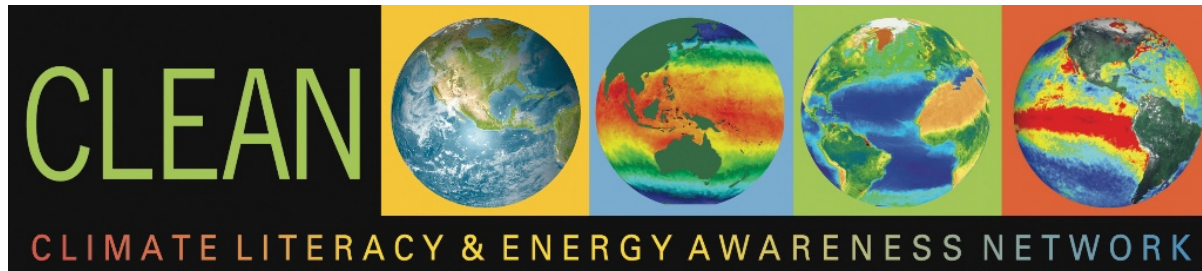
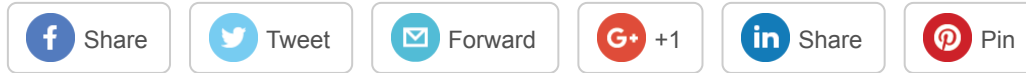


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CLEAN STEM Flash

A Timely Climate and Energy E-Learning Series to Use and Share

April 27th, 2021

Topic: Earth's Changes

As we celebrate Earth Month it is important to take the time to explore how Earth has changed. Earth's changes have occurred naturally and anthropogenically. There are a plethora of tools that can be used to see these changes. In this newsletter, you will find two resources on global change: 1) a collection of NASA images of Earth's changes that are updated regularly 2) a sea level viewer to explore future changes that may occur. We have also included an article that introduces a new Google Earth tool that allows users to see a time-lapse of changes anywhere in the world. Lastly, we want to hear from YOU! We are calling on our subscribers to share what they value in CLEAN.

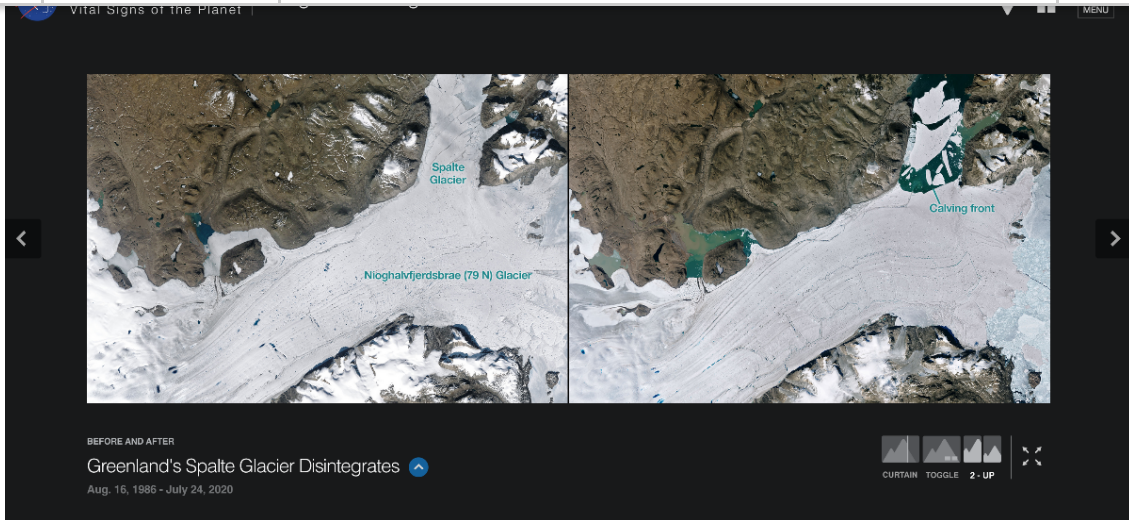
CLEAN Resource Feature

Visualization: [Images of Change](#)

This collection of photos from the NASA Climate website features images of global change, such as floods, wildfires, and retreating glaciers. Viewers are able to slide the photo in order to see how it has changed over time. Changes are sometimes directly or indirectly related to climate change, however not all of the changes are from human-caused climate change. This is a great resource for students at home right now.

Audience: Elementary, Middle School, High School, College Lower

Browse CLEAN for more resources on [Change](#).



NASA has hundreds of images from changes occurring all over Earth. Students can look at different categories of images, or explore on their own. From changes in ice to changes in river deltas and cities, there are images of everything. Depending on the image, some changes have occurred over decades, and others overnight. There are several different viewing options in order to compare the two images. This resource is updated regularly.

