

## Measuring Carbon, Net Zero, Taxonomies: Materials for Class on Tuesday March 26

Climate change mitigation efforts involve reducing emissions of greenhouse gases (carbon dioxide, methane, and nitrous oxide) which help to trap heat in the atmosphere. Under the Paris Agreement, states periodically set out their Nationally Determined Contributions (NDCs) to reach the goals of the agreement, including actions to reduce greenhouse gas (ghg) emissions and to build resilience.<sup>2</sup> Developing countries have tended to make their contributions conditional on receiving financial or capacity-building support.<sup>3</sup>

Reducing ghg emissions requires being able to accurately quantify those emissions and changes in emissions levels. The World Resources Institute (WRI)<sup>4</sup> and the World Business Council for Sustainable Development (WBCSD)<sup>5</sup> have developed the GHG Protocol which “establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions.”<sup>6</sup> The GHG Protocol is developed with input from stakeholders, and in a process involving a Steering Committee, a Standards Board and Technical Working Groups, and has five core principles: completeness, consistency, relevance, accuracy, and transparency.

A corporate carbon footprint looks at three different types of emissions: scope 1 emissions are direct emissions from the company’s operations; scope 2 emissions are indirect energy emissions, such as emissions associated with electricity the company buys, and scope 3 emissions are all other indirect emissions that occur throughout the company’s value chain from suppliers to end users of the company’s products.<sup>7</sup> The US Environmental Protection Agency has set up a Center for Corporate Climate Leadership, and provides tools and guidance to help companies to manage ghg emissions.<sup>8</sup> Its inventory guidance is aligned with the GHG Protocol

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<sup>2</sup> See, e.g., NDC Registry at <https://unfccc.int/NDCREG>.

<sup>3</sup> See, e.g., W. P. Pauw, P. Castro, J. Pickering & S. Bhasin, *Conditional Nationally Determined Contributions in the Paris Agreement: Foothold for Equity or Achilles Heel?*, 20 Climate Policy 468-484 (2020) (noting that the requested support is far in excess of existing funding pledges).

<sup>4</sup> WRI is a non-profit organization headquartered in Washington DC. See <https://www.wri.org/>

<sup>5</sup> WBCSD is an organization of businesses focused on sustainability. See <https://www.wbcd.org/> .

<sup>6</sup> <https://ghgprotocol.org/about-us>.

<sup>7</sup> See, e.g., <https://www.epa.gov/climateleadership/scopes-1-2-and-3-emissions-inventorying-and-guidance> .

<sup>8</sup> See <https://www.epa.gov/climateleadership>.

Corporate Standard,<sup>9</sup> and the EPA provides a simplified ghg emissions calculator to help small businesses and low emitters to inventory their emissions.<sup>10</sup>

Other groups are also involved in developing standards in this area, for example, there is a standard for financed emissions built on the GHG Protocol, to help financial firms assess emissions associated with their investments.<sup>11</sup> This standard was developed as an initiative of a group of banks, and covers “listed equity & corporate bonds, business loans and unlisted equity, project finance, mortgages, commercial real estate and motor vehicle loans.”<sup>12</sup> The Financed Emissions standard treats emissions from investments as scope 3 emissions:

“The GHG Protocol Corporate Accounting and Reporting Standard presents three consolidation approaches when preparing GHG emission inventories: the equity share approach, the financial control approach, and the operational control approach. These consolidation approaches are intended to define the organizational boundaries of the company for the purposes of accounting and reporting GHG emissions. The selection of one of these approaches affects which activities in the company’s value chain are categorized as direct emissions (i.e., scope 1 emissions) and indirect emissions (i.e., scope 2 and scope 3 emissions). Under the equity share approach, an organization accounts for GHG emissions from operations according to its share of equity—or ownership—in the operation. So, holding a 15% equity share in another organization would require including 15% of its emissions across all its emission scopes: scope 1, 2, and 3. Alternatively, an organization can report using the control approach, whereby the company reports 100% of the GHG emissions over which it has control as if these emissions were its own (i.e., 100% of direct emissions are reported under scope 1 and 100% of indirect emissions are reported under scope 2 or 3, respectively). Where the company owns an interest but does not have control, it does not account for GHG emissions from operations as part of its scope 1 and 2 emissions. However, emissions from such operations will be reported under scope 3 emissions according to its relative share of ownership. A control approach can be subclassified as either financial control or operational control, and companies using the control approach must pick between these two

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<sup>9</sup> GHG Protocol Corporate Accounting and Reporting Standard.

