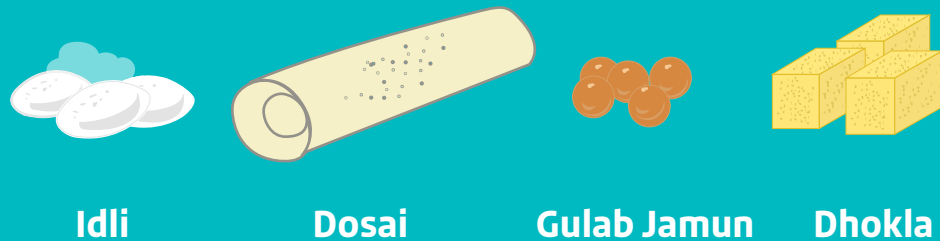


# Gits Food product life cycle assessment case study

Product Life Cycle Assessment was undertaken during 2014 by cBalance Solutions Pvt Ltd for Gits Food Products Pvt Ltd in order to assess and optimise carbon footprint of Gits' products and to map out the next steps in reducing Gits' ecological footprint. Such assessments are useful in measuring products' overall contribution to more sustainable business practices by enabling understanding of the environmental impacts of a food product throughout every stage of its life (from "cradle to grave"). This study also aims to establish environmental benchmarks for the food-focused studies in the future.

Gits Food was established in 1963 and has pioneered the convenience packaged food segment in India. The company is amongst the first food product manufacturing companies in India to have obtained ISO 9001 – 2008 (Quality Standard) and ISO 22000 (Food safety).

The firm has already differentiated itself through quality products and local credentials, and is now looking to integrate sustainability within its operations. 'Gulab Jamun', 'Khaman Dhokla', 'Idli' & 'Dosai', representing a popular consumer choice world-over, were chosen for the life cycle assessment (LCA) study.



Idli

Dosai

Gulab Jamun

Dhokla

The scope of work included review of the following life cycle stages of product's life:



## Assessment alignment with major Protocols and external Verification

The LCA study was conducted in line with the GHG Protocol Standard, and was subject to external expert review by Best Foot Forward Consultancy, part of Anthesis Group.

## Identifying carbon “hotspots” of the 4 products’ average total life cycle emissions

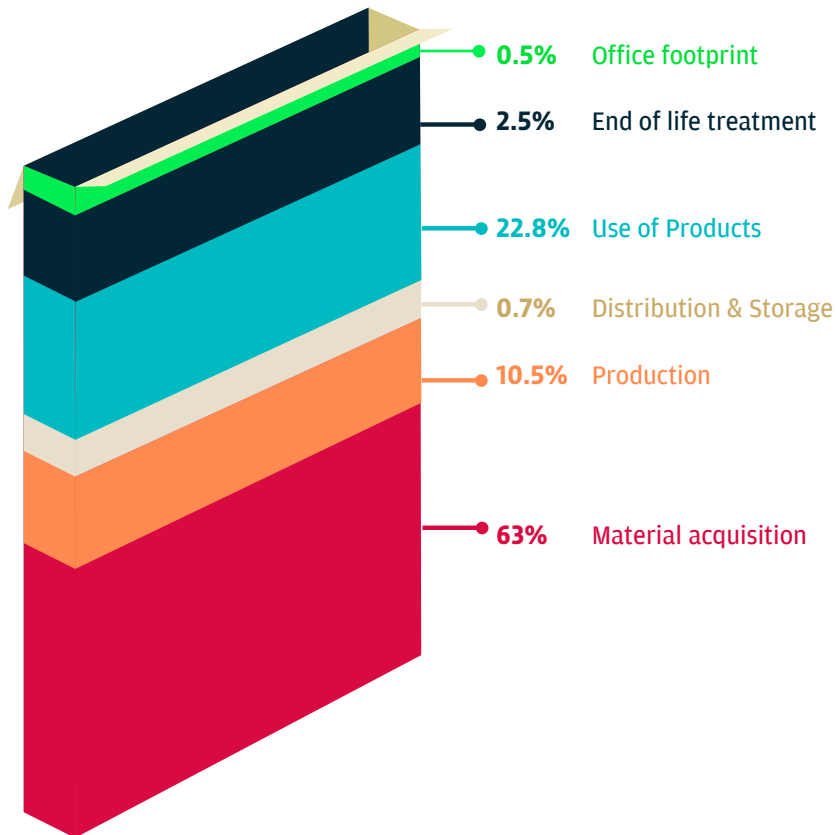
The “hotspot” in carbon footprint is at the raw material acquisition stage (**63% on average of total product life cycle footprint**), which includes procurement of raw materials, such as milk, rice, carton and other raw materials.

