NATIONAL COUNCIL FOR AIR AND STREAM IMPROVEMENT, INC.
P.O. Box 13318, Research Triangle Park, NC 27709-3318
Phone (919) 941-6400 Fax (919) 941-6401

Reid A. Miner
Vice President -
Sustainable Manufacturing
Phone (919) 941-6407
Fax (919) 941-6401
e-mail RMiner@ncasi.org

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TO: David Rich, Cynthia Cummis, Laura Draucker, Pankaj Bhatia, Holly Lahd – World Resources Institute
Andrea Brown, James Griffiths - WBCSD

FROM: Reid Miner and Caroline Gaudreault – NCASI

SUBJECT: NCASI comments on the GHG Protocol Product and Scope 3 Standards

First, allow us to thank WRI and WBCSD for their considerable efforts in organizing and carrying out this important project. We know that it has not been an easy process. We are, once again, impressed by the ability of your organizations to produce order from chaos.

NCASI's comments on both the Product Standard and Scope 3 Standard are included below. We will also be submitting these comments via the internet-based comment form. First we comment on the Product Standard and then on the Scope 3 Standard.

NCASI Comments on the GHG Protocol Product Standard

Summary of our most important general concerns: Our most important general concerns regard the material on (a) recycling-related allocation, (b) the handling of carbon storage, and (c) the appendix on land use change.

- Regarding allocation in systems involving recycling: We feel it is inappropriate that the standard directs users to two simple allocation methods, one of which (the 100/0 method) reflects a value judgment that is not transparently explained in the standard. Almost always, the selection of an allocation method involves value judgments (whether the user knows it or not). Knowing this, the GHG Protocol Product Standard should be constructed to (a) allow the user to select an allocation method consistent their value judgments but (b) require the user to transparently describe the method and the underlying value judgments associated with the method. The standard should also include a requirement for sensitivity analysis when more than one allocation method is applicable.
- Regarding carbon storage: The draft standard applies temporal boundaries that result in all biogenic carbon returning to the atmosphere except for that carbon that is permanently stored in landfills or in geologic formations. The standard should allow other temporal boundaries to be used as long as they are applied consistently and transparently. This is because, in many situations, there is value in knowing how much biogenic carbon will return to the atmosphere over periods relevant to human experience or tied to specific policy considerations. The standard precludes such analyses.
- Regarding the appendix on land use change: The appendix confusingly jumps back and forth between suggestions that the threshold question is (a) whether a land use change impact has occurred and (b) whether a carbon stock change has occurred. The appendix needs to be carefully

rewritten so that it is clear that the threshold question is whether land use change and land use change impacts have occurred. This is because there are many things that impact carbon stocks that are not land use change. In addition, the basic steps in the analysis need to be clearly summarized in the appendices. For those situations where the land area is known, the steps should be summarized as follows:

1. Determine whether a land use change and a land use change impact have occurred, using the definitions at the beginning of the Appendix.
2. Determine whether the land use change impact is attributable to the product. A land use change impact is attributable to a product if;
    a. it is the direct result of extraction or production of biogenic material to create the product,
    b. it is caused by human intervention with the intent of creating a product, and
    c. it occurs within 20 years or one harvest period (whichever is longer) before the time the product is made.
3. Determine the emissions attributable to each product. The emissions associated with a land use change impact are allocated to products made from material harvested during the land use change and over the following 20 years, or one harvest period, whichever is longer.

Specific comments:

Section 2.0

The limitations on what the standard is intended to support are appropriate.

Section 2.1

The standard should contain stronger language about the difficulties associated with product comparisons. In addition, it should be made clearer that the Standard does not support comparative assertions even when done in compliance with the guidance in Appendix A.

Section 5.3

The standard is correct in striving to use an attributional approach. The text should be strengthened by stating that the use of consequential approaches is not supported by the standard.

Section 6.1

A definition for “unit of analysis” should be added to the text box.

Section 6.2.4

It is appropriate to allow the standard to support cradle-to-gate inventories.

Section 7.1

In the text box, the definition of cradle-to-gate should be based on the “unit of analysis” instead of the “product” because some value chains involve multiple manufacturing stages and a company early in the value chain may want to develop a cradle-to-gate inventory without knowing what the final product is.

Section 7.2.1, Page 7-24, line 34 and footnote 18

It is indicated that storage of GHG emissions can be reported separately. However, more language is required to ensure that, in the case of biogenic carbon, there is no double-counting (i.e., to ensure that a study does not include both a "credit" for CO_2 uptake by vegetation at one point in the value chain and a "credit" for storage of the same carbon at a different point in the value chain).

