

## “Definition problems in the GHG Protocol Scope 1,2&3 and other standard metrics”

### JLH Comment to WRI & GHG Protocol.org

Just to record it again. It's been a couple years. Maybe now you'll listen. We have a deep problem with the metrics that needs urgent study, a large bias in the GHG Protocol metrics (Scopes 1,2&3), that keeps businesses from having much of the information they need for making sound decisions regarding their sustainability impacts. If you look carefully you find that the information the metrics provides businesses leaves out the impacts of their people.

The Scope 1,2&3 methods came from the sound analytical work of WRI, based on the sound analytical work done on LCA, that in turn was based on the long standing sound methods of economists, for how to trace the exchange of material goods between businesses. That leaves the exchange of human services for running businesses in exchange for human consumption, equally clear as a business decision and necessity, out of the picture... To make sound environmental decisions businesses need that in their environmental picture.

So, it's a “definition problem”. Present Scope 1,2&3 methods are defined to omit what turns out to be the great majority of the GHG impacts caused by business decisions and methods of operating. They very meticulously count all business uses of materials \*except for\* any material uses required to employ business people! So information about GHG's from those sources are omitted when businesses calculate their GHG impacts, and also omitted when calculating the impacts of the businesses in their supply and services chains!

I've been trying to raise this problem, and offer an explanation of the clean and practical accounting solution for it I developed, for some time. It's really not so hard to define a “mutually exclusive and collectively exhaustive” accounting for the whole impact of businesses, once you understand

the simplifying assumption needed. The delivery of goods and services exchanged for the human services to operate businesses, makes such extensive use of other businesses, throughout the entire economy, that even funding the work of just one person really requires “the whole economy”.

Here's the rub. That the impacts are so widely distributed, and the great majority untraceable, both lead you to assuming that without more information, the impacts of normal consumption are probably close to “average” per dollar. Being so widely distributed is both seems likely they actually are, and makes it certain they won't be close to “zero”. There are just no other neutral assumptions one could make. The wide distribution and need to assume something combine to make the necessary assumption also probably accurate (fyi see #2 #3).

My team's research on it is in our 2011 paper “Systems Energy Assessment (SEA)” (1). A further technical argument for the accounting principle is in a recent article in my research journal, What's “Scope 4”, and... Why all the tiers?? (2). A confirmation that household consumption does indeed generally have nominally average impacts per dollar of income is found in the 2008 paper on the subject by Weber and Matthews (3).

1)<http://www.mdpi.com/2071-1050/3/10/1908/>

2)<http://synapse9.com/signals/2014/02/26/what-s-scope-4-and-why-all-the-tiers/>

3)<http://www.ce.cmu.edu/~hsm/sust2008/readings/Weber-households-08.pdf>

The problem is not that human consumption impacts are not accounted for, someplace. The problem is that: - a) they're not included in the accounting of the impacts that business decisions pay for to operate, and - b) are both omitted from the accounting for any particular business and from that of all the businesses of its supply and

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services chains, and - c) is usually amounts to the great majority of the total impacts of any normal business’s value tree. In most cases those material impacts on the environment turn out to be \*many times the scale\* of the exclusive material exchange supply chains, that Scope 1,2&3 methods are based on.

So, yes, human consumption is "counted" by Scope 1,2&3 methods, but just not where the decisions to incur the impacts are made... That’s what aggregating the data to describe business decision-making impacts, rather than material exchange impacts, does, as by my SEA-LCA (a.k.a. proposed “Scope 4”) accounting method. I urge you to initiate a serious study.

The critical problem seems to be that the biased information provided allows business decision

makers to report shrinking impacts while continually growing them..., the mysterious pattern we’ve been observing for some time. Growing a business grows the human consumption being funded in many ways, all of which does not get counted as an impact of the business. Then for a growing business, making the technology more efficient can be said to show a comparative trend of “decoupling” from the environment while generating increasing inputs and outputs, but thought of as on the path of “sustainability”. It can give the appearance of reducing business impacts as they increase at increasing rates.

I urge you to get a team together, to decide how to guide our process toward more realistic decision making.