<sup>10</sup> See <https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator>.

<sup>11</sup> Partnership for Carbon Accounting Financials, The Global GHG Accounting and Reporting Standard, Part A: Financed Emissions (Dec. 2022). The PCAF has also produced standards for Facilitated Emissions (emissions associated with capital markets issuances) and insurance related emissions. See <https://carbonaccountingfinancials.com/en/standard#the-global-ghg-accounting-and-reporting-standard-for-the-financial-industry>.

<sup>12</sup> <https://carbonaccountingfinancials.com/en/about#our-mission>.

options for reporting. Using the financial control approach, the organization shall report 100% of emissions for all activities in the company where it can directly influence financial and operational policies and has the potential to benefit economically from the company's activities. Using the operational control approach, an organization shall account for 100% of emissions from operations over which it or one of its subsidiaries has control and the authority to introduce and implement operational policies. In most cases, whether an operation is controlled by the company or not does not differ between the financial control or operational control approach.

The consolidation approach used by a financial institution has a significant impact on how it accounts for its financed emissions. Choosing the equity share approach would require scope 1 and 2 emissions from all equity investments to be reported under the financial institution's scope 1 and 2 emissions (according to its share of equity in the operation), whereas financed emissions from other asset classes would end up in scope 3.

However, when choosing a control approach, only emissions from those operations where the financial institution, through its investments, holds a controlling interest would end up in its scope 1 and 2 emissions. In all other cases financed emissions end up in scope 3 category 15. As financial institutions' investments in equity or debt are typically not intended to hold a controlling interest, this Financed Emissions Standard requires financial institutions to measure and report their GHG emissions using either the operational or financial control approach. This requirement allows for consistent reporting of financed emissions in scope 3 emission category 15.”<sup>13</sup>

The Financed Emissions Standard provides a methodology for deciding how much of a borrower/investee's emissions should be attributed to the investment looking at the financial institution's outstanding loans and investments as a proportion of the total equity and debt of the company (the attribution factor). All financing is considered to contribute to emissions so no distinction is made. There are some issues relating to data quality:

“...financial institutions should use the highest quality data available for each asset class for calculations and, where relevant, improve the quality of the data over time. PCAF recognizes that high-quality data can be difficult to come by when calculating financed emissions, particularly for certain asset classes. However, data limitations should not deter financial institutions from taking the first steps toward preparing their inventories. Even estimated or proxy data can help them identify emission-intensive hotspots in their portfolios, which can inform their climate strategies. Where data quality is low, financial institutions can develop

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<sup>13</sup> PCAF, Financed Emissions at 37-39.

approaches to improve it over time.”<sup>14</sup>

Some carbon tracking resources are designed to help individuals and families to identify their own carbon footprint, with a view to reducing it.<sup>15</sup> And there is a Net-Zero Data Public Utility (NZDPU) which provides free access to emissions data for companies.<sup>16</sup>

Beyond emissions data, there are other issues about how to define targets for reducing emissions. A charitable organization called the Science Based Targets Initiative (SBTI) is another body involved in setting standards and guidance relating to emissions targets.<sup>17</sup> And the SBTI is developing a separate entity that will carry out validation of targets.<sup>18</sup> The separation responds to criticisms about the combination of the standard-setting and validation (for a fee) functions, which involve a conflict of interest,<sup>19</sup> and commentators have also criticized aspects of the SBTI methodology, for example its failure to give companies credit for past emissions reductions, which puts early movers at a disadvantage,<sup>20</sup> and an insufficiently demanding approach to targets. Some critics argue that a voluntary system like the SBTI’s is inherently problematic as it allows companies to congratulate themselves for not doing very much.<sup>21</sup>

On the subject of voluntary, rather than required, action we will look at two articles on voluntary carbon markets and a Consultation document published by IOSCO, the International

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<sup>14</sup> PCAF, *Financed Emissions* at 41.

<sup>15</sup> *See, e.g.*, Calculate Your Carbon Footprint at <https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>; Carbon Footprint Calculator at <https://www3.epa.gov/carbon-footprint-calculator/>.

<sup>16</sup> <https://nzdpu.com/home>. Emmanuel Macron and Michael Bloomberg founded the Climate Data Steering Committee which published recommendations which then led to the founding of the NZDPU. Climate Data Steering Committee, *Recommendations for the Development of the Net-Zero Data Public Utility, Final Report* (Nov. 2022).

