

Global Warming, Carbon Sequestration and the Teleosts.

Chris Bertram

The bio geo chemical cycles for the carbon cycle are changing in the form of too much carbon dioxide in the atmosphere (University of Toronto, Canada, 2010). It has been known that a carbon cycle feedback loop that is extremely complicated has been occurring with global warming (Peter M. Cox, 2000). Research has been done on a specific list of terrestrial animals and their habitat and it has shown that measureable changes have taken place in the last 100 years there due to climate change now known as global warming (Moritz, Patton, Conroy, & Parra, 2008). The article “Contribution of Fish to the Marine Inorganic Carbon Cycle (R.W. Wilson, 2009),” demonstrates that fish may play a role in carbon Sequestration. What is not generally known are the effects of Teleosts on carbon sequestration. In this paper I will show that: It may be inferred that climate change may be due to changes in the carbon cycle and that our current global carbon crisis may have more to do with over fishing of Teleost species.

In 1991 it was modeled that hypothetically if we were to enter a global warming cycle that it would feedback on itself and add more carbon due to the effects of increasingly more and more carbon dioxide in the atmosphere by releasing it from the soil from the warming by radiation. A positive feedback for temperature occurs when a global warming cycle starts thereby adding a timely aspect to the problem – a crisis (D. S. Jenkinson, 1991).

In 2000 it was postulated that Homo sapiens working with their technology had been making available too much carbon dioxide to the atmosphere (Peter M. Cox, 2000). It was demonstrated in a model that the carbon cycle had been altered and it was leading to a contribution to the condition of global warming (Peter M. Cox, 2000). In the hypothetical model of 2000 we see that Homo sapiens are suspected of contributing too much carbon dioxide to the atmosphere and it is contributing to climate change known as global warming.

Turn on any news cast and it is ubiquitous that fossil fuels are contributing to our global warming crisis. There is a social, political, and economic issue is based upon the carbon cycle. Society is

concerned with the carbon cycle and carbon sequestration. Recently a,” CO2 sequestration post doctoral position at University of Toronto – Ontario, Canada (University of Toronto, Canada, 2010),” has been placed for a carbon sequestration position. The job write up gives away the carbon and global warming hypothesis:

“...Hydrocarbon energy resources and mitigation of rising atmosphere CO2 levels through anthropogenic CO2 capture and geological storage are now key societal issues... (University of Toronto, Canada, 2010).”

We may infer that according to this job write up; hydrocarbon energy is one factor responsible for a global warming crisis based upon the carbon cycle.

Research that has taken a 100 year data set on small mammals indicates that global warming has been causing a set of species to move in elevation (either up or down) as a response to their environment (Moritz, Patton, Conroy, & Parra, 2008). The current global warming has been causing animals that are

acclimatized to one location to adjust to a range of another elevation to adjust for temperature. The range shifting has been graphed out in exact positions for a set of species on a mountain range in California where data has been kept by naturalists. Unfortunately the data set also indicates species extinctions. The global warming has been showing effects on the ranges of species on the Yosemite mountain slopes (Moritz, Patton, Conroy, & Parra, 2008).

It might be the case that fish provide carbon sequestration (R.W. Wilson, 2009). The authors make the case that Teleost species secrete calcium carbonate through the metabolic process in part to osmo regulate their pH levels for basal metabolism and that the effect per population of fish effects the environment and contribute to atmospheric carbon sequestration. The research states:

“...We predict that dissolution Of piscine carbonates will make a major contribution (up to 26%) to...the shallower oceanic depths ...The above estimate is a global average for fish-derived carbonates... (R.W. Wilson, 2009).”

The authors derive that carbon is sequestered in the form of carbonates. The authors specifically go after the teleost sequestration of carbon even though they are aware of microorganisms that may contribute:

“To calculate the teleostean contribution to oceanic carbonate budgets requires knowledge of Global marine fish biomass (R.W. Wilson, 2009).”

The authors in the article arrive at the conclusion as per their initial predictions. The choice of the subject matter is timely and needed and relevant to the events on hand. The proof that carbon sequestration in the form of carbonates is conducted by the Teleosts is well stated.

We know that we have an overfishing problem because groups are creating artificial fish to solve the overfishing problem (Nowak, 2010). The overfishing problem is proposed to be solved by creating artificial fish that grow faster. According to the article the overfishing problem has resulted in the concentrated effort to create the artificial fish.

Our global warming crisis has been causing animals to move their ranges of their habitat and go extinct (Moritz, Patton, Conroy, & Parra, 2008). Global warming climate change is based upon the carbon cycle (Peter M. Cox, 2000). The article “Contribution of Fish to the Marine Inorganic Carbon Cycle, (R.W. Wilson, 2009)” demonstrates very well that fish may play a role in carbon Sequestration. We can infer that due to the overfishing problem, (Nowak, 2010), carbon sequestration is lowered based upon the research on Teleosts (R.W. Wilson, 2009). The relationship of fish to carbon dioxide is inverse: Lower the fish and raise carbon dioxide and raise the fish and lower the carbon dioxide. Fish help sequester carbon in the carbon cycle (R.W. Wilson, 2009), therefore: the global crisis of global warming (Peter M. Cox, 2000) could be slowed or stopped by reducing overfishing of Teleosts.

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