature, and climate - and has done so for more than 60 years. Earth information from space supports decision makers, partners, and people in developing the tools they need to mitigate, adapt, and respond to our changing planet.


### Earth Observing Fleet



### Current Satellite Observations



### Image of the Day



**On This Day in 2000: Maharashtra Begins**  
A state of India, one of the seven states that split through state reorganization in 2000.

### Vital Signs

<b>Temperature</b>	<b>Sea Level</b>	<b>Minimum Amount of Arctic Sea Ice</b>	
↑ 1.1°C	↑ 4"	↓ 12.8%	
<b>Carbon Dioxide</b>	<b>Methane</b>	<b>Air Quality</b>	<b>Ocean Warming</b>
↑ 421	↑ 1824	↓ 424	↑ 348

NRT, broad

# Dashboard content is categorized thematically

WEDNESDAY  
OCTOBER 4, 2017 12:02 AM

## Earth Now

NASA's science provides data on Earth's land, ecosystems, water, air temperature, and climate, and has done so for more than 50 years. Earth information from space supports decision makers, partners, and people in developing the tools they need to mitigate, adapt, and respond to our changing planet.

### Current Satellite Observations



### Image of the Day



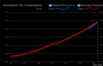
NRT, broad

Earth Observing F WEDNESDAY  
OCTOBER 4, 2017 12:02 AM

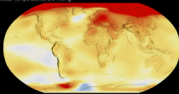
## Climate Vital Signs

NASA monitors the health of our planet to benefit humanity. Our missions track key climate indicators and we share these with the world.

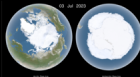
### Greenhouse Gas Levels are Increasing



### Global Temperatures are Rising



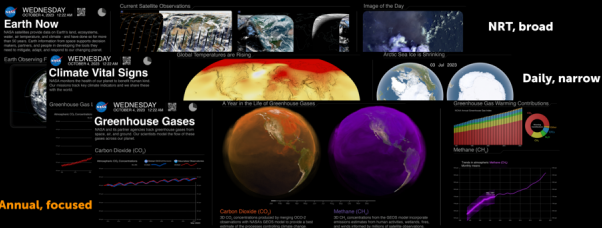
### Arctic Sea Ice is Shrinking



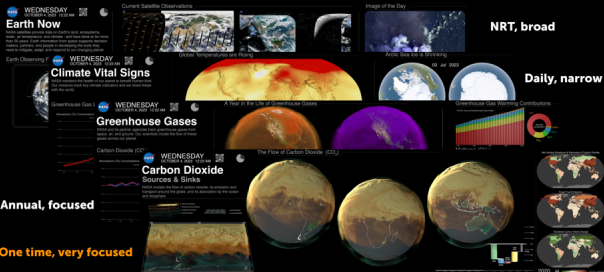
The quantity of sea ice at each pole varies seasonally. In the Arctic, it reaches maximum in March and minimum in September; in the Antarctic the seasons are reversed. The extent of Arctic sea ice is steadily decreasing, while Antarctic sea ice has remained stable in recent decades.

Daily, narrow

# Dashboard content is categorized thematically



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Annual, focused

One time, very focused

The EIC is the culmination of an **amazing team's** effort



NASA's Scientific Visualization Studio (PC: Wade Sisler)

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The Hypervall — Earth Info: <https://earth.gov/stories/hypervall>

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EARTH NOW | CLIMATE VITAL SIGNS | 1 | 2 | 3 | 4

### Earth Now

Earth Observing Fleet

#### Current Satellite Observations

- Global Precipitation
- Sea Surface Temperature
- Global Vegetation
- Sea Surface Salinity

#### Image of the Day

Storage in the United Arab Emirates

#### Vital Signs

Global Temperature	Sea Level	Mean Ocean Acidification	Carbon Dioxide
↑ 1.4°C	↑ 4"	↓ 12.2%	↑ 425
			↑ 1992
		Sea Ice	Ocean Warming
		↓ 424	↑ 380