



What are the main causes of climate change?

The sixth assessment report released by the Intergovernmental Panel on Climate Change (IPCC) in 2021 confirms that we are already seeing the consequences of 1.1°C of global warming through more extreme weather, rising sea levels and diminishing Arctic sea ice, amongst others.

The report projects that in the coming decades, climate changes will increase in all regions. For 1.5°C of global warming, there will be increasing heat waves, longer warm seasons and shorter cold seasons. At 2°C of global warming, heat extremes would more often reach critical tolerance thresholds for agriculture and health, the report shows.

But it is not just about temperature. Climate change is bringing multiple different changes in different regions – which will all increase with further warming. These include changes to wetness and dryness, to winds, snow and ice, coastal areas and oceans.

Does Sappi support the TCFD?

Yes we do. In recent years, we have been assessing our resilience to the physical and transitional risks and opportunities of climate change as framed by the Task Force on Climate-related Financial Disclosures (TCFD).

Does climate change impact forests and plantations?

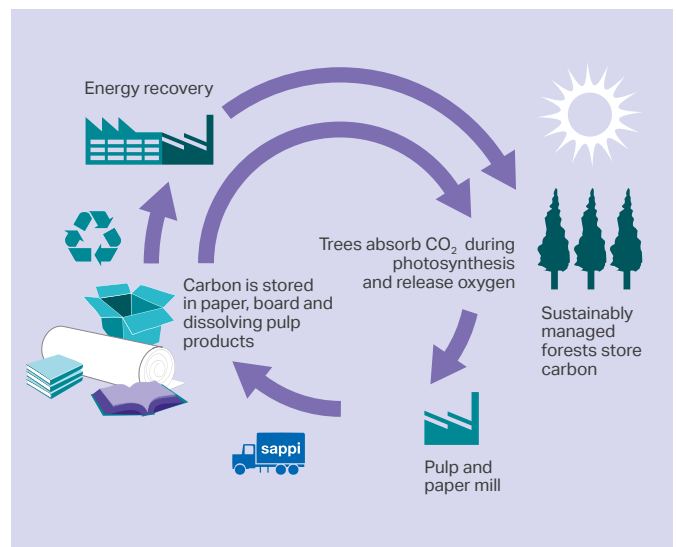
Climate change can stress forests through higher mean annual temperatures, altered precipitation patterns and more frequent extreme weather conditions which could

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exacerbate many of the threats forests and plantations face, such as pest outbreaks, fires, water scarcity and drought.

How do trees mitigate climate change?

Climate change is exacerbated by the presence of too many greenhouse gases; carbon dioxide (CO₂) is the most abundant greenhouse gas in the atmosphere. Through photosynthesis, a part of the carbon cycle, trees and other plants use water and sunlight to convert CO₂ into carbohydrates to provide energy and the building blocks for growth. The process releases oxygen as a by-product. The carbon removed from the atmosphere is effectively stored in plant material and wood. In other words, trees act as carbon sinks.



Fast facts

- The IPCC has confirmed that human activity is a major cause of climate change.
- Forests and plantations sequester carbon by capturing carbon dioxide and releasing oxygen, which mitigates climate change.
- Deforestation of tropical forests accounts for approximately 12-13% of global GHG emissions¹.
- We are assessing our risks and opportunities around climate change in line with the TCFD.
- Harvesting, balanced with regrowth, perpetuates carbon sequestration.

¹ <https://www.un.org/esa/forests/wp-content/uploads/2019/03/UNFF14-BkgdStudy-SDG13-March2019.pdf>

What is carbon sequestration?

Carbon sequestration is the process of capturing and accumulating carbon within the system. To be classified as a significant service, the carbon store should be increasing. To maximise carbon sequestration, it makes sense to harvest mature trees and replant them, perpetuating the sequestration process.

The forests from which we source our woodfibre in Europe and North America are managed sustainably; regrowth and afforestation exceeds the rate at which woodfibre is extracted.

In South Africa, our commercial plantations remain productive, even when we harvest the crop. The trees we harvest are generally replanted within a few months to perpetuate the carbon sequestration process.

Does Sappi use woodfibre from tropical forests?

We do not use woodfibre from tropical forests. Around 25% of global emissions come from the land sector, the second-largest source of greenhouse gas emissions after the energy sector. About half of these (5-10 GtCO₂e annually) come from deforestation and forest degradation.

