## **FORESTS**

Forests are great places to walk, refresh one's soul, and reflect on life. They sustain the planet by absorbing carbon dioxide in great quantities each year (about one-third of the carbon dioxide released from the burning of fossil fuels), and providing us with the wood we need to build our homes. The carbon dioxide which is absorbed is turned into solid carbon and store it in wood which remains even after it is cut. Most importantly, forests provide shelter for all sorts of wildlife.

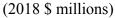
Trees renew our air supply by absorbing carbon dioxide and producing oxygen. The amount of oxygen produced by an acre of trees per year equals the amount consumed by 18 people annually. One tree produces nearly 260 pounds of oxygen each year. Trees are definitely not the only source of oxygen. First, all green plants do photosynthesis, not only trees. Moreover, about half of all photosynthesis on earth is done by microorganisms in the oceans known as phytoplankton (see <u>OCEANS</u>)

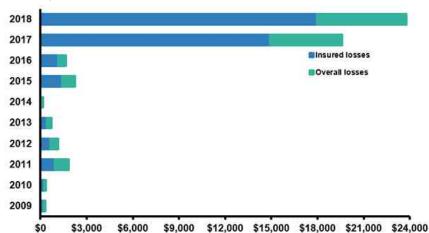
So now we come to the effect of climate change. Higher temperatures and drought lead directly to disease and forest fires as we have recently seen. Fire loss, particularly in the rain forests, leads to less carbon dioxide being absorbed, which leads to more warming. It is a continuing cycle.

<u>With warming temperatures</u>, forests are moving northward, to higher latitudes, or to areas more suitable for success. The quintessential New England northern hardwood forests that give us a kaleidoscope of color in the fall are slowly losing their advantage over species like oaks and hickories that currently thrive in conditions farther south. Spruce-fir forests, which rely on cool, high-elevation climates near the tops of mountains have nowhere to migrate as other forest types colonize their habitat from below.

<u>Changing forest health</u> and range has implications far beyond what types of trees will succeed. Trees are a major backbone of ecosystems that birds and other wildlife rely on. If there is such an abrupt change in the natural landscape, the wildlife, the human systems, and the economies that rely on those systems will be challenged to keep pace with the rate of change.

## Wildfire Lossses In The United States, 2009-2018





Adjusted for inflation by Munich Re based on the Consumer Price Index. Source: © 2019 Munich Re, NatCatSERVICE.

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