

## Environmental Thinker

Sunday, 15 February 2009

### The Purpose and Importance of Trees

"A tree makes oxygen, sequesters carbon, fixes nitrogen, distills water, provides habitat for hundreds of species, accrues



solar energy, makes complex sugars and food, creates microclimates and self-replicates." The 11th Hour

I'm not a tree hugger or a tree lover. The only relationship I had with a tree was when I was smaller and my dad helped me to build a tree house in our garden. Many years later, I was upset when acid rains destroyed the leaves on the tree in spring.

Recently however, I have rediscovered the importance of trees in looking for ways to reduce people's carbon footprint. If you think about it, in economic terms, trees are worthless except for fruit trees they're really not going to make anyone richer are they? Well actually, I've found that trees are much more useful than I previously thought, here's why:

- They produce oxygen through photosynthesis. The Amazonian rainforest generates 20% of the world's atmospheric oxygen.

- They sequester carbon. A word of warning here: you can use trees to offset your current carbon footprint but a tree does not begin to absorb carbon until it has matured which takes 15 years. So if you're trying to offset your carbon footprint with trees now, you need to realize that you're offsetting it decades forwards. A tree over its lifetime will absorb about 1 tonne of carbon. Also, each tree planted may not survive for its full lifetime so if you're trying to offset, you need to consider where the trees are planted and how many trees to plant. Worldwide, 10 trees are cut down for every tree that is planted. If you donate for trees to be planted, make sure the area in which they are planted is protected. I also like getting trees planted in the UK because no matter how un-environmentally friendly we are, I trust UK regulation and efforts for protecting trees more than the ones in the developing world. For instance, in Brazil, 80% of the

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logging is conducted illegally.

- They prevent erosion: you only need to look at Haiti to understand that. The level of deforestation in Haiti is perhaps one of the worst in the world. The contrast in between Haiti and the Dominican Republic when you look at helicopter views of the frontier is astonishing: on one side you see a huge forest and on the other you see barren land: the inhabitants of Haiti have completely deforested the land to provide for their needs. Add to this the fact that with global warming the oceans are warmer and thus hurricanes are stronger and more frequent and you have a recipe for disaster. Just last year, in September of 2008, Haiti was hit not by one but by 4 hurricanes. This was the worst natural disaster the island has ever known and it was compounded by the absence of trees. A tree can retain 57000 gallons of water in a 10-12 inch flash flood. It can grab that much water, prevent it from running off, cleans it and puts it back in the aquifer. During the hurricane season, a huge amount of soil was displaced into the sea. Soil takes from 100 to 1000 years to settle in any given area so it will take that long for the ecosystem in Haiti to recover. In a world with finite fertile soil, its preservation is essential to our survival. Only 20% of the soil on land on our planet can be cultivated. Furthermore, the soil that runs into the sea at each hurricane season disturbs the ocean ecosystem killing all the fish. When you know that the average inhabitant of Haiti lives on \$1 a day, imagine the scale of the disaster acknowledging that they can't hunt in the forest anymore and that there are no fish left on their coast! The same could happen to us in the UK if global temperatures rise by 3 degrees. Hurricanes may begin to hit our coasts along with flash floods. That's a very good reason for us to plant as many trees as we possibly can.

- In addition to the 3 key benefits mentioned above trees also distill water, provide habitat for hundreds of species, accrue solar energy, make complex sugars and foods, create micro climates and self replicate.

- Trees also produce clouds and clouds produce rainfall.

- Finally, forests are the lungs and the water tanks of the planet. Read more [here](#).

Watch a film to find out what some organizations are doing to solve the problems of deforestation: [click here](#).

#### **News on Deforestation:**

The UK Government Eliasch Review calculated that allowing deforestation to continue could cost the world \$12 trillion and called for emissions from deforestation to be halved by 2020 and to be carbon neutral by 2030. (Source: The Ecologist, November 2008)

Scientists have found **A fifth** of the world's carbon emissions are soaked up by extra forest growth. Trees in the tropics are getting bigger, which means they are soaking up an extra 5bn tonnes of CO<sub>2</sub> a year. Compared to the 1960s, each hectare of intact African forest has trapped an extra 0.6 tonnes of carbon a year. Over the world's tropical forests, this extra "carbon sink" effect adds up to 4.8bn tonnes of CO<sub>2</sub> removed each year - close to the total carbon dioxide emissions from the US. Although individual trees are known to soak up carbon as they photosynthesise and grow, large patches

of mature forest were once thought to be carbon neutral, with the carbon absorbed by new trees balanced by that released as old trees die. (Source: The Guardian, 18/2/09)

Posted by Environmental Thinker at 17:38

Labels: [Haiti and Dominican Republic border courtesy of NASA](#)

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**2 comments:**

Anonymous said...

Thanks, this was very informative.

[1 November 2009 22:28](#)

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Anonymous said...

Very informative indeed and provided me with several interesting facts.

[2 October 2011 18:32](#)

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