<sup>17</sup> SBTI, *Corporate Climate Action Gets a Boost with Upgrade to Target Validation and Standard Setting* (Sep. 13, 2023) (“The SBTi has been operated as a partnership between the World Wide Fund for Nature (WWF), CDP, World Resources Institute (WRI), United Nations Global Compact, and the We Mean Business Coalition. It has now incorporated in the UK where it has registered as a company limited by guarantee and has submitted an application to the Charity Commission. Although independent, the SBTi will retain close links with its founding partners, representatives of which will continue to serve the Board alongside the new independent Trustees.”)

<sup>18</sup> SBTI, *The SBTi Launches Open Call for Validation Council Members* (Mar. 6, 2024).

<sup>19</sup> Credit rating agencies were affected by similar conflicts in the past and have since been regulated.

<sup>20</sup> *See, e.g.*, Oliver Balch, *Will Shakeup at Net-zero Targets Arbiter Be Enough to Quiet its Critics?*, Reuters (Feb. 6, 2024).

<sup>21</sup> *See, e.g.*, Ian Morse, *Inside the Little-known Group Setting the Corporate Climate Agenda*, MIT Technology Review (May 16, 2023).

Organization of Securities Commissions in December. Two organizations are seeking to improve these markets: the Integrity Council for the Voluntary Carbon Market (ICVCM),<sup>22</sup> and the Voluntary Carbon Market Integrity Initiative (VCMI).<sup>23</sup>

In contrast to these voluntary initiatives, there are efforts to define what sorts of activity are able to be described as sustainable.<sup>24</sup> The EU is developing a very detailed Taxonomy setting out criteria for sustainable economic activity in various sectors of the economy.<sup>25</sup> The development process has shown that the concept of sustainability is complex and contested.<sup>26</sup> The Taxonomy identifies six categories of environmental objectives: climate change mitigation and adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control and the protection and restoration of biodiversity and ecosystems.<sup>27</sup> In order to be considered to be environmentally sustainable an investment must contribute significantly to one or more of these objectives, must not significantly harm any of them, must meet specified minimum human rights standards, and comply with technical screening criteria established under the Regulation.<sup>28</sup> There are technical screening criteria under the Regulation, which are extremely complex and detailed.<sup>29</sup>

The development of these detailed rules to implement the EU Taxonomy has produced a

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<sup>22</sup> <https://icvcm.org/>.

<sup>23</sup> <https://vcmintegrity.org/>.

<sup>24</sup> See, e.g., OECD, *Developing Sustainable Finance Definitions and Taxonomies* (2020) <https://doi.org/10.1787/134a2dbce-en> At 11 (“Taxonomies are definitions of sustainable finance that aim to be comprehensive classification systems, while definitions of sustainable finance are less ambitious in scope. When appropriately designed, sustainable finance definitions and taxonomies can bring potential benefits. These include improving market clarity. More precise and consistent definitions of which investments are “green” and “sustainable” could facilitate investment by giving confidence and assurance to investors. Other potential benefits include easier tracking of sustainable finance flows in order to measure them, and/or in order to take a policy action such as setting incentives.”)

<sup>25</sup> Regulation (EU) 2020/852 on the Establishment of a Framework to Facilitate Sustainable Investment, OJ L198/13 (Jun. 22, 2020).

<sup>26</sup> Cf. Quinn Curtis, Jill Fisch & Adriana Z. Robertson, *Do ESG Funds Deliver on Their Promises?*, 120 MICH. L. REV. 393, 399 (2021) (“ESG means different things to different investors.”)

<sup>27</sup> EU Taxonomy Regulation, Art. 9. Much other EU law relates to these objectives. See EU Taxonomy Regulation at Recitals 26-30.

<sup>28</sup> EU Taxonomy Regulation, Art. 3.

<sup>29</sup> See, e.g., Commission Delegated Regulation (EU) 2021/2139, OJ L 442/1 (Dec. 9, 2021); Commission Delegated Regulation (EU) 2022/1214, OJ L 188/1 (Jul. 15, 2022); Commission Delegated Regulation (EU) 2023/2485, OJ L 2023/2485 (Nov. 21, 2023).

number of controversies.<sup>30</sup> For example, ClientEarth has challenged the inclusion of forest biomass for bio-energy as a green investment under Commission Delegated Regulation 2021/2139. After the Commission rejected a request for an internal review of this decision ClientEarth applied to the EU General Court to annul the decision, arguing that the Commission made errors including disregarding essential elements of the Taxonomy Regulation and making errors of assessment as to the scientific evidence as to forest biomass.<sup>31</sup>

