SCIF Narrative

Standardized Construction Impact Factor (SCIF)

Abstract;
The narrative constitutes an introduction to a CARBON/CO2 based construction impact protocol, whereby fractional CARBON/CO2 generated by elemental building materials and activities will be indexed and tabulated in accordance with the fossil fuel requirement at source. Summation of the respective materials/ activities will render the consequential CO2 footprint of the building. A factual CO2 footprint will facilitate rational planning/investment/regulation and conservation/environmental options.

1. QUESTION

Whether (1) construction related activities can be rationally related to the depletion of the polar ice caps (2) whether construction activities and materials can be indexed as to the respective construction/ destruction contribution/elements (3) whether an abatement protocol OR alternative methodologies may be rationally developed so as to mitigate the construction/ destruction impact (4) whether construction activities in itself may be offset in totality and (5) whether a *Standardized Construction/Destruction Impact Factor (SCIF*) may be rationally developed and enforced in real time.

2. ANSWER

In order to determine the relevance of *SCIF*, the sufficiency of CO2/carbon dioxide (the prevailing norm) as a measurement/management tool must be examined. The answer is found in the makeup of CO2, i.e. simply constituting a product of combustion without relevancy to the heat generated OR the utility of the underlying process. Because ice melts as a consequence of an impinging heat flux, CO2 (in isolation) cannot be rationally related to the demise OR depletion of the polar ice caps. As for the relevancy of CO2, the ANSWER to the question is that CO2 simply constitutes a derivative OR compounding *SCIF* factor. Because building materials and processes are all unique, the attributed CO2 component will be unique. The CO2 content of building processes/components may hence be rationally applied (and managed) to optimize construction methodologies in terms of CO2 content.

3. APPLICATION

The determinative question is the rational make-up of *SCIF*. The answer to the latter issue is found in the ratio of the heat of combustion vs. the associated CO2 flux. The rationale is that, given production of CO2, already being regulated/capped, the ratio of the fractional heat flux vs. the associated CO2 production would render a rational/unique *SCIF* measurement. The task would be to determine *SCIF* factors for elemental building tasks/ materials (inclusive of all the production/transpiration factors) as well as the utility thereof, and consequently MINIMIZING the collective impact. The *SCIF* fraction as to a rainforest OR logging component may hence be ***doubled, trebled OR quintupled***. *SCIF* caps may consequently be allocated to units of construction (SM warehousing and commercial/residential properties), sold in bundles, OR cap-and-traded akin to CO2 protocol. The difference is that CO2 "cap-and-trade" functions as a global commodity without rational mitigation means. *SCIF* conversely relegates local OR intrastate/provincial activities. *SCIF* standards may be adaptively conditioned as to climatic and sub-continental regions. It is however imperative that the heat-flux at source (inclusive of transportation) must be enumerated as to the respective materials and tasks.

A notable sequel is the combustion of natural gas (modeled as CH4) and coal (modeled as C12H16). Given that *2CH4+4O2 >> 2CO2+4H2O* and *C12H16+16O2 >> 12CO2+8H2O*, the respective ***SCIF*** factor becomes *20,000/(88/16)/1,000* =***3.636*** and *12,000/(528/160)/1,000* =***3.636***, given the combustion value of CH4 (Methane) =20,000Btu/lb, the combustion value of coal =12,000Btu/lb and the CO2 ratio expressed in "milli" (1/1,000) fractions. The combustion of natural gas and coal (barring the efficiency of conversion and scrubbing factors) appears to render virtually IDENTICAL *SCIF* factors. For all practical purposes, the

number ***3.636*** (1000x Btu/lb CO2) may hence be considered a Universal (OR UNITARY) *SCIF* coefficient. *SCIF* hence facilitates an adaptive measurement of the cost of construction in terms CO2 ensuing from the combustion of fossil fuels at source. A *SCIF* based carbon/CO2 cost/tally would hence represent the destructive impact of elemental construction tasks and materials more concisely. A penalty/multiplier may conversely be applied to rainforest and indigenous lumber products.

The subsequent sequel is that of NUCLEAR. Although nuclear does not generate CO2 (the underpinning to the proposed *SCIF* denominator), a hypo of ***UNITY*** (e.g. 1lb CO2 for every 1,000x Btu breeder flux) is proposed. The *SCIF* impact of wind, solar and PV's would obviously be ***ZERO***. Geothermal would however fall into the same class as nuclear, i.e. being taxed by a *1lb CO2/1000x Btu* magna flux.

4. DISCUSSION

Whereas life on earth was simplistic and sustainable up to the mid 1900's, enhanced food production and health care has lead to a population explosion that is taxing environmental limits. GLOBAL DISORDER and rampart destruction of the ecology is an irreversible consequence of exponential growth. Although the myth of (total) annihilation are being implied by ECOLOGISTS as to endangered animal and plant species in the Amazon and Asian rainforests, the cardinal issue simply is that of synergy between the rainforest and the polar ice caps. Although the heat content of the polar ice caps exceeds that of the rainforests by an order of magnitude, the issue is that of "peripheral" balance (i.e. a nexus between the peripheral ice fields/glaciers with the rainforests). The consequence is that chipping the rainforests results in a direct and equal reaction force as to the peripheral (polar) ice fields/glaciers. Whereas the October 2009 Chongqing/SuDBE2009 "polarequilibrium" analysis alluded to the polar (heat balance) nexus, the consequential *SYNCOOL* synthesis explained the underlying photosynthesis (of which CO2 is a cardinal component) bioconversion chilling-power. The issues at stake as to global disorder hence comprise (1) heat produced by human activity via the combustion of fossil fuels (2) deforestation generally and (3) destruction of the rain forests, specifically.

