

## TEAKDECKING SYSTEMS®

Innovative solution: GreenTeak

November 2024

### Introduction

This study—part of a larger Water Revolution Foundation project to evaluate sustainable supplier solutions in the yachting industry—compares the environmental impacts of two yacht decking materials: conventional natural teak decking (Scenario 1, Business as Usual) and GREENTEAK, an alternative by TeakDecking Systems (Scenario 2). The goal is to assess whether GREENTEAK’s plantation-sourced teak decking provides better environmental performance than the forest-harvested teak option. This document offers a brief summary of the LCA study.

### Approach & Data

The LCA was conducted in accordance with the ISO 14040 and ISO 14044 by ALEA Design (Università di Modena e Reggio Emilia) with third party review from TETIS Institute SRL (University of Genova spin-off). The analysis is based on primary data from TeakDecking Systems, including raw material sourcing, manufacturing processes, energy consumption and waste. Supplementary data, such as regional energy mixes, transportation distances, and fuel types were modelled with Ecoinvent database and the SimpaPro 9.5 software.

### Functional Unit

The functional unit is defined as 1 m<sup>2</sup> of finished and installed yacht decking

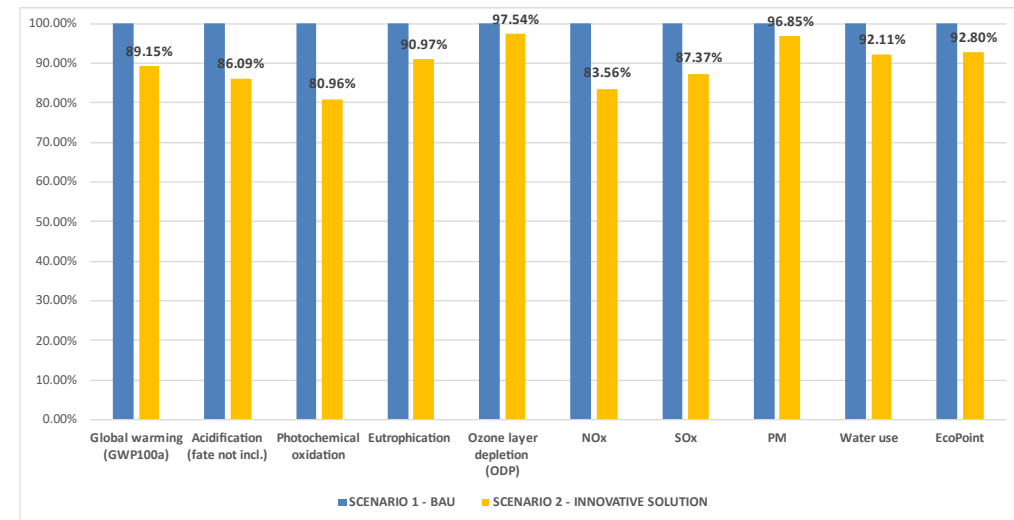
### System Boundary

The LCA evaluates three life cycle stages for both scenarios: upstream(extraction and initial processing and transport), core(manufacturing and packaging) and downstream(transport, installation, maintenance and disposal).

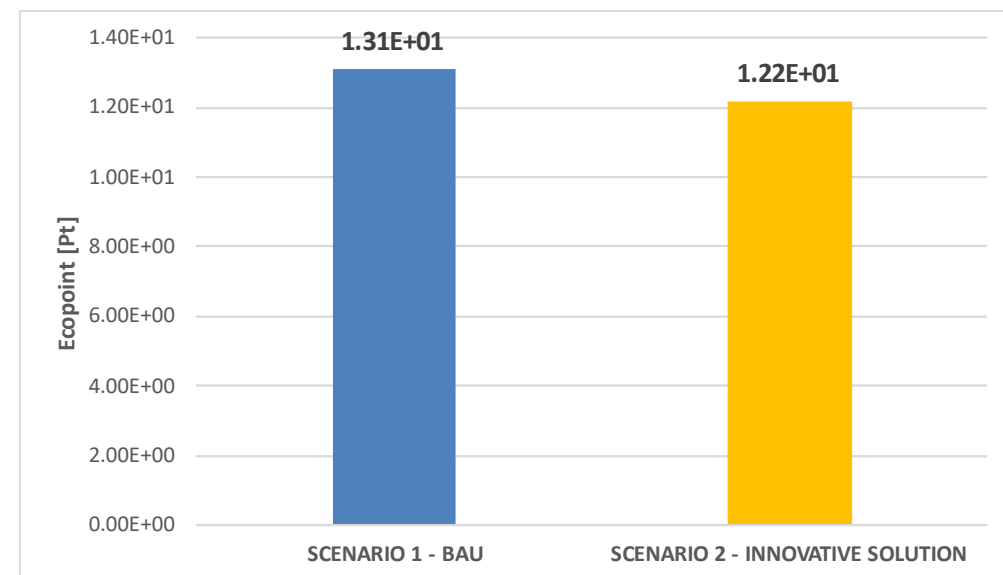
### Conclusions

The LCA results indicate that GREENTEAK consistently achieves lower environmental impact across all categories evaluated. Compared to forest-harvested teak, GREENTEAK’s plantation-sourced teak impact are reduced by **2.46% to 19.04%**, particularly in Global Warming Potential (GWP), Acidification Potential (AP) and Photochemical Oxidation. The Ecopoint, summarising overall environmental impact, is **7.2% lower** for GREENTEAK. These reductions are attributed to GREENTEAK’s streamlined production process, plantation-sourced material, and optimised waste management, which collectively yield efficiency improvements across energy, material and emissions.

## LCA Impact Category Results (Business-As-Usual vs GREENTEAK)



Comparison between the results of Scenario 1- Yacht with traditional teak decking (BAU) and Yacht with GREENTEAK decking (Innovative Solution). The results are expressed in percentage.



Summary of the single score (Ecopoint) assessed scenarios. Scenario 1 is business as usual (yacht with traditional teak decking), and scenario 2 is the innovative solution (yacht with GREENTEAK decking). The higher the Ecopoint value, the higher the potential environmental impact.