Ballast project: transporting Perrier brand products by rail

The rehabilitation of railway infrastructures and the construction of a multimodal platform at the Perrier plant in Vergèze allows the Perrier brand to achieve a modal shift from road to rail for the transport of its products to the port of Fos-sur-Mer and thus reduce the associated CO2 emissions.

Starting date of the project	October 2018
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	The Ballast project was born in the Occitanie region, within the framework of the rehabilitation of a rail line linking the Perrier plant, in Vergèze, and the port of Fos-sur-Mer, near Marseille, over a distance of approximately 100kms. The conversion from road to rail transport can be replicated in other geographical areas.
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	The project aims to **reduce the CO2 emissions linked to the transport of the Perrier brand** by exporting its products by rail rather than road. At the same time, the project **relieves the road congestion** between the Perrier factory in Vergèze in the Gard department and the Port of Fos-Sur-Mer in the Bouches-du-Rhône department, over a distance of approximately 100kms.
Detailed project description	Through Ballast, Perrier is responding to more global issues. Last July, the brand committed to achieving carbon neutrality by 2022. This neutrality is one of the components of the Nestlé Group's commitment to reach net zero emissions by 2050 in compliance with the Paris agreements. As **transport accounts for around 39% of the Perrier brand's emissions*,** Ballast is therefore part of the group's efforts to reduce emissions. The relaunch of the rail line between the industrial site of Vergèze (Gard) and the port of Fos-sur-Mer (Bouches-du-Rhône) enables the Perrier brand to transport 70% of its maritime exports by rail, i.e. nearly 13,500 containers per year. As a result, the Ballast project is having a positive impact on reducing the brand's carbon footprint by switching from diesel trucks to an 80% electric train, reducing Perrier's dependence on oil. This process also improves the traffic flow. The Ballast project has a positive impact on urban areas by relieving congestion on the roads linking the plant to the port of Fos-sur-Mer, an area that is particularly saturated between Monday and Friday. * *The three main categories that make up Perrier's carbon footprint are logistics (including transport) at 41%, packaging at 41% and manufacturing at 12%.*
Main project's drivers for reducing the greenhouse gas emissions	

Reduction levers	**Details on the aspects of the project**
☐ Energy and resource efficiency (including behaviour)	
☒ Energy Decarbonisation	Modal shift from road to rail for freight transport
☐ Energy efficiency improvements	
☐ Improving efficiency in non-energy resources	
☐ Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)	
☐ Financing low-carbon producers or disinvestment from carbon assets	
☐ Reduction of other greenhouse gases emission	

Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope	**Aspects of the project contributing to the reduction**	**Quantification of associated GHG emissions by emission category**

	of emissions by emission category	Please follow the quantification methodology used in the Afep guidelines.
Reduction of the company's carbon dependency		
Scope 1 *Direct emissions generated by the company's activity.*	Modal shift from road to rail for freight transport	-2,2 ktCO2eq/year
Scope 2 *Indirect emissions associated with the company's electricity and heat consumption.*		
Scope 3 *Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.*		
Increase of carbon sinks		
Emissions Absorption *Carbon sinks creation, (BECCS, CCU/S, …)*		
GHG emissions avoided by the company at third parties		
Avoided Emissions *Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects*		

Clarification on the calculation or other remarks:
Based on the operational data below, the Ballast project makes it possible to move from an initial situation of road transport via 44T lorries loaded to 24T, making the Vergèze-Fos-sur-Mer journey and consuming an average of 31.77 litres/100km to a rail flow over the same distance.

297 570.0 tonnes
256 294 800 litres transported
12469 trucks
90 km distance
50% average empty distance rates

The calculation of the emissions associated with this road transport flow consists of multiplying the litres consumed (713,068) by the emission factor for diesel fuel (3.16kgsCO2/litre) and dividing the result by 1,000 to obtain tCO2eq. This brings us to 2,253.29tCO2eq

