

## F. Methodological Notes – Carbon Footprint 2022

For the calculation of Altri’s carbon footprint, we included the industrial units Celbi, Biotek, and Caima, ALTRI Florestal, ALTRI Abastecimento de Madeira, and ALTRI SGPS. In 2022, greenhouse gas (GHG) emissions accounting was carried out according to the GHG Protocol, an initiative of the World Resources Institute and the World Business Council for Sustainable Development. The GHG Protocol standards are currently the most widely used internationally for the accounting of greenhouse gas emissions by organizations from all sectors of activity, being adopted by more than 90% of Fortune 500 companies.

As the GHG Protocol is missing specific guidelines on quantification of biological carbon sequestration, the accounting of carbon removals and losses, including the calculation of the respective reservoir in forest areas managed by ALTRI Florestal, used a methodology adapted from the National Emission Inventory (National Inventory Report – NIR), published annually by the Portuguese Environment Agency, according to the IPCC Guidelines for National Greenhouse Gas Inventories (2006) – Volume 4 – Agriculture, Forestry and Other Land Use.

The 2022 carbon footprint reporting is aligned with the GHG Protocol, according to the three reporting scopes. Other emissions, such as forest carbon stock, emissions avoided by the sale of electricity, and biogenic emissions, are reported independently.

The following areas were considered:

**Scope 1:** Refers to direct greenhouse gas (GHG) emissions from operations by sources owned or controlled by Altri. It includes emissions in the field of fuels (own fleet), fuels (installations), fertilizer and corrective applications, fuels (machinery), EU-ETS emissions (combustion and process), fuels out of EU-ETS, biofuels (CH<sub>4</sub> and N<sub>2</sub>O), f-gas leaks and internal waste treatment.

**Scope 2:** Relating to GHG emissions associated with the production of electricity acquired by Altri. These emissions were calculated according to market-based and location-based methodologies.

**Scope 3:** Refers to other indirect GHG emissions associated with the Altri value chain. The categories calculated in this scope are:

- **C1.** Purchase of goods and services – including the purchase of chemicals, external biomass, fertilizers, and phytopharmaceuticals.
- **C3.** Activities related to fuels and energy not included in scopes 1 and 2 – calculated on the basis of activity data present in scopes 1 and 2, such as emissions associated with extraction, refining and transport of fuels, and losses in the network;
- **C4.** Upstream transportation – transportation of wood and chemicals
- **C5.** Waste generated from operations (including transport) – includes waste generated in pulp mills;
- **C9.** Upstream and downstream transportation – transportation of product;
- **C10.** Processing of the product sold.

**Other emissions:**

- **Forest Carbon Reservoir:** Under Altri Florestal, carbon stock in the forest under its management was calculated.
- **Avoided emissions:** The methodology for calculating avoided emissions has been revised. For this purpose, electrical energy injected into the network by pulp mills was considered (only surplus plants in electrical power were considered in this calculation).
- **Biogenic emissions:** The biogenic emissions associated with the consumption of non-fossil fuels in pulp mills have been calculated. The main non-fossil fuels are black liquor and biomass.

**Exclusions:** Other categories of scope 3 were considered not relevant or not applicable to Altri’s activity.



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- 06
- 07
- 08
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