Section 7.2.4

It is appropriate to allow companies to select a definition of insignificance based on the goals for the inventory.

Section 7.2.5

The approach for non-attributable processes is appropriate.

Section 7.2.6

In the draft standard, the time boundary is required to extend out until the materials extracted from nature return to nature. Shorter time boundaries should be allowed where they are transparently disclosed and are consistent with a company's goals for the inventory. One important reason to allow shorter time boundaries is to address the many situations where there is interest in understanding the net carbon fluxes to the atmosphere that are relevant to human experience or to specific policy considerations. Another reason to allow shorter temporal boundaries is to contain the uncertainties about the fate of materials over very long time periods. In some situations it may be more important to accurately understand the impact over 20 years than to speculate about the impact over 1000 years.

The use of the term "embedded" carbon is likely to cause confusion (even though the term is defined in a footnote). Here and elsewhere in the draft standard, we suggest replacing "embedded carbon" with "carbon contained in the product".

The text on the reporting of biogenic carbon is potentially confusing. On one hand the organization needs to separately report biogenic carbon removals and emissions. On the other, it also needs to report carbon that is stored in landfills. The text needs to be clarified to avoid double counting (i.e., to avoid a situation where the user applies a "credit" for CO_2 uptake by vegetation at one point in the value chain and a "credit" for storage of the same carbon at a different point in the value chain).

Section 8

Section 8, lines 2 to 9 states, "Perhaps even more challenging than general allocation is allocation due to recycling, which occurs when processes need to be allocated between two different product life cycles." The sentence implies that process allocation is only associated with recycling. Processes also need to be allocated, however, between two different life cycles in the case of "general allocation". To remedy this, the sentence could be changed to say, "Perhaps even more challenging than general allocation is allocation due to recycling. Allocation may be necessary in recycling because, like in other cases involving shared processes, processes in systems involving recycling may be shared by the virgin and recycled product life cycles."

Section 8.1

The text states that, "Using the emissions from an alternative product that comprises the same functional unit as a co-product to estimate the emissions of the co-product and allocating the remaining emissions to the subject product and remaining co-product(s). Only applicable when companies have direct knowledge of the function and eventual use of the co-product." In order to be consistent with section 7.1, it is necessary that the production of the alternative product is described as a non-attributable process. We recognize that this is seen as a purely "mathematical" way of allocating the emissions but more language is required. Also, it is possible that this approach will give negative emissions for the studied product. This highlights one of the disadvantages of this approach and it should be mentioned and explained.

Section 8.2

In the box which contains the definitions of the different recycling terms, the description of the 0/100 Output Method should be expanded to make clear that this is the same as the "closed loop" method described in ISO standards.

In addition, in these definitions, it is not clear what is meant by recycled material input and recycled material output. This needs to be clarified.

We understand that WRI and WBCSD have attempted to narrow the options for addressing allocation related to recycling in order to make the standard more practical for reporting organizations. As drafted, however, the standard goes too far in its attempt to standardize the analysis in an area where simplification could result in the application of value judgments that may not be shared by the user of the standard. As written, the draft standard requires users to apply the 100/0 or 0/100 methods unless neither method is "most appropriate" for the situation. This makes it far too easy for users to comply with the standard without giving adequate thought to the allocation options and the underlying value judgments inherent in their selection. Allocation for systems with open loop recycling is inherently complex and users should be required to understand their systems well enough to select among the available options. The standard should require users to transparently describe the selected allocation method(s) as well as underlying values promoted by the method(s). In addition, because the allocation approach can sometime have a large impact on results, where more than one allocation method is applicable, the user should be required to perform sensitivity analysis and report the results.

The standard contains an incorrect depiction of shared processes (also called "common processes") for open loop recycling systems. The standard should recognize that virgin material production processes, recycling processes and end-of-life processes are all shared between the virgin and recycled product (as described in the IS0 14044 standard). In the draft standard, only the recycling process is shared. In this context, the common processes would be allocated as follows for the 100/0 method:

- Virgin production processes: to the product using the virgin material
- Recycling processes: to the product using the recovered material
- End-of-life process: to the product that are actually discarded

In addition, the standard should make clear that the 100/0 method inherently favors recycling.

Section 8.3.2 – System expansion example

In its system expansion example, the standard says that emissions attributable to sold electricity should be allocated using a system expansion approach. However, in the same example it allocates the removal using an underlying physical relationship. This is in direct contradiction with section 8.1 that mentions that "The same allocation method shall be used to allocate emissions for all co-products from a common process."

In figure 8.7, the arrow above the "Pre-processing" box appears to be in the wrong direction.