Note, however, that forests are also one of the most important solutions to addressing the effects of climate change. Approximately 2.6 billion tonnes of CO₂, one-third of the CO₂ released from burning fossil fuels is absorbed by forests every year².

Are Sappi's woodfibre sources part of the climate change solution?

Yes, they are. Certification gives our customers the assurance that our products originate in sustainably managed plantations and forests. Globally, 77% of fibre supplied to our mills is certified. The balance is procured from known and controlled sources.

² <https://www.iucn.org/resources/issues-briefs/forests-and-climate-change>

³ Our mills' and forestry certification details, including FSC™, SFI® and PEFC, are available online (<https://www.sappi.com/certifications>) and summarised in the Sustainability FAQs — Our certifications.

We use internationally recognised forest certification programmes that include:

FSC Forest Stewardship Council³

PEFC Programme for the Endorsement of Forest Certification.

SFI® Sustainable Forestry Initiative® and other PEFC -endorsed systems.

In South Africa, all our owned and leased plantations are Forest Stewardship Council™ (FSC™ N003159); and Programme for the Endorsement of Forest Certification™ (PEFC/01-44-43) certified; 85% of the wood supplied to us is certified.

In Europe and North America, we do not own plantations or land, but source woodfibre from landowners and commercial loggers.

In Europe, 87% of fibre used is certified through FSC and PEFC, while in North America, 59% of fibre used is certified through FSC and SFI®, as well as from the Certified Logging Professional and Maine Master Logger programmes.

What is Sappi doing to mitigate climate change risk?

Our most vulnerable assets to physical climate change are our plantations in South Africa. Our scientists have developed a high level of expertise in assessing physical climate change impacts.

In **South Africa**, we own and lease 399,996 hectares (ha) of plantations, of which 261,605 ha are planted. The remainder is managed to conserve the natural habitat and biodiversity found there. This gives us a high level of control over our fibre sources. We moderate our exposure to climate change-related risk by:

- **Maintaining wide genetic variability** in our planting material enables us to breed trees for a range of conditions, allowing us to respond to climatic changes.
- Continually monitoring and reviewing **forest best practices** in the light of changing environmental factors, thus helping to mitigate any increased threat from drought.
- Measuring **permanent sample plots** annually (eucalypts), or bi-annually (pines), to determine the effect of drought and other climatic change impacts on annual growth as an input to long term planning.

- Engaging in **research** and **collaboration** with industry and tertiary institutions to develop **biocontrol** measures and **breed genetically** more **resistant** planting **stock**.
- Implementing extensive planting of more **drought-tolerant eucalypt hybrids**.
- Mitigating fire risks via an integrated **Fire Risk Management System (FRMS)**, which categorises our risks and assigns a risk rating.
- Continually assessing the health of our growing stock. This is measured through evaluation of trees with emphasis on growth rate, age and utilisation efficiency. Annual measurement programmes using a pre-harvest measurement of 20,000 hectares per annum (8%), as well as an airborne laser scan of all the plantations conducted every second year, together with analysis of growth trends and drivers from, for example, permanent sample plot programmes (PSP). Actual versus planned yields per compartment are used to continuously adjust the annual cut and detect emerging problems.

Other ways in which Sappi is mitigating climate change?

Our efforts to reduce our own carbon footprint are evident in the fact that over 53.9% of our global energy use is

derived from renewable rather than fossil fuel sources. This is important, as the burning of fossil fuels releases 'new' CO₂ previously locked up in the earth's crust in the form of oil, gas or coal. When renewable energy like biomass is burned, the CO₂ released is equivalent to that which was bound from the atmosphere during the process of photosynthesis – so, no 'new' carbon is being introduced.

Our aim is to enhance energy self-sufficiency, improve energy efficiency and decrease our reliance on fossil fuels. We are achieving this by making process changes, installing Best Available Technology (BAT) which is more energy-efficient, reducing purchased energy (electricity and fossil fuel) by increasing our use of renewable energy – an approach that ultimately results in a reduction in CO₂ emissions.

Since 2000, when we instituted a system for measuring greenhouse gases (GHGs) based on the premise of measure, monitor, manage and mitigate, one of our key strategic goals has been to reduce our carbon footprint by improving energy-use efficiency and decreasing our reliance on fossil fuels.

Sappi figures quoted are for FY2022.