

UN SDG Goal 13: Take urgent action to combat climate change and its impacts

Integration of climate goals in national policies, facilitate transition to a low carbon economy.
Calls for a massive global collaborative effort to arrest global warming.

Paris Agreement

To limit global warming to 1.5°C means that carbon emissions need to fall by 45 per cent by 2030 from 2010 levels and continue at a steep decline to achieve net zero emissions by 2050.

As of May 2019, 186 countries have ratified Paris accord and declare NDCs (Nationally determined contributions). 183 countries have declared their first level of NDCs. UN has asked all countries to take stronger goals and update the NDCs by 2020 as the current NDCs are not enough to reduce global warming.

To Achieve a 1.5 to 2 Deg C increase by 2050, all the countries must become carbon neutral.

This means that combined impact of all the human activities should be carbon neutral.

India pledge

- 33% reduction of emission intensity below the 2005 level of GHG emissions by 2030
- 40% energy from non-fossil fuel by 2030
- Create carbon sink for 2.5- 3 Gt of CO₂e (forest growth).

Handles for reduction in GHG emissions

- Transition to low carbon economy by moving away from fossil fuel based fuels and adapting the cleaner energy.
- Use of Circular Economy principles (reuse, recycling, or replacement of products). Keeping material in loop as much as possible and reducing waste generation.
- Improve efficiency of existing processes and save energy. Adapting the newer technologies which are more efficient.
- Responsible Consumption – the natural resources should be responsibly consumed
- Growing forest cover – forests are the largest sink for carbon emission and a positive growth of forest cover will help neutralize impact of carbon emissions.
- Capture the CO₂ emitted and store Carbon Capture and Storage (CCS) or Utilization (CCU)

Textile industry contributes to 8% of the total GHG emissions and has a large impact on the global warming.

	%	MILLION METRIC TONS CO ₂ eq
Apparel	6.7%	3,290
Footwear	1.4%	700
Total apparel & footwear impacts	8.1%	3,990
Compared to:		
Total global CO ₂ eq impacts	100%	49,300

There is large GHG emission due to fossil fuel based raw materials, energy used in producing the fibers, processing the fabrics and making the garments and its supply chain.

Birla Cellulose Carbon Strategy

Viscose is a Sustainable choice for Textile applications when it is produced responsibly.

Viscose is produced from wood which is natural and renewable, sourced from sustainably managed forests. Well managed forest plantations serve as carbon sinks, pulling CO₂ from the atmosphere at a greater rate than older forests. Once this wood is harvested, the wood pulp is converted to viscose fibers, therefore creating long term storage of the carbon. **Birla Cellulose has been ranked No 1 in the latest Hot Button Report by organization Canopy Planet, which ranks viscose producers on the sustainable wood sourcing policy and development of circular technologies for recycling the textile wastes.**

Birla Cellulose uses the closed loop manufacturing technologies which recover and recycle chemicals, energy and water, to reduce the consumption of raw materials and with minimal impact on environment. Viscose is also fully bio-degradable in soil, water and marine bodies, and it does not create pollution of land and water unlike the fossil fuel based synthetic fibers which are based on not renewable and bio-degradable.

Also the progressive producers of cellulosic fibers have been able to recycle pre and post-consumer textile waste are now and this is a great development enhancing the end to end circularity of the industry

Birla Cellulose is First Viscose Producer to be Carbon Neutral

Total Scope 1 and Scope 2 GHG emissions were found to be 3.22 Mt CO₂e, and the total net sequestering was 3.44 Mt CO₂e at forests directly managed by Birla Cellulose, completely offsetting Scope 1 and Scope 2 emissions. The data of the Financial Year 2019 (Apr 2018 to Mar 2019) was used to conduct the evaluation. The GHG emissions evaluation includes all 12 Birla Cellulose sites, including 5 pulp plants (3 in Canada, one in Sweden and one in India) and seven fibre plants (4 in India, one each in Indonesia, Thailand and China). The evaluation was done through the Greenhouse Gas Protocol Initiative standard, and the carbon sequestering was evaluated via the IPCC (Intergovernmental Panel

for Climate Change) guidelines. Birla Cellulose have engaged Ernst & Young (EY), India for the assurance of the GHG emissions evaluation.

Birla Cellulose 1st to do Scope 3 Evaluations in MMCF industry

Birla Cellulose is the first in MMCF industry to do the scope 3 greenhouse gases which were a part of this very comprehensive exercise using GHG Protocol Corporate Value Chain accounting and reporting standards (Scope 3). The Scope 3 included purchased goods and services, fuel and energy related activities, upstream transportation and distribution, waste generation in operations, business travel, and downstream distribution. The total scope 3 greenhouse gases were evaluated to be 2.01 Million tCO₂e for Birla Cellulose.

There are five pillars of Birla Cellulose strategy to Manage its GHG footprint and continually reduce it:

1. Use of sustainable forest and net positive growth of owned managed forests
 - a. Carbon Sequestering in directly managed forests (2.44 MT CO₂e) totally offsets scope 1 and scope 2 emissions (2.2 MT CO₂e)
2. Reduce the specific GHG emissions of MMCF production by:
 - a. Use of Renewable Energy
 - i. Pulp plants use 83% to 93% renewable energy from non-fossil sources
 - ii. Increase in use of renewable energy going forward
 - b. Upgrade plant to the latest energy efficient technology
 - c. Continuous Reduction in specific power and sp. steam consumption
3. Apply Circular Economy Principles in all its operations
 - a. Recover and recycle the raw materials to reduce the fresh use of natural resources.
 - b. Recovery and reuse of Sulfur to as much as 90%.
 - c. Reduction of use of key raw materials such as Caustic, Zn, and CS₂
 - d. Recycling of pre and post consumer waste – newly developed technologies to put waste carbon in use. Upto 20% recycling is already achieved, target is 50% by 2020.
 - e. Reduce waste generation and use of waste in alternative application
4. Product Portfolio transition towards eco-enhanced range of products.
5. Collaborate with value chain partners for reduction of Carbon foot print in the upstream and downstream textile value chain.