In line with the Greenhouse Gas Protocol classification it also includes emissions from delivery of raw materials from suppliers, and marine and road distribution for export.

Distribution & Storage comprises road shipment from warehouses to retail outlets. As the raw materials contribute the most in terms of carbon footprint, this is identified as the area of focus of future carbon reduction efforts.


Average Greenhouse Gas (GHG) emission per packet of product:  
**648 gms\***

Average GHG emissions per kg of each product is  
**2.53 kg**




\*based on the data FY 2013-2014


## Subsequent proposed steps include:



Internal training workshop to engage employees and the suppliers on issues related to sustainability and reduction of ecological footprint through sustainable operations and food sourcing practices



Engage in smart consumer communication on the study, conveying on what can be done individually at home to reduce the footprint

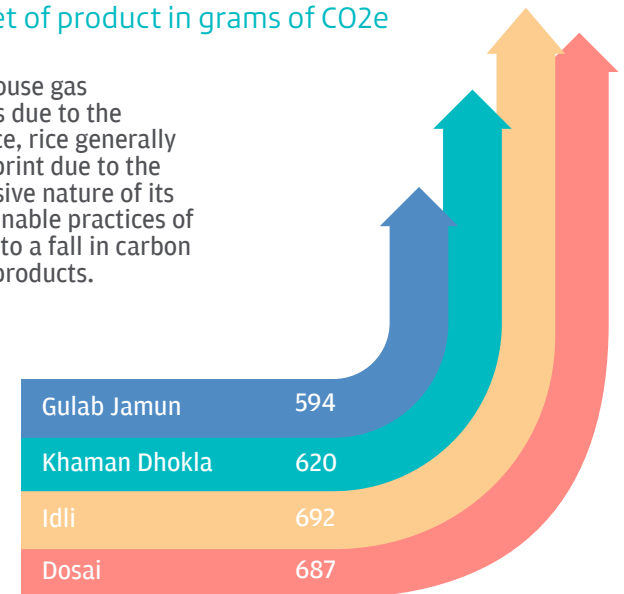


Industry-wide events to promote environmental awareness from food suppliers to manufacturers

## Products’ Greenhouse Gas emissions

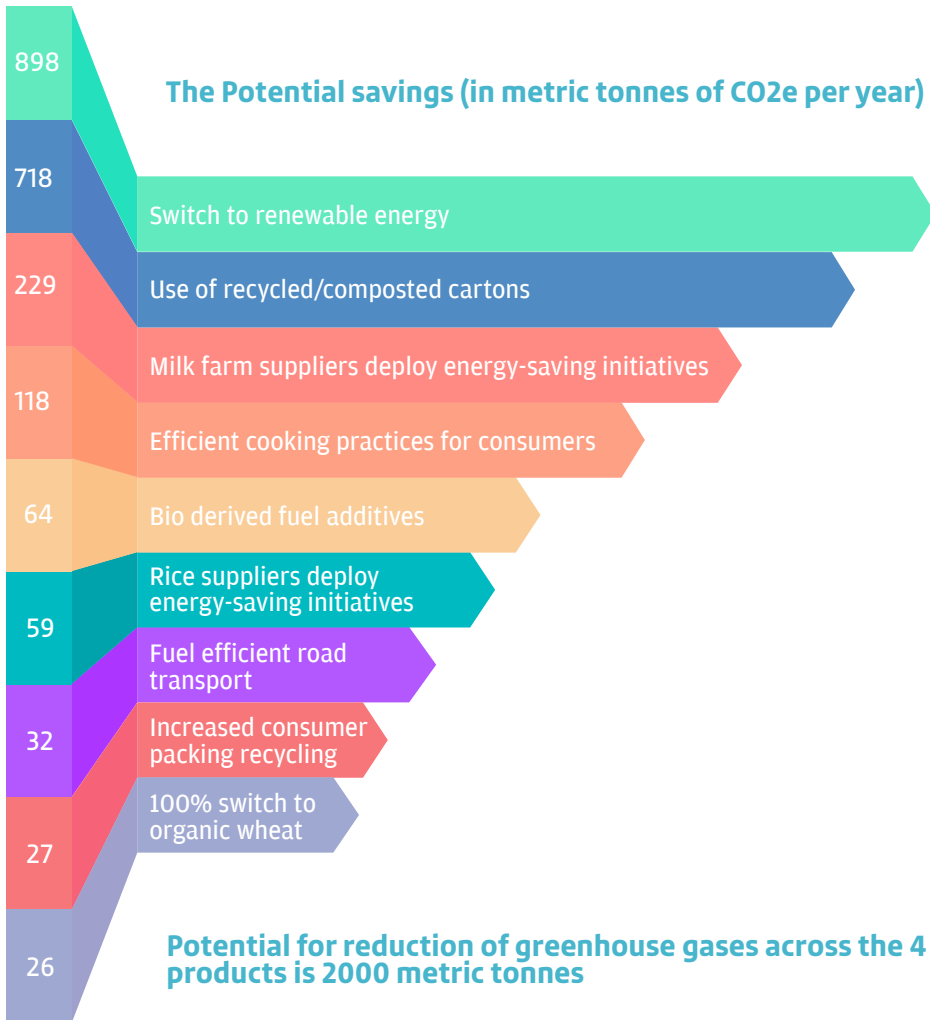
Emissions per packet of product in grams of CO<sub>2</sub>e

