



GHG Emission Reduction: CO₂ Reduction

Tosca Reusable Solutions



Reusable packaging Reduces emissions in more ways than one

What generates GHG emissions?



Greenhouse gas (GHG) emissions are produced when packaging is manufactured, transported and recycled or disposed of to landfill. But GHG emissions also come from damaged food which has to be replaced and possibly disposed.

Eliminating packaging, reducing the volume required, using the right size and ensuring protection of the contents all leads to emissions reduction!

REUSE is the only true way to reduce your packaging emissions

Calculating GHG Emissions

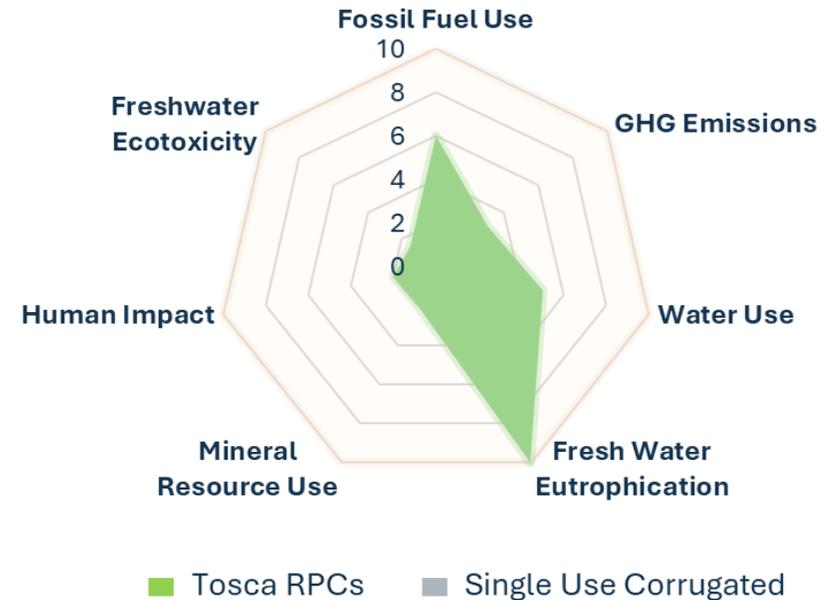
Working out how you impact the environment can be very complicated.

One way is to assess your operations or your products using a LifeCycle Assessment (LCA) approach.



We perform detailed, customer specific LCAs – the only provider to do so!

Environmental Impact Analysis



We perform a detailed LCA on the actual packaging services we perform for you, to determine the GHG emissions from start to finish, cradle-to-grave: meaning from raw material extraction all the way through final disposal, including transportation of raw materials and through the life of the product and the impacts of using the product.

Tosca LCAs

We perform 'comparative' LCAs.

Comparative LCAs compare the environmental impacts associated with the manufacture, transportation, use and end of life of our products vs an alternative form of packaging.

Our LCA Software is Ecoimpact: a Trayak product.

It is specifically designed to compare packaging types. It is ISO 14040 and 14044 conformant and endorsed by the Sustainable Packaging Coalition.



Fossil fuels used in the packaging, its manufacture, transport, recycling and disposal

Greenhouse Gas Emissions (CO₂e)

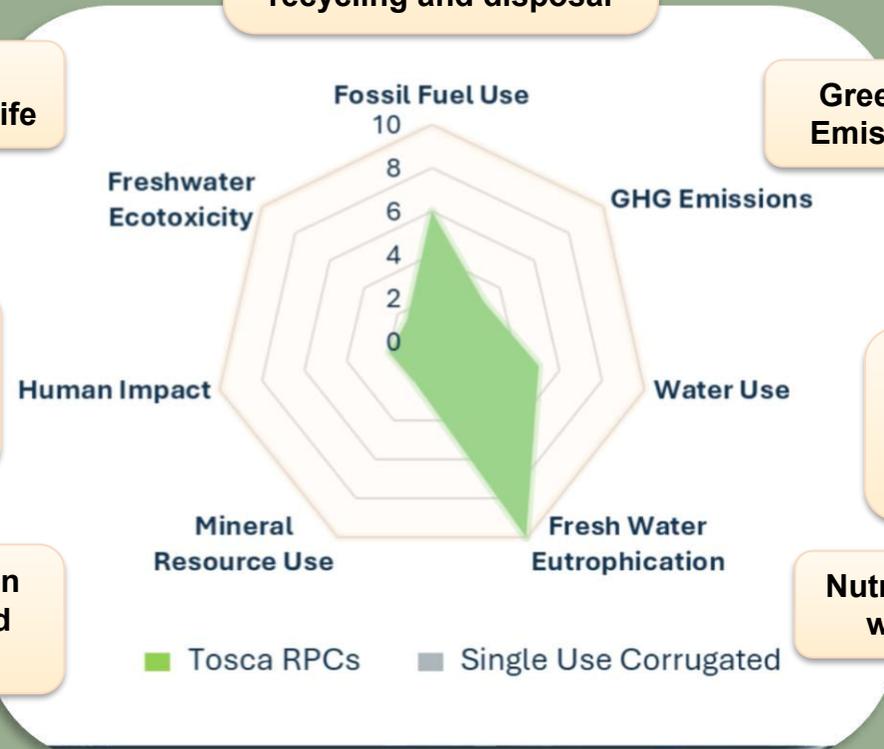
From water used in manufacture to water used in washing