Section 8.3.3

In section 8.1, physical allocation is described as "Allocating the inputs and emissions of the system based on an underlying physical relationship between the quantity of product and co-product and the quantity of emissions generated". In section 8.3.3, there are several examples of parameters that can be used to perform physical allocation (e.g., mass, volume, energy). In most cases, these parameters are not going to be reflective of underlying physical relationships and would fall under the heading of "other relationships". More language is required to clarify this. WRI/WBCSD can decide to favor physical properties over economic values but physical properties are not the same as physical underlying relationships.

Section 8.4.1

The 0/100 method is the "closed-loop" method described in ISO standards. The ISO description is much clearer. The description in the GHG Protocol Product Standard should be rewritten to be more understandable. The introduction to this section should be rewritten so that the reader understands that the approach sets the amount of recovered material used to make the product equal to the amount of material recovered from used product at the end of life. The input of virgin material is then adjusted to make up the difference between recovered input and the total input requirement.

In this section it is stated that, "If the later scenario is not the case (e.g. recycling processes are more GHG intensive than virgin inputs), it is possible that using virgin inputs would result in a lower total product inventory than using recycled inputs. This unintended consequence is an example…" This text exposes a value judgment that is inappropriate for what is intended to be a value-neutral standard. The text is inappropriate because it should not be objective of the standard to yield predetermined results. It is suggested that the entire paragraph is removed.

Section 12.2.3

The draft standard states that, "If it is known that embedded carbon within the product is not released to the atmosphere during waste treatment, a company is required to disclose and justify this in the inventory report." This should be changed to say, "If it is known that carbon in the product is not released to the atmosphere during the time included in the study's temporal boundary, a company is required…"

In a cradle-to-gate inventory, in addition to stating the amount of carbon in the product as it leaves the inventory boundary, the user should be required to state whether the carbon is biogenic or non-biogenic. Otherwise, the downstream accounting for the carbon may be done incorrectly.

Appendix C – Land Use Change Impacts

Appendix C – General comment 1:

We strongly recommend that the appendix be changed so that it is clear that the starting point is a determination of whether land use change and land use change impacts have occurred. In many places, the current draft indicates that the starting point is the determination of whether a carbon stock change has occurred. This is unnecessarily ambiguous and will lead to great confusion and controversy about what types of practices should be included. There are many things that might cause stock changes that are not necessarily land use change impacts. The user must understand that the Appendix is limited to those situations that meet the definitions of land use change and land use change impacts contained in the Appendix.

Appendix C – General comment 2:

It would help very much to have short descriptions of the required steps at the beginning of the two main sections of the Appendix (i.e. the sections describing the approach for the case where the land area is known and the case where the land area is not known). These descriptions would describe what must be done and the remaining material in each section would provide examples and guidance. For the case where the land supplying the biomass is known, the statement at the beginning of section 18.1 could say the following.

"Land use change impacts attributable to products are determined via the following steps.

1. Determine whether a land use change and a land use change impact have occurred, using the definitions at the beginning of this Appendix.
2. Determine whether the land use change impact is attributable to the product. A land use change impact is attributable to a product if;
    a. it is the direct result of extraction or production of biogenic material to create the product,
    b. it is caused by human intervention with the intent of creating a product, and
    c. it occurs within 20 years or one harvest period (whichever is longer) before the time the product is made.
3. Determine the emissions attributable to each product. The emissions associated with a land use change impact are allocated to products made from material harvested during the land use change and over the following 20 years, or one harvest period, whichever is longer."

Page 105, lines 7 and 8:

"CO_2" should be changed to "non-biogenic CO_2 because biogenic CO_2 emissions are counted for in line 5 and 6. To include them both as stock changes and CO_2 emissions (flows) is double counting.

Page 105, lines 7 and 8:

We suggest removing "liming and urea applications" from the parenthetical because it is too easy to confuse these with emissions associated with ongoing operations (not land use change).

Page 105, lines 17 through 22:

A sentence needs to be added explaining that "Land use change does not include forest harvesting and regeneration into the same general forest type, where the regenerated forest is expected to have comparable carbon stocks to the harvested forest." This type of harvesting/regeneration is such common practice that it makes no sense to allow room for speculation about whether it represents land use change.

Page 105, lines 13 through 32:

Add a definition of "harvest period" – i.e. "Harvest Period is the length of time required to grow a crop to a condition where it is ready to be harvested for its intended use. Where several types of products are generated at different times from the same type of crop (e.g. thinnings and saw timber from planted forests), the harvest period is the longest time required for any of the products to reach a harvestable condition."