The variation in greenhouse gas emissions per product is due to the composition, for instance, rice generally has a large carbon footprint due to the energy and water intensive nature of its production. Thus, sustainable practices of rice producers can lead to a fall in carbon footprint of rice-based products.

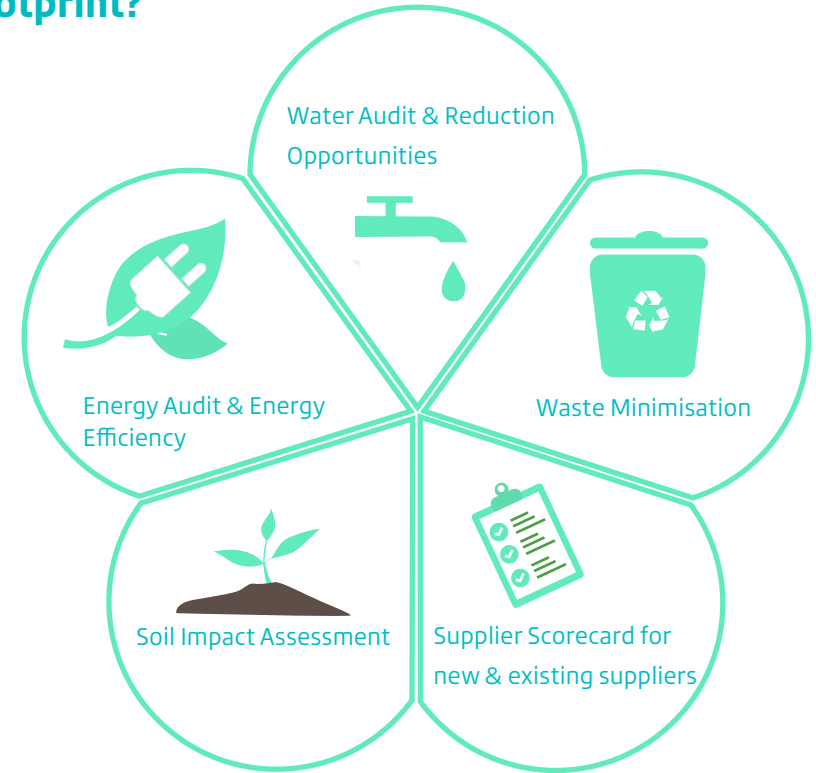


## What is the solution?

Many opportunities exist for food manufacturers to reduce their carbon and overall ecological footprint. Some of the recommendations include switching to renewable energy supply, collaboration with milk farmers and implementation of energy efficiency solutions at their farms, encouraging consumers to use efficient cooking practices, switch to bio-derived fuel additives in vehicles and increasing use of fuel-efficient vehicles overall.



## How can a company reduce its overall ecological footprint?



## A business can leverage the product life cycle assessment outcomes:

- 01 to increase focus on areas of carbon footprint reduction, through internal operational practices, collaboration with suppliers and customer communication
- 02 to acknowledge business's eco credentials through an ecolabel certification (for example, with the Green Signal) and external party assurance
- 03 to spread the message across the industry through stakeholder events and workshops
- 04 to embark on a benchmarking exercise against similar products in India and internationally, providing consumer with objective data on businesses' eco practices