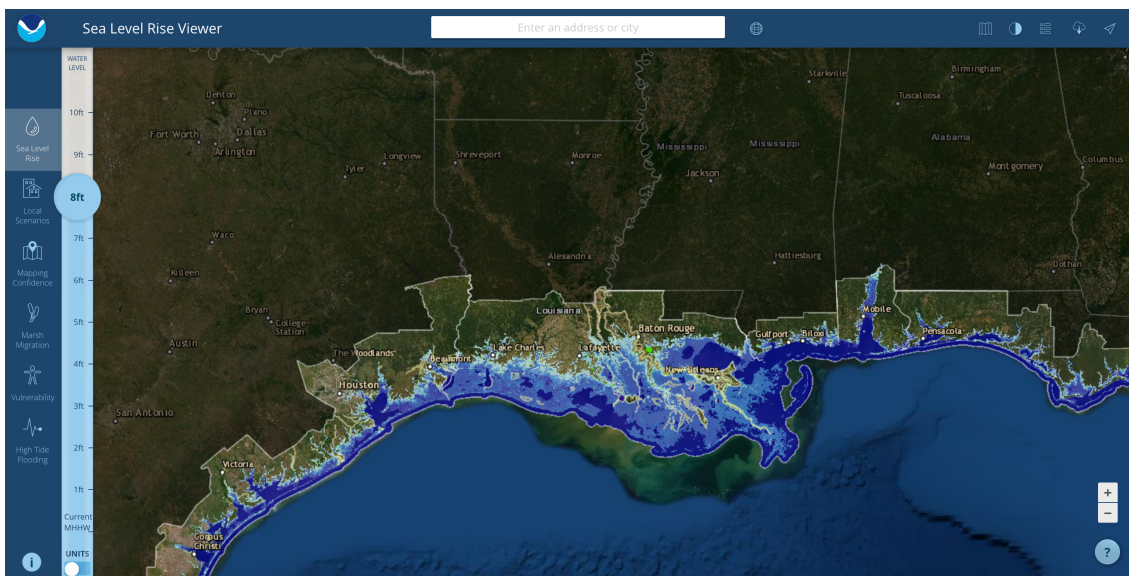
CLEAN Resource Feature

Visualization: [Sea Level Rise Viewer](#)

This web mapping tool allows users to investigate impacts of sea level rise. Data is included from across the United States at different scales. Various timelines and sea level rise projections can be explored.

Audience: Middle School, High School, College, General Public

Take a look at some more CLEAN resources focused on [Sea Level Rise](#).



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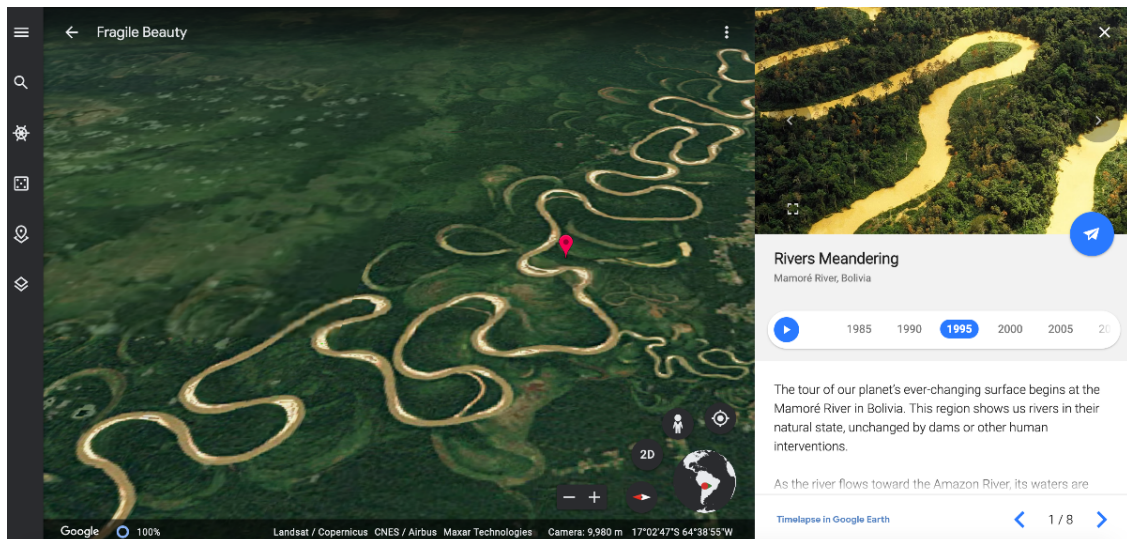
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flooding might impact local landmarks are also provided, as well as data related to water depth, connectivity, flood frequency, socioeconomic vulnerability, wetland loss and migration, and mapping confidence.

In the News: [Google's New Timelapse Shows 37 Years of Climate Change Anywhere on Earth, Including Your Neighborhood](#)

Satellites have been imaging Earth for many decades now and Google Earth has consolidated a series of images from 1984-2020 in a new features called 'Timelapse'. Timelapse allows users to explore the changes right in their neighborhood, or anywhere else in the world. Google also incorporated five major themes that include a guided tour for users to explore, which include deforestation, urban growth, warming temperatures, sources of energy, and fragile beauty. Check out the article for greater detail on this new tool.



CLEAN Testimonials

We want to know how CLEAN has served you!
Please share with us how you are making use of CLEAN in your classroom or your work.

CLEAN would like to hear from you personally. Can you share with us how you are using CLEAN - in your classroom or in other ways? In what ways does CLEAN provide support or makes your life easier? Is there a favorite resource you go to time and again? Is there a teaching guidance page that has offered help in your own learning? Do you particularly enjoy the newsletters, teleconference calls, or webinars? Please take a moment to share with us through a short video or written testimonial!

Please follow [this link](#) to our survey where you can upload a short video or write

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The first 50 submissions that describe the use of CLEAN in action will receive a \$5 Amazon gift card.

Thank you for your support and participation in strengthening the work that CLEAN does!

- CLEAN Team

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