Page 106, line 6:

As noted above, for clarity, we recommend that this section begin with a statement of what is required. In specific, we recommend the following text.

1. Determine whether a land use change and a land use change impact have occurred, using the definitions at the beginning of this Appendix.
2. Determine whether the land use change impact is attributable to the product. A land use change impact is attributable to a product if;
    a. it is the direct result of extraction or production of biogenic material to create the product,
    b. it is caused by human intervention with the intent of creating a product, and
    c. it occurs within 20 years or one harvest period (whichever is longer) before the time the product is made.
3. Determine the emissions attributable to each product. The emissions associated with a land use change impact are allocated to products made from material harvested during the land use change and over the following 20 years, or one harvest period, whichever is longer."

Page 106, line 7:

Change the text to say "…if all of the following are true."

Page 106, lines 8 through 11:

In these three bullets, change the phrase "carbon stock change" to "land use change." This is important because the phrase "carbon stock change" does not specify what types of carbon stock changes are included (e.g. even harvesting of annual crops causes a carbon stock change). By contrast, the definition of "land use change" provides the needed clarification as to what types of carbon stock changes are included and which are not. Therefore, it is much more precise to refer to "land use change" instead of "carbon stock change" in these bullets.

Page 106, line 15:

Change "carbon stock change" to "land use change" for the reason stated above.

Page 106, lines 17 through 19:

Again, the phrase "change in carbon stock" should be replaced with "land use change." In specific, the sentence should be changed to say "If the extraction of above-ground biomass is associated with a land use change, the impacts...," This is much less confusing than the current text because any extraction of biomass causes a change in carbon stocks on the land.

Page 106, line 23:

Again change "carbon stock" to "land use change". In specific the sentence should say, "Because the length of the harvest cycle is longer than 20 years, the company must consider any land use change that may have…"

Page 106, footnote:

Again, to be clear, the sentence should refer to land use change instead of carbon stock change, since many things may cause carbon stock changes (e.g. harvesting of annual crops) but it is only those associated with land use change that are the focus of this Appendix. It is best to keep directing the user back to the definitions of land use change and land use change impacts.

Page 108, lines 1 and 2:

The standard should give the user the option of either allocating the emissions equally among the 20 years (i.e. 1/20th per year), or in cases where product is not produced annually, equally among the products produced over 20 years. Otherwise much of the impact may not be allocated to any product. This approach is actually used in the example on Page 108 lines 12 and 13 but it is not provided for in the text of the appendix. Regarding the example on lines 12 and 13, the user should be able to allocate using something other than mass since some of the products may have much higher value than others.

Page 108, lines 14 through 16:

It is not clear what is meant by "…or where additional cultivation of the land is not planned…" It seems unnecessary and is potentially confusing.

Page 108, lines 29 through 32:

A scenario where there is no land use change ("…land is not converted into another category…") should not be combined with a scenario where the future use of the land is unknown. They often represent very different situations. Indeed, it is unclear what the inclusion of this scenario is intended to accomplish. If the intent is to include a situation where there is inadequate information about future carbon stocks, perhaps the first scenario should be reworded as "A forest is selectively harvested for wood and then converted to a preserve, or the future use of the land is unknown."

Page 108, footnote:

The footnote states, "It is recognized that a change in carbon stock can result in either a removal or emission of carbon from or to the atmosphere. However, because this standard accounts for the GHG inventory of a product, it is most likely that the removal of biomass (and not the planting or re-growth of biomass) which results in carbon emissions is the attributable carbon stock impact. Growing biomass to create a GHG credit is not attributable to a product following this standard methodology. However in some specific cases, such as a carbon stock change from till to no-till crop rotation) a company may see a slight net positive impact (more removal than emissions) associated with carbon stock and land use change." To illustrate the confusion created by this footnote, consider the situation where degraded pastureland is converted to planted forest with an associated land use change impact (increase in carbon stocks). The impact is clearly attributable to the products that will be made from the wood taken from that land, yet the footnote appears to object to this. Not only is the footnote confusing, it (once again) begins the analysis with the incorrect question. The footnote should begin by referring to "a land use change impact" rather

than "a change in carbon stock". In all cases, the appendix should be directing the user to address the following questions:

1. Has land use change and a land use change impact occurred?
2. Is the land use change impact attributable to the product?
3. What are the emissions associated with the land use change impact that should be allocated to each product?

The problem created by the footnote (and found elsewhere in the appendix) is avoided if the appendix consistently directs the user to begin the analysis with the questions posed above.

