

OUR COMMITMENT

SDG impact



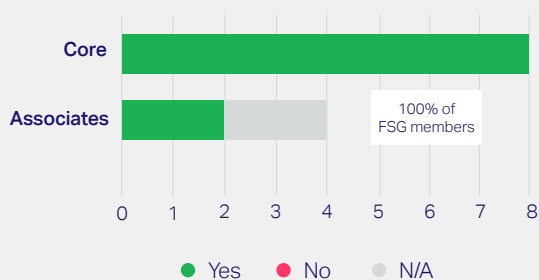
Scale up the sector's contributions to a circular bioeconomy

- Invest in **innovation and the widespread adoption of low-carbon and circular wood fiber products** that store carbon and substitute non-renewable and fossil-based materials, in particular in the packaging, construction, energy, chemical and textile sectors.
- Accelerate research and science to better understand the carbon impacts of forests and wood fiber products to build a clear, consistent and science-based narrative** to inform customer procurement decisions and raise consumer awareness of the carbon storage and end-of-life benefits of wood fiber products over fossil-based and non-renewable alternatives.

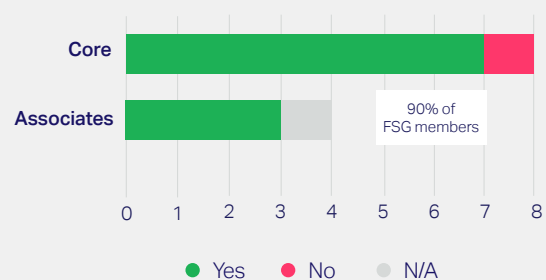
KPI RESULTS

R&D intensity: R&D expenditure/total revenue (%) (weighted average) **2019** 0.41% 8 core

Does your company communicate the benefits of wood fiber products to customers/consumers on a regular basis?



Does your company engage with academia/research institutions to build science-based evidence of the carbon impacts of forests and wood fiber products?



By 2050, the global population will reach almost 10 billion, leading to an increasingly resource-constrained world if societies continue to use linear “take-make-dispose” economic models. A radical shift away from fossil-based materials combined with the removal of carbon dioxide from the atmosphere and material reuse are essential. The forest sector lies at the heart of this transition to a low-carbon circular economy due to the ability of forest products to capture and store carbon. These can effectively substitute for and complement fossil-based materials in sectors such as packaging, construction materials, textiles, bioenergy, pharmaceuticals or even vehicle components. To scale up a circular bioeconomy, companies face considerable hurdles related to costs, technology, policy and consumer perception. In the SDG Roadmap, in addition to investing in our individual R&D capacity, we commit to jointly tackling the barrier of consumer perception by driving the widespread adoption of fiber-based products through clear, consistent and science-based communication.

The forest sector is facing a unique opportunity to tap into the fast-growing circular bioeconomy market, estimated at USD \$7.7 trillion.¹³ **In 2019, on average, FSG members invested 0.41% of total revenues into R&D.** As this R&D intensity figure is relatively low, the pace of innovation across the sector will accelerate in the coming years to bring to market innovative bio-based solutions that offer

alternatives to plastics, concrete, glass, metal and other non-renewable materials. By doing so, the forest sector is accelerating the decarbonization of several industries.¹⁴ For example, **Stora Enso** is developing a technology that uses dry lignin from wood to manufacture a replacement material for lithium-ion batteries for applications in the consumer electronics and automotive industries, among others. **Birla Cellulose** is tapping into the growing sustainable fashion market by offering wood fiber-based textiles as an alternative to fossil-based textiles that currently account for more than 60% of textile fabrics.

1. Communicating the benefits of wood fiber products

To inform customers and raise consumer awareness of the sustainability benefits of fiber-based products all FSG members communicate on a regular basis with customers

and consumers depending on their placement in the forest products value chain. Our corporate messaging typically describes the benefits of fiber-based products by highlighting their renewable, recyclable and biodegradable nature, as well as their health benefits and contributions to climate change mitigation through carbon storage. We often support messaging on forest product capacity to complement and substitute for non-renewable and fossil-based materials with quantitative evidence of the low-carbon and circular impacts as provided by product life cycle assessments and environmental product certificates or labels.

Typical communication channels used to reach customers and consumers are exhibitions and fairs, company websites, sustainability reports, social media channels, as well as the product’s packaging.



Definition: Circular bioeconomy

The bioeconomy is the use of biological resources to produce food and feed, products and energy. In a circular bioeconomy, biological resources are renewable, sustainably managed, recovered and reused as much as possible.¹²

Standardized platforms such as Sedex and Ecovadis or disclosure platforms such as the Carbon Disclosure Project (CDP) or Dow Jones Sustainability Indices (DJSI) also help channel sustainability data to customers. As an example of collaborating to communicate the benefits of the bioeconomy, investments made by **New Forests** support the Ultimate Renewable Campaign, a mass media campaign that promotes the benefits of wood and timber products to Australian consumers.

2. Build a science-based narrative

Sustainably managed forests absorb carbon dioxide from the atmosphere. When the trees are harvested, the carbon remains in the fiber as it is made into products and for the duration of its lifetime, even through recycling. Research to date clearly demonstrates that forest-based

products, particularly building materials, provide long-term greenhouse gas (GHG) mitigation benefits when substituted for more GHG-intensive alternatives.¹⁵

While we are increasingly understanding and documenting the benefits of the circular bioeconomy for a low-carbon future, the quantification of the climate benefits of the bioeconomy is still lacking. The absence of standard guidance on how to account for the carbon stored in forest assets and products hinders the sector's ability to credibly communicate the strategic opportunity to stakeholders by reporting the emissions avoided as a result of use of the products they sell.

In recognition of the importance of grounding the message in a robust science-based narrative, **90% of FSG members work in partnership with global**

and national academic and science institutions, such as the World Resources Institute (WRI), National Council for Air and Stream Improvement (NCASI), International Union of Forest Research Organizations (IUFRO), international NGOs, such as The Nature Conservancy (TNC) and WWF, and local industry associations, to advance innovation and research on the carbon and climate impacts of forests and wood fiber products. Many of us participate in the development of accounting methods, such as the Greenhouse Gas Protocol, that should lead to a globally accepted emissions accounting standard to quantify the carbon impacts of forests and wood fiber products. The development of science-based targets also helps stimulate interactions with customers on the climate benefits of forest products.