Proponents of the idea that forest bio-mass is a sustainable energy source focus on the idea that trees are, in contrast to fossil fuels, renewable, because they can be replaced within a relatively short period of time,<sup>32</sup> and that the biomass being burned is waste material that would have released carbon dioxide in any event.<sup>33</sup> However, the burning of biomass releases carbon dioxide, in contrast to other energy sources more appropriately seen as sustainable such as wind and solar.<sup>34</sup> The EU has recognized biomass as a renewable energy source in the Renewable Energy Directive.<sup>35</sup> Within the EU the different Member States have tended to organize energy differently, although bioenergy constitutes 59% of renewable energy in the EU,<sup>36</sup> and some Member States are more dependent on biomass energy than others in terms of production and usage. Germany, Spain, Poland, Sweden and France report the largest levels of biomass from forests.<sup>37</sup> The Netherlands and Denmark are the largest importers of wood pellets.<sup>38</sup>

Other areas of conflict relating to the Taxonomy have involved nuclear power and natural gas. Greenpeace organizations asked the EU Commission to carry out an internal review of the

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<sup>30</sup> See, e.g., Mehreen Khan, *Brussels Faces Backlash over Delay to Decision on Whether Gas Is Green*, Financial Times (Apr. 21, 2021).

<sup>31</sup> See Action brought on 17 September 2022 — ClientEarth v Commission (Case T-579/22) OJ C 45/16 (Feb. 6, 2023).

<sup>32</sup> See, e.g., US Energy Information Administration, *Biomass Explained*, at <https://www.eia.gov/energyexplained/biomass/>.

<sup>33</sup> See, e.g., Kate Ravilious, *Biomass Energy: Green or Dirty?*, 33 *Physics World* 31, 31 (2020).

<sup>34</sup> See, e.g., Sasha Stashwick, *How the Biomass Industry Sent “Sustainability” Up in Smoke* (Jul. 25, 2019) at <https://www.nrdc.org/bio/sasha-stashwick/how-biomass-industry-sent-sustainability-smoke> (“Per unit of energy, all existing biomass power plants emit more CO<sub>2</sub> from their smokestacks than coal plants. Thus, the inevitable initial impact of replacing coal with forest biomass in power stations is to increase CO<sub>2</sub> levels in the atmosphere.”)

<sup>35</sup> Directive (EU) 2023/2413 on the Promotion of the Use of Energy from Renewable Sources, OJ L 2023/2413 (Oct. 31, 2023).

<sup>36</sup> EU Commission, *Union Bioenergy Sustainability Report*, COM (2023) 650 final (Oct. 24, 2023) at 1 (“Bioenergy produced from agricultural, forestry and organic waste feedstock continues to be the main source of renewable energy in the EU, accounting for about 59% of renewable energy consumption in 2021.”)

<sup>37</sup> *Id.* at 2.

<sup>38</sup> *Id.* at 8.

decision to include nuclear power and natural gas in the Taxonomy, noting, for example, that nuclear power stations raise significant questions about “the unresolved issue of nuclear waste” and its compatibility with the principle of a circular economy, and their vulnerability to adverse weather events linked to climate change.<sup>39</sup> Greenpeace also expressed concerns that the long period of time for the development of nuclear power plants means that they are not useful as a climate change mitigation activity, and allowing the development of new natural gas plants, which typically operate for 35 years, means that they would still be operating in 2050 when the EU is supposed to use only renewable energy.<sup>40</sup> The Commission declined to carry out the requested internal review,<sup>41</sup> and Greenpeace challenged this decision.<sup>42</sup>

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<sup>39</sup> Media Briefing: Greenpeace’s Legal Arguments Against Including Gas and Nuclear in the EU Taxonomy (Feb. 9, 2023) at <https://www.greenpeace.org/eu-unit/issues/climate-energy/46567/media-briefing-greenpeaces-legal-arguments-against-including-gas-and-nuclear-in-the-eu-taxonomy/>.

<sup>40</sup> *Id.*

<sup>41</sup> Greenpeace to Take European Commission to Court over Controversial Gas and Nuclear Greenwashing (Feb. 9, 2023) at <https://www.greenpeace.org/eu-unit/issues/climate-energy/46570/greenpeace-to-take-european-commission-to-court-over-controversial-gas-and-nuclear-greenwashing/>.

<sup>42</sup> Action brought on 18 April 2023 — Greenpeace and Others v Commission (Case T-214/23), OJ C 235/46 (Jul. 3, 2023).