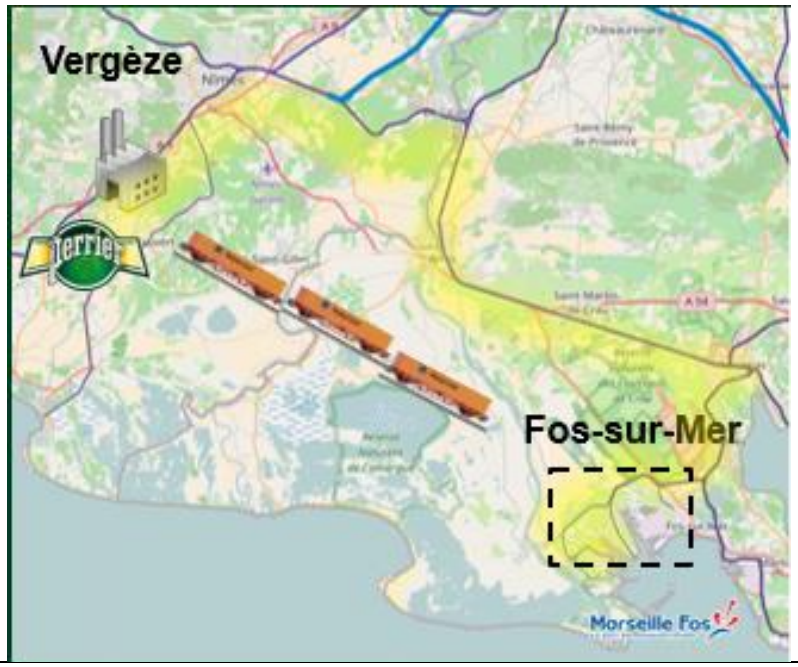
The calculation of the emissions associated with the rail flow consists of multiplying the tonnes / kms (31,270,140) by the rail emission factor in gco2 / t.km (1.67Gco2 / t.km) and dividing the result by 1 000 000 to obtain tCO2eq. This brings us to 52.22tCO2eq.

In the end, 2,201 tCO2eq were avoided by switching from road to rail transport.

Modality of verification of the quantification.	**Calculation standard used (ADEME base, GHG protocol, etc.):** Base ADEME **Verification of the calculation (internal or external):** The environmental consultancy CPV has quantified the emission reductions achieved as part of the Freight 21 programme.

Other environmental and social benefits of the project	The project responds to SDG 7 "Affordable and Clean Energy", by reducing dependence on diesel, switching from trucks to 80% electric train journeys. It responds to SDG 9 "Industry, Innovation and Infrastructure", by innovating and investing in greener and more sustainable transport modes. The project responds to SDG 11 "Sustainable Cities and Communities", by relieving road congestion between the Vergèze plant and the Port of Fos-sur-Mer, but also by reducing transport-related noise pollution by 10-15% for the local population. Finally, we are responding to SDG 12 "Responsible Consumption and Production" by reducing the environmental impact of our products, since the volumes now transported by train represent 43%* of the global volumes of the Perrier brand. ** According to the LCA study conducted by RDC on 2018 volumes.*
Project maturity level	☐ Prototype laboratory test (TRL 7) ☐ Real life testing (TRL 7-8) ☐ Pre-commercial prototype (TRL 9) ☐ Small-scale implementation ☒ Medium to large scale implementation **Remarks:** Deployment completed.
Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential	Nestlé is committed to reducing its GHG emissions to achieve net zero emissions by 2050. Following on from the 'Ballast' project, Nestlé Waters has undertaken other projects. For example, in 2019, Vittel (a Nestlé Waters brand), in partnership with VFLI (a subsidiary of the SNCF), replaced a train running on diesel over a distance of 600kms between the Vittel factory in the Vosges and Arles with the first European dual-mode hybrid train EURODUAL, which makes almost all of its journey in electric mode (565kms) These various projects are in line with the government's desire to increase the share of rail freight in France, reaffirmed last July. Ballast was created in barely a year, a record for a project of this scale. The conditions for this success are reflected in the seamless collaboration between private and public actors.
Amount of investment made (in €)	Nestlé Waters invested 2 million euros in the Ballast project. The Occitanie region also contributed with a financial support of 200,000 euros. The project has enabled the rehabilitation of the railway infrastructure and the construction of the multimodal platform.
Economic profitability of the project (ROI)	☒ ST (0-3 years) ☐ MT (4-10 years) ☐ LT (> 10 years) **Remarks:** The tonnes of CO2 saved through the Ballast project represent avoided carbon credit costs in achieving Perrier's carbon neutrality in 2022. In addition, the rising cost of road transport has been a driver for the transition from diesel to electric which has allowed us to be less dependent in the short term.
Engaged partnerships	As part of this project, numerous partnerships have been set up with: • Perrier • Région Occitanie • SNCF Réseau/SNCF Infra • RégioRail • Amsted Digital Solutions • Arnal • Bolloré Logistics • Brifer • Combronde • Ermewa • Eurofos et Seayard • Grand Port Maritime de Marseille Finally, this project, carried out in partnership with the SNCF Réseau and other actors, has enabled investment in a more responsible and sustainable mode of transport that benefits everyone.
Open comments from the project owner	The Ballast project is an excellent example of territorial development and collaboration between private and public actors.
More about the project	

Contact the company carrying the project	Communication.Nw@waters.nestle.com
Project URL links	https://www.usinenouvelle.com/article/a-vergeze-perrier-re-fait-appel-au-train-pour-assurer-l-export-maritime.N757034 https://www.lantenne.com/Nestle-Waters-Vergeze-Fos-en-train-juste-retour-aux-sources-pour-Perrier_a44813.html
Illustrations of the project	  


Vergèze
Perrier
Fos-sur-Mer
Marseille Fos