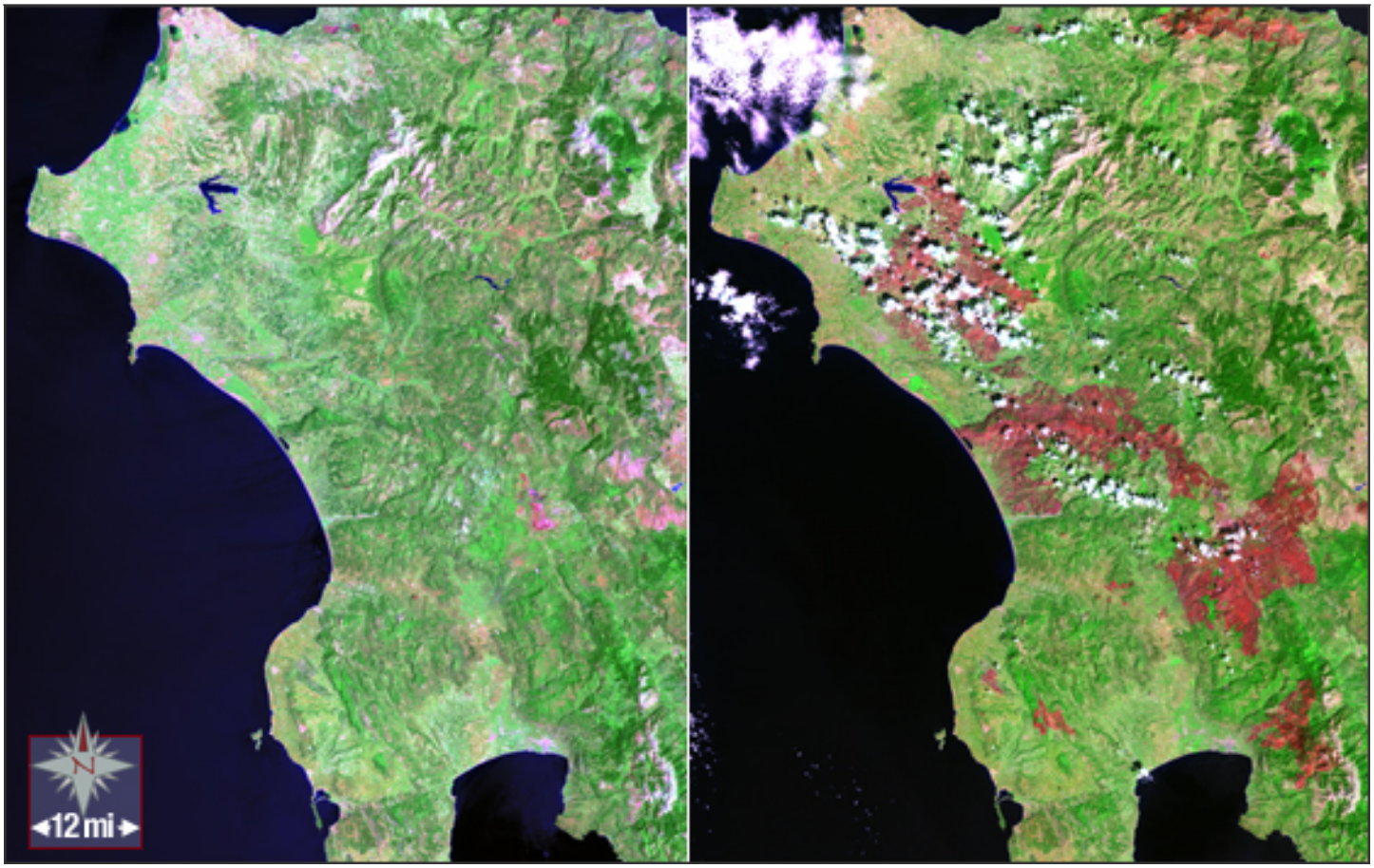
My NASA Data - Mini Lesson

Estimating Biomass Loss from a Large Fire

Mini Lesson

This is easier to do with the printed Student Page (found under Document Resources). If necessary, you can measure your screen.

1. Using a metric ruler, and the conversion 1 mile = 1.61 kilometers, what is the scale of the image in meters per millimeter?
2. About what is the total area, in square kilometers, of this photo of Greece and its surroundings?
3. About what was the land area, in square kilometers, that was burned?
4. What percentage of the total area was lost to the fires?
5. Suppose that a typical forest in this region contains about 5.0 kilograms of biomass per square meter. How many metric tons of biomass were lost during the fires?



Sources:

1. Greeks Get Space-Based Help In Wake of Deadly Fires https://landsat.gsfc.nasa.gov/greeks-get-space-based-help-in-wake-of-deadly-fires/
2. Landsat Math https://landsat.gsfc.nasa.gov/landsat-math-2/
3. Space Math http://spacemath.gsfc.nasa.gov

Teachers who are interested in receiving the answer key, please contact MND from your school email address at mynasadata@lists.nasa.gov.

Grade Band

- 6-8
- 9-12

Supported NGSS Performance Expectations

- HS-ESS3-1: Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
- HS-ESS3-5: Analyze geoscience data and the results from global climate models to make an

evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.

Crosscutting Concepts

- Scale, Proportion, and Quantity

Instructional Strategies

- Integration of content areas

Related Links

- Landsat Math