


## OUR COMMITMENT

**SDG impact**



### Bring resource-efficient, bio-based and circular business models to scale

- Innovate to enable effective and efficient **upcycling of waste streams and processing residues** within the value chain for energy generation and as a feedstock for other industries, such as the chemical and cement sectors.
- Further increase the **global recovery rate of wood fiber products** by:
  - Identifying and scaling up new sustainable solutions to waste management and fiber recovery;
  - Helping to spread best practices and innovative designs to overcome end-of-life use bottlenecks, for example for long-life engineered wood products in construction;
  - Promoting and competitively positioning circular economy products to customers and consumers by driving behavior change through consumer education and incentives.
- Improve and innovate **business models and product design to provide end-of-life solutions for single-use fiber products**, such as composite packaging, diapers, personal care and sanitary products.

## KPI RESULTS



Despite the increasing awareness of the need for circular economies, the world is currently only 8.6% circular.<sup>26</sup> Due to the renewable, recyclable and biodegradable nature of wood fiber products, the forest sector is well positioned to bring efficient, bio-based, circular business models to scale. To achieve this, in the SDG Roadmap we commit to action at every stage of the forest product value chain: sourcing raw materials, designing products to improve the recovery potential, repurposing the 2 billion tons of waste generated each year by the sector,<sup>27</sup> and working on improving the global recovery rate of wood fiber products.

### 1. Sourcing based on circular principles

Wood fiber is the predominant material inflow for forest products, followed by non-wood fiber materials such as chemicals. Most forest products combine virgin and recycled fiber derived from recovered paper. As wood fiber is a renewable material, we use certification and other tools to ensure the sustainability of each part of the forest management cycle. In addition to the certification of their input wood fiber intake, **55% of FSG members systematically apply circularity principles to their sourcing strategy.** Among others, this means that we strive to increase the amount of recycled materials in products

without compromising product safety or quality. We can do this by setting specific targets for the percentage of virgin to recycled fiber flowing into the product. But this virgin and recycled fiber combination is not possible for products such as some food packaging, toys, pharmaceuticals or premium paper that require the almost exclusive use of virgin fiber for safety or technical reasons. Also, for fiber to reach its full recycling capacity (around 7 times), the input of virgin fiber is necessary at each cycle.

### 2. Design products to maximize recovery potential

By leveraging the sustainability attributes of wood fiber, the forest sector is in a strong position to develop more sustainable alternatives to products already on the market. But to meet product requirements, the sector often combines wood fiber with other materials such as plastics or coatings that can compromise their recovery potential. Single-use fiber products such as composite packaging, diapers, personal care and sanitary products are a key area of concern and action for us regardless of

whether we have direct control over their manufacturing.

**Some 60% of FSG members systematically apply circular design principles to maximize the recovery potential of their products.**

To reach key stakeholders and customers, some of us have joined or launched collective initiatives. For example, **Smurfit Kappa's** Better Planet Packaging Initiative seeks to reduce packaging waste and litter by creating more sustainable packaging solutions through design, innovation and recycling capabilities. Others invest in equipment upgrades. For example, **Birla Cellulose** recently invested over USD \$170 million in upgrading to cutting-edge technology for a closed-loop production process that maximizes recovery potential and enables the upcycling of waste textiles into fresh fiber for one of its product lines.



#### Definition: Circular economy

The circular economy consists of a move away from the traditional "take – make – dispose" economic model to one that is regenerative by design. The goal is to retain as much value as possible from resources, products, parts and materials to create a system that allows for long life, optimal reuse, refurbishment, remanufacturing and recycling.<sup>25</sup>

### 3. Upcycling of waste streams

With about 2 billion tons of waste generated each year, mostly as wastewater and sludge, the forest sector is constantly looking for innovative ways to reuse this waste either as raw material input in its own value chain or as a feedstock for other industries such as chemicals or cement.

**In 2019, FSG members sent on average 37% of their total solid waste to landfill. They recycled or incinerated the remaining 63% for energy.** The variation of this figure over time is directly linked to the evolution of FSG membership, as it is closely linked to the type of products produced, as well as the local regulations on landfilling certain types of waste.

**The Navigator Company** provides a good example of the reuse of waste within its own value chain through the valorization of carbonate sludges, a waste from its industrial processes, as a raw material for incorporation in the production of its uncoated wood-free paper. The production takes place onsite through a cooperation partner.

Reusing waste as a feedstock for other industries also presents attractive opportunities, for example reusing residuals such as ash and sludge for road construction, cement, bricks, fertilizers or soil improvers. Additionally, forest residues can be used to produce essential eucalyptus oils for fragrances, cosmetics, disinfectants and other pharmaceutical products.

### 4. Improving the global recovery rate

While most of us operate upstream in the forest product value chain, consumers' growing concern about the end-of-life disposal of products is pushing businesses to increasingly internalize the cost of poor waste management infrastructure. With a recycling rate at 60% globally, paper is one of the most recycled materials.<sup>28</sup> But there is still room for improvement across the full range of wood fiber products and **half of FSG members are actively contributing to increasing the recovery rate of these products.** We often do this in collaboration with

other actors in the value chain, as well as local or regional authorities. For example, **CMPC** has internalized the recovery process by operating its own paper and board recovery subsidiary that works throughout Chile, and at a smaller scale in Peru and Argentina, to recover materials from different origins, such as local recycling facilities, supermarkets or large retail stores and from its own subsidiaries. In Belgium, **Stora Enso** has trialed the recycling of used paper cups from volume cafés and quick-service restaurants by working closely with local waste management partners.

