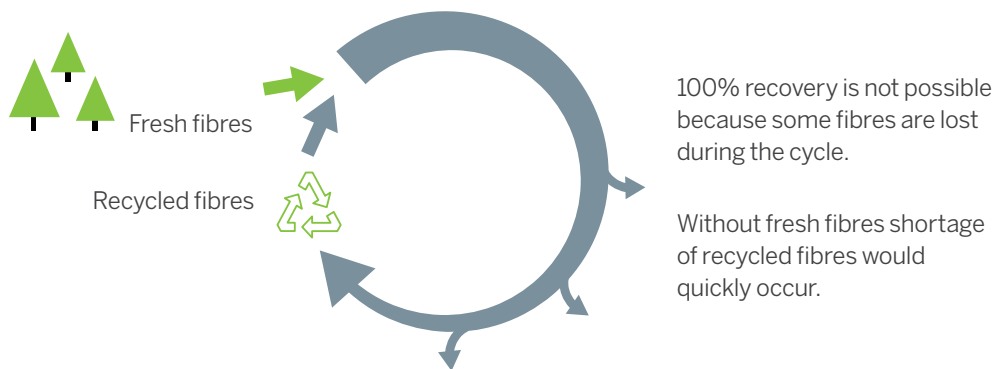


# Facts about fibres

## – what you should know about fresh fibre-based packaging

Packaging plays an important role in protecting products and consumers. As packaging volumes continue to rise it is important that we look for new ways to improve its sustainability. Packaging made from fresh wood fibres is a vital contributor to the circular economy, where raw materials are renewable and can be used again. In terms of the circular economy, both fresh and recycled fibres are equally good and are part of the same cycle. The recycling rates of paperboard and paper packaging are already high. For example, in both the European Union and the United States rates are over 80%, far outstripping those of other packaging materials.



### WHY DON'T WE JUST RECYCLE THE SAME FIBRES AGAIN AND AGAIN?

Fresh wood fibres are pure and strong, making them an excellent material for the circular economy because they can be recycled multiple times. They help to maintain the fibre loop by compensating for the losses caused by papers and boards that cannot be returned back to circulation. These losses can be due to, for example, a lack of correct sorting for recycling, exports to other fibre-scarce markets or contamination or weakening of fibres.

### BUT THE CARBON FOOTPRINT OF RECYCLED PACKAGING IS LOWER, ISN'T IT?

Two major factors affect the carbon footprint of packaging: weight and the energy used in production. Boards made from recycled fibre are weaker than those made from fresh fibre, so more recycled fibres are needed in order to manufacture packaging of the same strength, which

increases the packaging weight and therefore its carbon footprint.

Another factor affecting the carbon footprint of packaging is the energy type used in board production. Countries like Finland and Sweden produce more fresh fibre paperboards, mainly using renewable energy. In the European countries where recycled boards account for the majority of production, the mills producing these products are traditionally powered by fossil-based energy.

When calculating the carbon footprint of fresh fibre paperboard the starting point is the forest and the sourcing of the wood, whereas the carbon footprint calculation for recycled paperboard starts from the collected paper and board waste. Despite its longer supply chain, the carbon footprint of fresh fibre paperboard is often lower than that of recycled paperboard due to its lighter weight. Fresh fibre paperboard produced in countries like Finland and Sweden has an even lower carbon footprint because it is typically produced using renewable energy.



## RECYCLING IS GOOD FOR THE ENVIRONMENT, BUT IS IT GOOD FOR THE FOOD PACKED IN IT?

The choice of packaging material depends on the planned end use. While packaging made of recycled fibres is suitable for many different end uses, in hygiene and safety-critical end uses such as food and pharmaceuticals fresh fibres are the better and safer choice. Recycled fibres can contain residues like printing inks, adhesives and lacquers that should not come into direct contact with food because they are harmful to human health.

Food packaging that is made from recycled paperboard typically includes additional material to protect the food from potential contamination. Often this material is plastic, which increases the carbon footprint of the packaging and can make recycling more complicated.



## AM I CONTRIBUTING TO THE DESTRUCTION OF FORESTS BY CHOOSING PACKAGING MADE OF FRESH FIBRES?

Thanks to sustainable forest management the forests in Finland and Sweden grow more than they are used. For example, for every tree harvested in Finland four new ones are planted. Third-party forest certification (PEFC, FSC®) is a mark of legal and sustainable forest use. While only 10% of the world's forests are certified, in Finland the percentage is 90% and in Sweden it is 63%. Finland has the highest share of strictly protected forests in Europe.

”A single small tree from forest thinning provides enough material to produce 1,000 pasta packages.”

Traceability of fibres is important because it shows whether the material comes from sustainably managed forests and is safe to use. The origin of fresh fibres can be traced back to the forest, whereas with recycled paper and packaging it is impossible to determine the origin of the fibres. The forest certification claims used in recycled paperboards do not guarantee that the fibre comes from certified or even controlled forests; they only state that recycled fibres have been used in the production of the board.

Pulp – the raw material used to make fresh fibre paperboard – is mainly made from wood from forest thinning and woodchips from sawmills. The trunk, the most robust part of the tree, is used for sawn timber products and not for pulp or paperboard production. Tree tops, bark and branches are a valuable source of bioenergy that is widely used in paperboard production in Finland and Sweden.

## WHICH PACKAGING MATERIAL IS RIGHT FOR MY END USE?

Safe, strong, lightweight and traceable fresh fibre is the best choice for direct food contact and other end uses where hygiene and safety are critical, as well as for packaging with demanding printing requirements. Mixed-quality recycled fibre from miscellaneous sources is a good choice for end uses like newsprint, packaging for electrical appliances and tools, and logistics packaging.

### Sustainable packaging:

- protects the product and prevents waste
- ensures consumer safety
- is made of renewable and traceable materials
- is lightweight
- is produced using renewable energy
- can be easily recycled