

New ideas, debates and discussions

This page contains ongoing discussions on approaches and alternatives. The idea is to help to shape, test and articulate new ideas through discussion and debate.

Method: Propose a theme, articulate a point of view and formulate its practical implications. Then invite others to challenge, refine or elaborate.

- 1 [Theme 1: Climate Accounting and SDG Accounting](#)
 - 1.1 [Premise](#)
 - 1.2 [Basic structure of SDG accounting](#)
 - 1.3 [Testing the framework with a practical use case: personal climate footprint calculators](#)
- 2 [Theme 2: Ontology languages and editors](#)
 - 2.1 [Does it make sense to formally encode the ontology and semiology to be used for standardising climate action and accounting in an ontology language?](#)
 - 2.2 [Which editor is the best to use in peer programming calls?](#)
 - 2.3 [Does the Dublin Core Metadata Initiative have a role to play?](#)

Theme 1: Climate Accounting and SDG Accounting

Premise

Accounting for greenhouse gas emissions is a special case of accounting for outcomes that have an impact on humanity as a whole (i.e. accounting for externalities). Arguably the most widely supported and comprehensive list of such outcomes is the United Nations' list of 17 Sustainable Development Goals (SDGs). Goal 13 of the SDGs is "Take urgent action to combat climate change and its impacts".

Developing tools and procedures for greenhouse gas accounting within a generic framework for SDG accounting will enable better integration of results and will also enable the wider use of some of the tools developed in the context of GHG accounting. It may also address potential problems such as double counting / double crediting.

Basic structure of SDG accounting

The table below gives a high-level comparison of the components to the process of outcome accounting for two activities that target different SDGs. The table builds from the bottom up (from raw activity data to statements about impact on desired end states).

	Example: GHG reduction through efficient cookstoves	Example: Recycling electronics	What is specific or generic about it?
1. Desired end state	Climate stability	Environment without toxic materials. Fair and efficient use of limited resources (e. g. metals).	Both relate to goals articulated in the SDGs
2. SDG aligned to desired end state	SDG 13: combat climate change and its impacts	SDG 12: Ensure sustainable consumption and production patterns	
3. Causal model related to the end state	"GHG emissions lead to climate change"	"If dumped in landfills, incinerated or incorrectly recycled, toxic materials from electronic device components are released into the environment. "	
4. Target intermediate states and activities	Limit GHG emissions	Target 12.5 "By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse"	
5. Activity and state metrics	Express GHG emissions in terms of the global warming potential of 1 tonne of CO ₂ over 100 years	Mass of e-waste recycled % of all e-waste recycled from a specific facility, area or agent	Generic: all state metrics have a unit of measure , an underlying rationale , and an argument for their credibility .
6. Agent responsibility model and entity demarcation	Households own and operate cookstoves	Cities and municipalities operate waste services within their jurisdiction	The principles according to which agents are identified and entities and activities are demarcated are probably fairly generic.
7. Scenario comparisons (counterfactual or real)	Households are assumed to optimise their utility but established patterns have a certain inertia. It is assumed that adoption of new stoves will take place if there are no barriers to such adoptions.		Methods for establishing scenarios are also probably very generic

8. Data transformations	A specific methodology will typically prescribe the calculation procedures		All transformations have to be rational and repeatable
9. Data gathering	A specific methodology will typically prescribe the data collection procedures.		Scientific methods of observation and measurement have wide application and acceptance

The choice

SDG goal

The SDG goals are described as a set of targets under each SDG.

Agent goal

Business and organisations have their core business and operate subject to legal requirements and past undertakings.

People derive utility from activities and to a certain extent follow common practice.

An important question is if the activity is motivated by the SDG goal or whether it is part of the established personal / organisational goals or behaviour.

Quantification

Measured part

Counterfactual part

Testing the framework with a practical use case: personal climate footprint calculators

Calculators

Parameter	Footprint calculator	Climate Neutral Now
URL	https://www.footprintcalculator.org	https://offset.climateneutralnow.org/footprintcalc
Owner /operator	Global Footprint Network	UNFCCC
Agent	Individual or households	Individual or households
Activities		
"Scope 2" activities		
"Scope 3" activities		
States	Global atmospheric CO2 concentration	Global atmospheric CO2 concentration
	Global atmospheric methane concentration	
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Theme 2: Ontology languages and editors

Does it make sense to formally encode the ontology and semiology to be used for standardising climate action and accounting in an ontology language?

If so, which one?

Which editor is the best to use in peer programming calls?

Does the Dublin Core Metadata Initiative have a role to play?

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