In order to understand the argument, consider a laboratory-scale with 1Kg weights on each side. A good scale with PERFECT weights will remain in PERFECT balance. However, with the addition of a ONE-GRAIN leaflet on either side, the scale tips. Similarly, global ecosystems are capable of dispensing with the massive release of stored fossil energy/heat (where nuclear adds to the imbalance) via deep space radiation and biomass conversion in rain forests (reference AA). However, a minimal imbalance can tip the "equilibrium" scales significantly.

SYNCOOL Narrative: In a forest, where intertwined branches and foliage of tall, mature trees amass, the crowns of dominant trees receive most of the sunlight, and produce organic nutrients as a consequence of photosynthesis. The elevated foliaged canopy forms a shady, protective "umbrella" over the rest of the forest. In such an arboreal continuum, ALL incipient solar energy may be converted into biomass, yielding a commensurate decrease in ambient temperature. Using a computational model, a twenty-foot forest canopy in the limit of perfection can yield a net cooling effect as high as TEN degrees Fahrenheit. www.syncool.com

However, the ultimate goal of the *SYNCOOL* project is to develop a global construction/destruction model (the *SCIF* factor) whereby activities relating to construction may be rationally coupled to rainforest preservation and polar depletion, respectively. The rationale is simply that whereas we are in a position to develop perfectly SUSTAINABLE communities in the near future, it is construction activities that take the toll. Being the global material/components producer, China is conversely being labeled as the perpetrator of excessive carbon/CO2 emissions. Its however not CO2, but the heat of combustion of fossil fuels, that constitutes the real cause environmental/polar destruction.

The challenge hence is to develop a tool whereby (1) construction activities can be rationally graded, and (2) destruction, in relation to construction, could be minimized. SCIF offers the means to the end.

5. WORKSHOP Content

A. Binder Schmidt Crust Formation & Equilibrium workshop (enclosure CC) as to (1) formation/date stamping of the crust of the earth, (2) global heat balance fundamentals and (3) rainforest and polar ice interaction.
B. The fundamentals of SYNCOOL and rainforest sequel
C. Developing a *SCIF* protocol (actual numbers and caps)
D. Developing a GLOBAL computational model with CFD
E. Developing a hands-on SYNCOOL laboratory model
F. Determining Masters & PhD research/study material
G. Determining avenues of funding as to proposed activities
H. Inviting governmental & private sector participation.

CEJ, Kartago Inc, Los Angeles, CA
November/25 2009 (Ref1)

Enclosures;

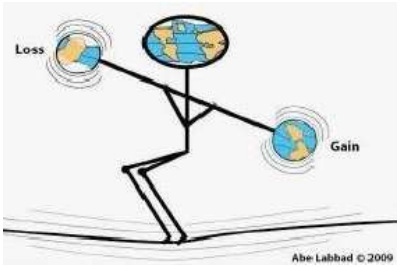
AA. Amazon rainforest locks up 11 years of CO2 emissions
Rhett A. Butler, mongabay.com

May 8, 2007
The amount and distribution of above ground bio-mass (or the amount of carbon contained in vegetation) in the Amazon basin is largely unknown, making it difficult to estimate how much carbon dioxide is produced through deforestation and how much is sequestered through forest regrowth. *To address this uncertainty, a team of scientists from Caltech, the Woods Hole Institute, and INPE (Brazil's space agency), have developed a new method to determine forest biomass using remote sensing and field plot measurements.* The researchers say the work will help them better understand the role of Amazon rainforest in global climate change.

The results suggest that future deforestation in the Amazon could be more damaging to climate than previously thought. Remaining forests appear to lock up larger amounts of carbon and interact closely with the climate. Clearing these forests would not only would release some of their stored carbon into the atmosphere as greenhouse gases, but may adversely impact the regional or global climate. Unsurprisingly, they found that secondary forest and deforested areas have lower levels of above ground biomass. *Looking at the Amazon basin specifically, the researchers estimate the total bio-mass is around 86 petagrams (86 billion metric tons) of carbon--for comparison, 7.9 billion metric tons of carbon dioxide were emitted in 2005.* This means that Amazon locks up at least 11 years of recent carbon dioxide emissions, though clearing the Amazon would have a disproportionate impact due to its role in global weather regulation and other ecosystem services.
http://news.mongabay.com/2007/0508-amazon.html

BB. Rainforest - Tropical Rainforests

Tropical rainforests have a very complex canopy, consisting of multiple, intermeshed layers of foliage. *The area of this canopy can be equivalent to 12-13 SY (10-11 m^2) of foliage per SY (m^2) of ground surface (Wikipedia).* This is among the densest foliar surfaces maintained by any of Earth's ecosystems, a characteristic that allows a relatively great efficiency of capture of solar energy and its conversion into plant biomass.



POLAR BALANCING ACT
www.polarequilibrium.com