Nutrient overload in water systems

Toxicity of the material to water life

Effects on human health from the materials used and processes involved

Use of minerals in manufacture and recycling



Calculating Footprints

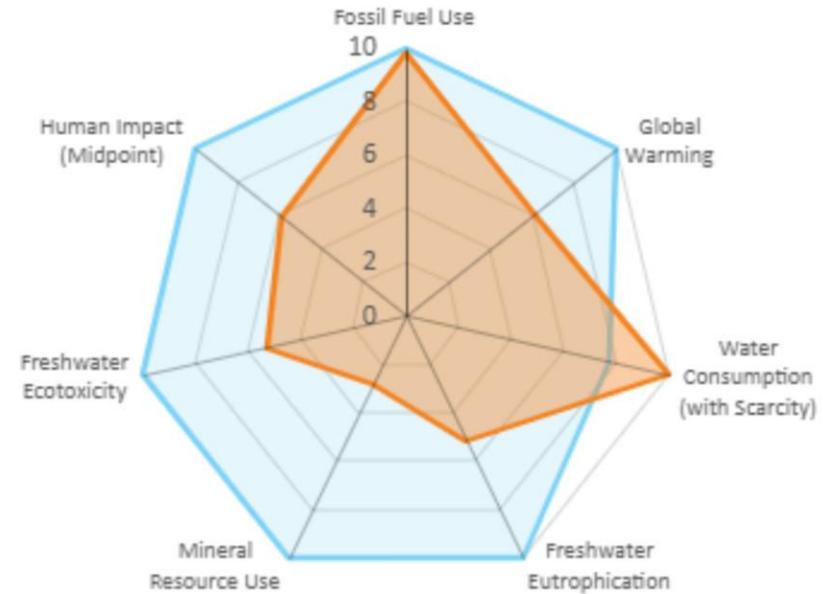
Footprints vary based on the weight of the asset, virgin material used, amount of recycled content, miles travelled and cube efficiency.

The more specific the data the more accurate the LCA.



LCAs are not all the same and you need to pick the right method for the purpose

■ Wooden pallet
 ■ Tosca pooled plastic pallet



An LCA evaluates the environmental impacts of a product from cradle-to-grave: meaning from raw material extraction all the way through final disposal, including transportation of raw materials and through the life of the product and the impacts of using the product.

Reduce your Emissions with RTPs

By presenting a stronger, reusable, more cube efficient and food protective alternative to single use corrugated, RTPs improve the sustainability of a supply chain by reducing overall GHG emissions.

While recycling is better than nothing, recycling doesn't reduce your overall emissions footprint!



