

About

Carbon Productivity: Curing Two Headaches With One Pill?

Can we take two of today's greatest challenges – and turn them into a huge positive for tomorrow's economy? That's the question posed by the Carbon Productivity Consortium.

A growing number of national economies are experiencing two increasingly painful headaches at exactly the same time. First, the economic productivity that funds everything society wants to do is weakening; and, second, the world's greenhouse gas emissions are destabilizing the climate.

It's time to put two negatives together – and create the sort of positive market outcomes that massively boost our chances of delivering the Sustainable Development Goals.

Step 1 is to reimagine carbon as not simply a global liability, but also a critical asset for tomorrow's growth. We need to ensure we invest the remaining carbon budget in ways that will make us fit for a very different future.

Step 2 is to reimagine productivity, with business leading collaboration to unlock new technologies, business models and mindsets that revolutionise supply chains to deliver a wider range of financial, social and environmental value.

And, Step 3 is to start reaching for the 'big wins'. Carbon Productivity is part of a new mindset that sees 'quick win', incremental change (whether 1% or 10%) as inadequate at a time when our challenges are going exponential, increasingly demanding 10x (or 10-fold) change.

This is not just about fossil fuels. A key first step will be to stop burning carbon, but the spotlight is already switching to turning it into the building blocks of tomorrow's more social, lean, integrated and circular economies. Harbingers of the new order like carbon fiber, graphene and buckminsterfullerene would have seemed impossible, or at least magical, a few short years ago.

So what is Carbon Productivity?

The Consortium defines carbon productivity as the value created from fossil carbon resources (coal, oil and natural gas), just as capital productivity tracks the financial return on investment and labor productivity measures the value created from human resources.

The term has also been used to describe the value created for each unit of Greenhouse Gas (GHG) emitted (McKinsey 2008, Corporate Knights 2014). The definitions are closely linked – since fossil carbon consumption leads in most cases to GHG emissions.

Over time, the aim must be to understand and manage three forms of carbon flagged by Bill McDonough – durable (e.g. limestone, wood, concrete), living (e.g. lifeforms) and fugitive (e.g. atmospheric emissions). However, defining unburned carbon as a valuable input for our industries and economies potentially provides a new perspective for innovators, entrepreneurs, managers, investors and policy-makers.

Here are some commonly asked questions:

01

What is the purpose of the Carbon Productivity Consortium?

The goal of the Consortium is to catalyse a new perspective on value creation through carbon. We aim to initiate and support a multi-stakeholder conversation, and the development of appropriate toolkits, that can drive breakthrough approaches to generate ever-more value for society from ever-less fossil carbon.

02

Why do we need breakthroughs in carbon productivity?

The Paris Agreement and the Global Goals for Sustainable Development framed three critical and inter-linked challenges for society:

- Drastically reducing consumption of fossil carbon
- Maintaining and growing healthy and productive economies
- Protecting, enhancing and creating natural or man-made sinks for carbon

Balancing the three challenges to remain below the 2°C climate target requires us to wean our economy off fossil fuel carbon, and to achieve a huge leap in the value generated from each unit of it that we use – in other words, we need breakthroughs in carbon productivity. Over time, the approach should embrace all forms of carbon.

03

How does carbon productivity align with existing approaches and tools?

Business is key to making all this happen, so there is an inevitable profusion of concepts and terms. But the Consortium aims to complement existing approaches and tools for understanding, reporting and improving the climate impact of a company or product. It is not intended to replace, for example, Life Cycle Assessment (LCA), the Greenhouse Gas Protocol, the Carbon Disclosure Project or Science-Based Targets; it links all of these—and more.

The prototype tool that is being developed to measure and improve carbon productivity is grounded in the LCA methodology. It provides new summary metrics to derive new insights and improvement strategies from LCA data.

04

Is the carbon productivity initiative unwittingly legitimizing continued growth in fossil carbon use by industry?

No. Use of a carbon productivity concept and tool – as for emissions intensity metrics used by many companies – should be grounded in a strategy for absolute reduction in fossil fuel carbon use in line with the Paris Agreement and a well below 2°C climate target.

05

Is Carbon Productivity simply about addressing climate change?

Again no. The focus of the initiative is on climate change mitigation. However, we recognise the risk from focusing on carbon at the expense of other environmental and social impacts. Our approach is nested within the work of the Future-Fit Foundation, which explores the ripple effects of change across other aspects of the biosphere, oceans and atmosphere. For all applications of carbon productivity, users are encouraged to consider potential unintended consequences on other social and environmental system values. This way lies the road to true sustainability.