

# FREQUENT QUESTIONS



**NOAA Coastal Services Center**  
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## Forest Fragmentation

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*Forest fragmentation data are available in raster-based maps from NOAA's Digital Coast. Obtain the data using the Land Cover Atlas at [www.csc.noaa.gov/digitalcoast/data/forestfrag/](http://www.csc.noaa.gov/digitalcoast/data/forestfrag/).*

### **What Is Forest Fragmentation?**

Forest fragmentation occurs when large, contiguous stands of mature forest are divided into smaller isolated patches known as "forest fragments." Forest fragmentation is caused by human activities, such as road construction, agricultural clearing, and urbanization, or by natural processes that include fire and climate change.

### **Why Is Forest Fragmentation Relevant?**

Forest fragmentation is considered a useful indicator of forest ecosystem health. The degradation of core forest into fragments can cause biological diversity loss of native flora and fauna species, alterations to water cycles, and adverse impacts on air and water quality. Forests weakened by fragmentation become more susceptible to damage from insects and diseases, and this stress often degenerates into a condition of chronic ill health.

### **How Were the Forest Fragmentation Data Derived?**

The forest fragmentation data were derived from NOAA's Coastal Change Analysis Program (C-CAP) data using the University of Connecticut's Center for Land Use Education and Research (CLEAR) Landscape Fragmentation Tool (LFT). The C-CAP forest classes included Deciduous Forest, Evergreen Forest, Mixed Forest, Palustrine Forested Wetlands, and Estuarine Forested Wetlands.

### Which Forest Fragmentation Classes Are Mapped in the Land Cover Atlas?

- Background or Non-Forest** – Pixels contained within the boundary of the land cover data that are not classified as forest or are null values
- Patch Forest** – Small fragments of forest that are surrounded by non-forested land cover
- Perforated Forest** – Forest pixels that define the boundary between core forest and relatively small clearings (i.e., perforations) inside the forested land cover
- Edge Forest** – Forest pixels along the outside edge of a core forest patch
- Core Forest** – Interior forest pixels that are not degraded by edge effects (i.e., forest pixels surrounded by other forest pixels)