60%

Reduction in Carbon Emissions



50%

Reduction in Food Waste



100%

Of Tosca Reusables Recycled at End-of-Life

>6%

More merchandize per truck

50%

Less refrigerated space required

50%

Less water used than corrugated boxes

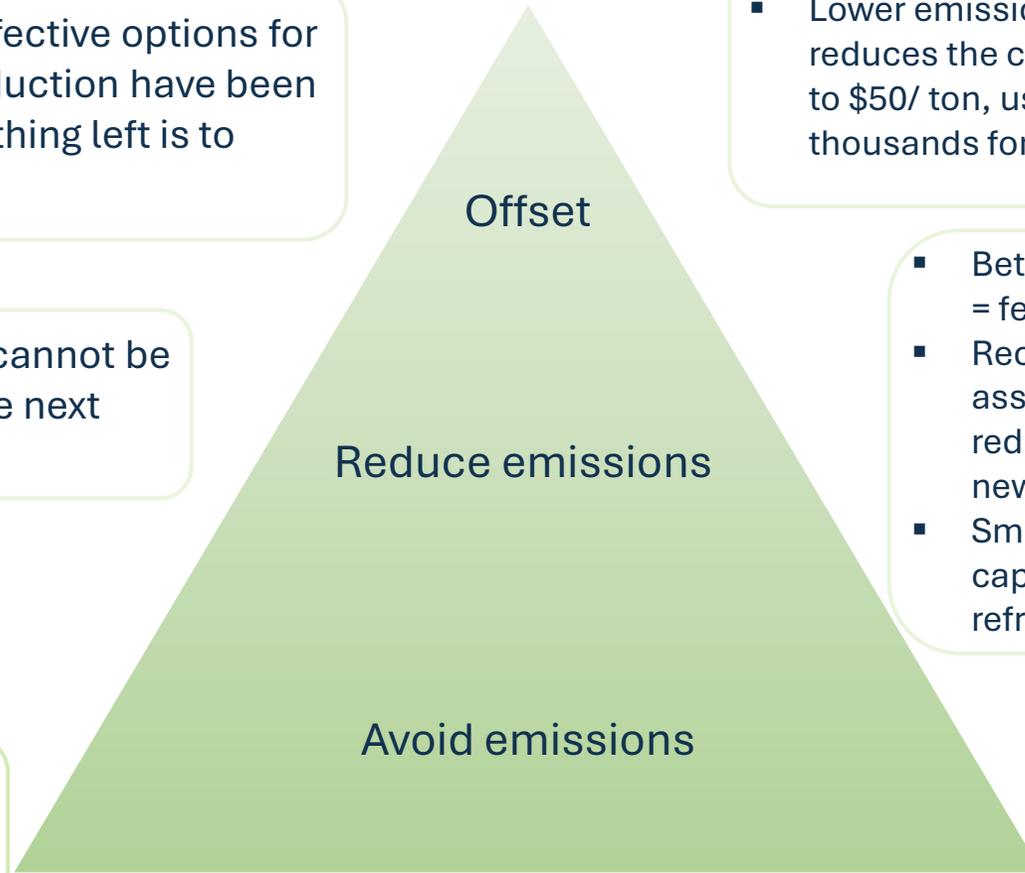
ZERO

Assets in our control to landfill

>30% Recycled material content up to 100% for our Circular pallet

Net Zero Objective

Avoid, Reduce, Offset



Once the most cost-effective options for GHG elimination or reduction have been implemented the only thing left is to offset emissions.

Where GHG emissions cannot be avoided, reduction is the next best thing.

The most cost-effective approach is to avoid sources of GHG emissions in the first place.

- Lower emissions all along the value chain reduces the carbon offset needs. At anything up to \$50/ ton, using RTPs can save hundreds of thousands for businesses every year.

- Better sizing = better cube efficiency = fewer trucks = fewer transport related emissions.
- Recycling of end-of-life plastic assets back into new assets to over 30% recycled content on average reduces the emissions from the manufacture of new RTPs.
- Smaller space requirements due to better stacking capabilities plus ventilated design of crates = less refrigeration space required.

- Reusable packaging eliminates the emissions from repeated manufacturing of single-use systems.
- Reduced food damage removes the need to replace lost food = avoids the emissions from replacing that food.



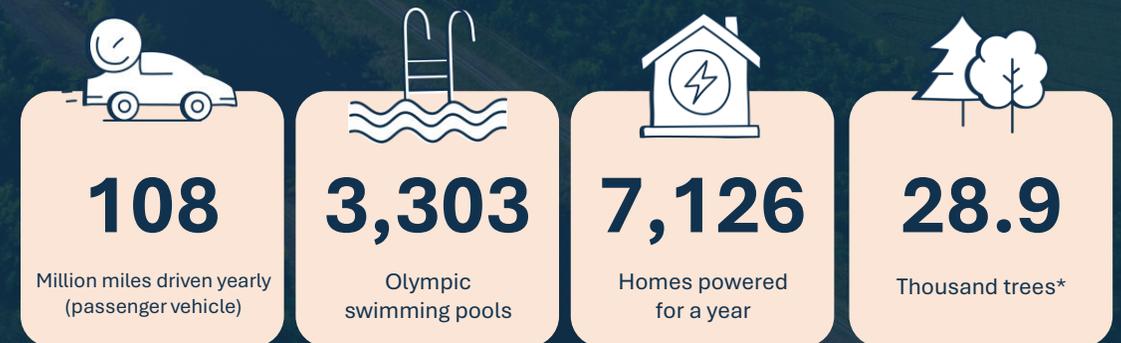
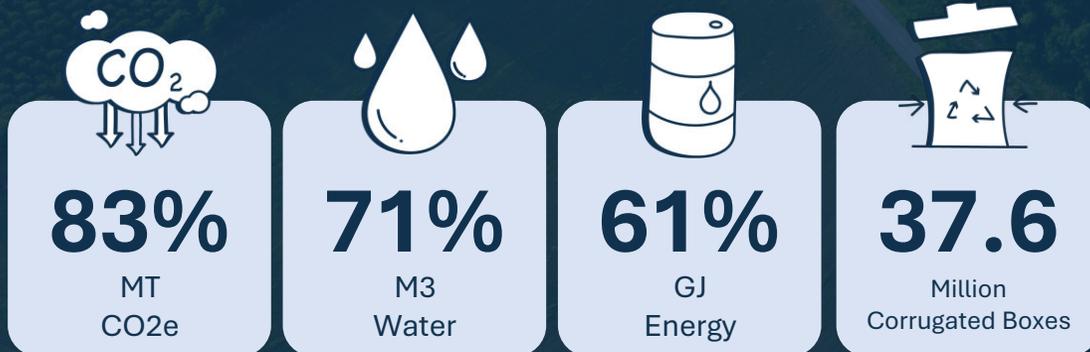
2025 Sustainability Certificate

