

CROSSROADS

CROSSROADS Language Studio's Newsletter July, 2014

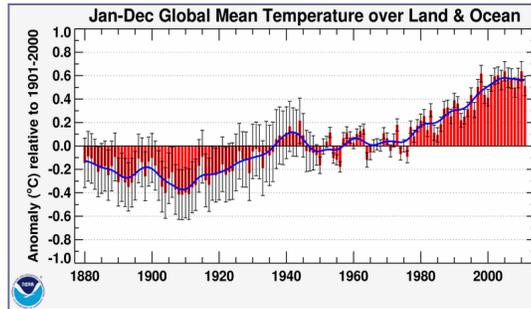
GLOBAL WARMING: THE CAUSES AND EFFECTS

Global warming is a topic of concern for all of us. We now know that the Earth's surface temperature over both land and water has been warmer throughout the most recent three decades than in any preceding decade since 1850.

Since the year 2000, the steady rise in global mean temperature has taken a pause, though not a decline.

The cause of the warming is thought to be due to an accumulation of carbon dioxide and other gases in the atmosphere which produce a greenhouse effect upon solar radiant energy, as predicted by Swedish chemist Svante Arrhenius in 1896. When people burn fossil fuels (e.g., coal, oil, gas), carbon dioxide is added to the air at rates that far exceed the capacity for removal. As well, when people cut down the Earth's forests (deforestation), less carbon dioxide is taken out of the atmosphere by plants and the structure of the forest itself gives up its carbon to the atmosphere.

If the Earth's temperature continues to rise, polar ice will melt and water will expand (as it becomes warmer), and raise the sea level by 56 to 200 cm by the 22nd century. A rise in sea level would flood many coastal areas and submerge low lying oceanic islands. Scientists are most concerned about the feed-forward effects of global warming. A big concern is that extended summer heat in Arctic areas will lead to a discharge of methane from permafrost and continental margins. As a greenhouse gas, methane is about 20 times stronger than carbon dioxide in trapping heat. Another concern is that the growth of trees is negatively affected by drought, which causes heat-related forest stress and dieback. This poses a risk of release of the forest carbon pool into the atmosphere and jeopardizes one of the important means of consuming carbon.



The effects of a warming climate upon weather patterns will be manifold, such as where and how much rain or snow falls. Already, we are witnessing both flooding and drought in multiple areas of the world. Deserts will increase

in size and drought will fuel wildfires and curtail crop yields in the breadbaskets of the world. Storms, especially those with potential to cause extensive property damage such as typhoons and tornadoes, are apt to be more frequent and severe. And heat waves, characterized by the persistence of high night-time temperature, will mount. The combination of high humidity and high night-time temperature currently render this consequence of global warming more deadly than the combined effects of cyclones, lightning, tornadoes, floods, and earthquakes.

In this article, we talk about the causes and consequences of a warming world. There are important steps that must be taken soon to deal with the problem, which will be the subject of another issue in this series.



Article by Kenneth

Net News

NET LESSONS: Too busy to come to CROSSROADS?
.... Try our *lessons through the net!*

SITE OF THE MONTH:

Get the basic facts about global warming here:

<http://www.justfacts.com/globalwarming.basics.asp>

Some Thoughts for the Month



Joshua Says: I always hope that our students will contribute to our newsletter's page 3. This month Taro has done just that. Thanks Taro, good job! Writing is a great way to improve your English. It forces you to find the words necessary to express your ideas and, thus, adds to your vocabulary. I always look forward to getting your contributions in our newsletter. Who will be next month's contributor?

Junko Says: Well, our front garden is now, more or less, finished. We planted as many flowers shrubs and even trees as we could fit into the space, and I think it definitely looks much better now compared to when we first moved here. I hope you agree. I'd like to thank the students who contributed plants. I'm sure your plants are feeling very happy in their new home.



Kenneth Says: Keep cool in summer by ¹drinking water frequently (8 oz per hour); ²running your wrists or ³soaking your feet in cold water; ⁴eating small (and ⁵spicy) meals more often; ⁶taking tepid, not cold, baths or showers before bedtime; ⁷wearing lightweight, light-colored cotton clothes; ⁸avoiding caffeine and alcohol; ⁹keeping the curtains drawn; ¹⁰using fans; ¹¹avoiding strenuous activity, jogging, if you must, in the coolest time of the day; or better yet, ¹²go swimming!

Adrienne Says: I don't know whether the rainy season has officially ended or not, but it still seems to be rather rainy these days. A few weeks ago, I noticed that my living room had a heavy, wet, fungus-like smell. Since then, I tell myself that I will look down the basement to see if there is water down there. Every night, I forget about it and go to bed. Every morning, the smell seems to get worse than the previous day. Now, I am afraid to look. Maybe if I continue to forget about it, it will just dry up naturally during the hot summer.



Danielle Dit: Au Japon, à l'été, il y a des feux d'artifice un peu partout. Saviez-vous que le plus grand feu d'artifice au Canada a lieu le 1^{er} juillet? C'est notre fête nationale! La France célèbre en grand le 14 juillet et les Etats-Unis le 4 juillet. Bon été!