NCASI Comments on the GHG Protocol Scope 3 Standard

General comment 1:

The draft standard contains considerable flexibility in a number of places to allow for varying objectives for Scope 3 GHG inventories. Such flexibility is not only appropriate, it is essential because Scope 3 inventories are performed for a much wider range of reasons than Product-level inventories.

General comment 2:

The draft standard makes no provision for including estimates of lifecycle-based net transfers of biogenic carbon to the atmosphere. From our experience, we know that there are many situations where forest products companies want to include such information. The standard should allow for it but should remain flexible because there are many different purposes for doing such analyses. In some cases, we find that companies are interested in tracking their actual year-to-year carbon fluxes (as they progressively afforest a landscape, for instance). In other cases, companies are interested in analyses that are much more like those in the Product Standard. The Scope 3 Standard should be flexible to allow either, as long as the approach and assumptions are transparently communicated.

Section 1.2

The limitations on what the standard is intended to support are appropriate.

The standard is correct in striving to use an attributional approach. It might be helpful to add some text to explain how attributional processes for a company are different than those for a product (i.e. in the case of products, attributional processes are connected to the product by mass or energy flows, whereas attributional process for a company can include many, like business travel, that are not connected to the company's products by mass or energy flows).

Table 1.9:

Additional effort should be made to align this with the requirements of the Scope 1 and 2 standard. As an example, in the Scope 1 and 2 Standard, the material on goal setting is guidance only, while in this table the use of the word "shall" implies that it is required by the standard.

Table 4.3:

It would help to have a footnote explaining that when the table refers to Scope 1 and 2 emissions, it means the Scope 1 and 2 emissions from the viewpoint of the entity supplying the good or service to the reporting company.

Page 23, line 11:

It appears from a reading of the draft standard that it is intended that the Scope 3 standard will follow the convention in the Scope 1 and 2 Standard of (a) not including biogenic CO_2 in the emissions, but (b) requiring that biogenic CO_2 from combustion be included for information. The inclusion of land use and land use change, however, suggests that biogenic carbon is intended to be handled in a more comprehensive manner. At a minimum, this inconsistency should be resolved (presumably by removing the reference to land use change). Alternatively, however, as we observe above, the Scope 3 standard should be flexible enough to allow companies to address biogenic carbon uptake/emissions in a number of different ways, consistent with varied study objectives.

Page 23, line 18:

The order of the words should be change to "…the use or operation of products purchased by the company are accounted for…".

Page 25, line 11:

Change "This category…" to "Category 3…" to remove the ambiguity.

Page 28, line 20:

Change "Recycling" to "Recovery for recycling" because the question of whether the emissions from the facility using the recovered material are included will depend on the allocation approach used.

Page 33, line 7:

It should not be a requirement to include indirect emissions from use of sold products in a Scope 3 inventory. The most important reason is that, in most cases, identifying and estimating these involves a great deal of speculation. If they are required, it should only be in cases where they are associated with processes that are clearly required to use the product. This is consistent with allowing, but not requiring, the inclusion of emissions associated with product maintenance.

Page 34, Box 4.10:

The limitations on including avoided emissions are appropriate.

Page 36, line 7 to 9:

There many are situations where the Tier 1 supplier is merely a "middleman" whose emissions have nothing to do with the emissions associated with producing the product that is being purchased. The standard should somehow make it clear that where this is the case, it is good

practice to extend the data collection effort to the actual manufacturer of the product. This is dealt with later in Box 8.6, but it should be mentioned here too.

Page 54, Table 7.1:

In Table 7.1, physical allocation is described as "Allocating the emissions of an activity based on the underlying physical relationship between the multiple inputs/outputs and the quantity of emissions generated". In the table, there are several examples of parameter that can be used to perform physical allocation (e.g., mass, volume, energy). In most cases, these parameters are not going to be reflective of physical underlying relationships and would fall under the "other relationships". More language is required. WRI/WBCSD can decide to favor physical properties over economic values but physical properties are not the same as underlying physical relationships.

Page 62, line 19 to 23:

As noted above, there many are situations where the Tier 1 supplier is merely a "middleman" whose emissions have nothing to do with the emissions associated with producing the product that is being purchased. The standard should somehow make it clear that where this is the case, it is good practice to extend the data collection effort to the actual manufacturer of the product. This is dealt with later in Box 8.6, but it should be mentioned here too.

Page 69, box at top of page:

In the Scope 1 and 2 Standard, the material on goal setting is guidance only, while in this table the use of the word "shall" implies that it is required by the standard.

Page 78, lines 20 to 29:

It is appropriate that companies be allowed to using internal quality assurance for Scope 3 inventories.