

To tree or not to tree essay

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To tree or not to tree The reckless consumption and growth models of world economies are adding to carbon buildup in the atmosphere by emissions from the automobiles and industries. Research carried out by forest scientists all over the world points to the importance of trees in reducing carbon dioxide in our atmosphere and slowing the buildup of this greenhouse gas.

Trees are very important in fighting the global warming, because they absorb the carbon dioxide from the air during photosynthesis and give out oxygen and hence known as nature's carbon sinks. Trees prevent CO₂ from reaching the upper atmosphere where it can help trap heat around the earth's surface. Also trees draw water from the soil, which evaporates into the atmosphere.

This creates low clouds which reflect the hot rays of the sun. Therefore, trees also produce cooling effect through the process of evotransportation. Trees also offer a large social, communal and economical benefit over and above the environment gains.

However, a new study published in 'Proceeding of National Academy of Sciences' points out that forests' other climatic effects can cancel out their carbon cleaning advantages in some parts of the world. An unexpected and startling discovery that plants emit millions of tons of methane gas every year has changed our thinking about trees and their role in reducing global warming. Not only fallen leaves or plant litter produce methane, living plants also produce this gas. This is due to the fact that plants produce hydrocarbons such as isoprene and terpenes in large amounts and single

carbon compounds such as methyl halides and methanol. So the trees remove carbon dioxide from the air but at the same time, add methane gas to it. Their dark green leaves absorb light from the sun, thereby heating the earth's surface by holding heat near the ground level. The gains of planting trees are further eroded as we move away from the equator.

Planting more trees in mid and high-latitude locations could lead to net warming of earth's surface. This is due to the fact that the darkening of surface by forest canopies as compared to snow, grass or crops in these regions, allows absorption of more sunlight. In my opinion, the trees are valuable as they provide benefit in more than one way. First, as they grow, they take up several tons of carbon dioxide over their lifetime.

Second, by providing shade and transpiring water, trees lower air temperature and therefore cut energy use, which reduces the production of carbon dioxide at power plants. On an average, for every kilowatt hour of energy produced, about 1.39 pounds of CO₂ is released. Thus, lowering of temperatures during summers by planting trees in cities is one way to reduce energy use, thereby reducing CO₂ emissions. And planting trees is an immediate solution. Moreover it does not require development of new technology and massive investment in development of alternative energy sources. Planting a tree for a building is something we all can do.

It must be ensured to keep the population of trees stable to achieve long term reduction in CO₂ levels in air. For this, a diverse mix of species of trees must be used so that when an individual tree dies, it is replaced by another one. The dead trees can be converted to wood products and in bio energy to

further reduces methane emissions. Sources Bhatia & Tyagi (2008) Trueman's elementary Biology, Trueman Book Company, New Delhi.