Together we are revolutionizing the flow of goods through the supply chain, eliminating waste at every turn

An example of our annual sustainability report with data you can use for your Annual Sustainability Report or internal communications

By using Tosca's RPCs compared to single-use Corrugated boxes you have achieved the following reductions^....

and saved the equivalent of....



^Environmental savings are calculated using the Ecolmpact LCA software and activity related data held by Tosca


Global Head of Sustainability

*based on 50% recycled content of corrugated boxes



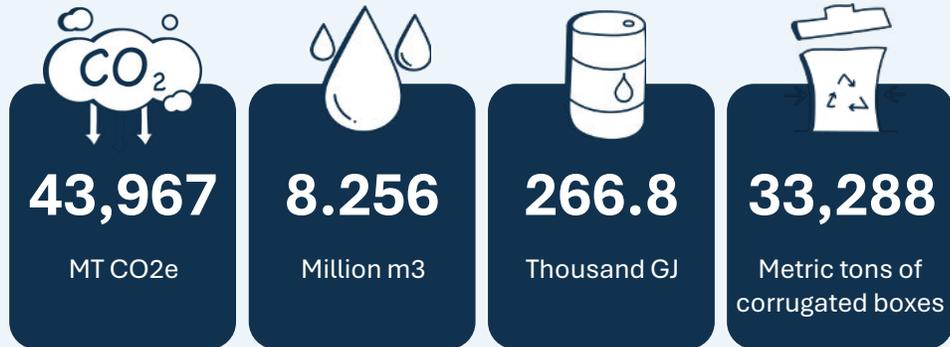
Sustainability Report

Together we are revolutionizing the flow of goods through the supply chain, eliminating waste at every turn

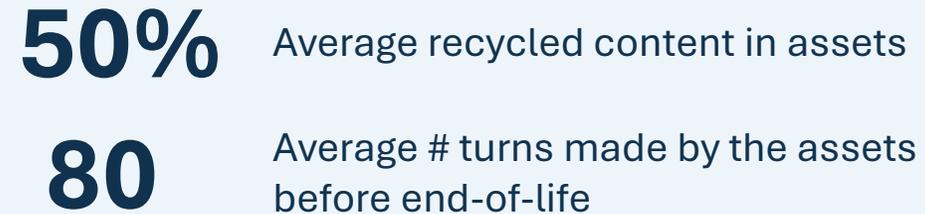
An example of our annual sustainability report with data you can use for your Scope 3 Reporting

Your scope 3 GHG emissions[^] associated with Tosca's services = **8,897 metric tons CO2e**
VS
GHG emissions[^] you would have emitted using corrugated boxes = **52,864 metric tons CO2e**

In partnership, we have saved...



Assets within Tosca's control are 100% recycled at end of life



Global Head of Sustainability

[^]Environmental savings are calculated using the EcoImpact LCA software and activity related data held by Tosca

Reusable packaging means less manufacturing than single-use packaging

Recycled content = less emissions from virgin material production

Better protection minimizes food damage and emissions from replacing lost food

Reduced refrigerated space reduces greenhouse gas emissions

Fewer trucks needed means less miles means less emissions

Fewer carbon credits require purchasing

Benefits of RTPs On Total Cost of Packaging

CO₂e emission reduction is a key part of the TCOP.

Our 2030 Goals

GHG Emissions

- **Achieve Net Zero by 2050**
- **42% reduction in Scope 1 and 2 absolute emissions from a 2021 baseline**
- **42% reduction in Scope 3 absolute emissions from a 2024 baseline**



Learn more about Emission Reduction



Navigating sustainability:
Reusable transport packaging
solutions



Replacing EPS foam: The
problem in seafood shipping



Limiting single-use plastics



Tosca's new partnership with Avery
Dennison to save up to 800 tons of CO2
emissions from Avery Dennison's European
supply chain annually



Case study: Tosca RPCs
reduce time and emissions for
premium chicken supplier
Fieldale Farms



Optimizing your supply
chain with collapsible
bulk containers