

National Aeronautics and
Space Administration



Biomass burning is the combustion of plant material, such as forests, grasslands, and agricultural waste after the harvest. Major causes of biomass burning are natural lightning and human activities. In some parts of the world, biomass burning is used as an agricultural and forestry management practice in land clearing and land use change.

The burning of biomass is a significant global source of several atmospheric gases and solid combustion particles called particulates. Carbon dioxide (CO_2) and methane (CH_4) are produced during biomass burning. Both of these gases are greenhouse gases, which contribute to global warming. Other gases produced during biomass burning include, carbon monoxide (CO), hydrocarbons, and nitric oxide (NO). These gases, along with methane, lead to the chemical production of ozone (O_3) in the troposphere (from the surface to about 12 km or 7.5 miles). In the troposphere, high concentrations of ozone are harmful to all living systems.

For more information about biomass burning or the atmosphere in general, see the following web sites:

www.nasa.gov

[www.nasa.gov/centers/langley/science/
Science_Directorate.html](http://www.nasa.gov/centers/langley/science/Science_Directorate.html)

asd-www.larc.nasa.gov/biomass_burn/

www.nasa.gov

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