

# Oiconomy Pricing - Real price of cocoa liquor from single origin beans, Sierra Leone



<b>Company</b>	Tradin Organic
<b>Location</b>	Amsterdam, The Netherlands
<b>Product</b>	1 ton of cocoa liquor
<b>Currency</b>	Euro
<b>Oiconomy Assessment</b>	<u>Oiconomy Sustainability Assessment Tool v2.04</u>
<b>Timeframe</b>	Data from 2021

**Case description** Tradin Organic is a Dutch B2B company, which sources, distributes, and processes organic food ingredients to the international food market. Within its wide product portfolio, the case is single origin, organic cocoa liquor, from cocoa beans which are cultivated by smallholder farmers, located in Sierra Leone. The cocoa beans are bought in from the smallholder farmers and processed in a factory owned by Tradin Organic and stationed in The Netherlands. Tradin Organic has several impact programs aimed at to improving the environmental and social sustainability of the cocoa supply chain but has not yet quantified the externalities associated with the product.

## Scope of assessment:

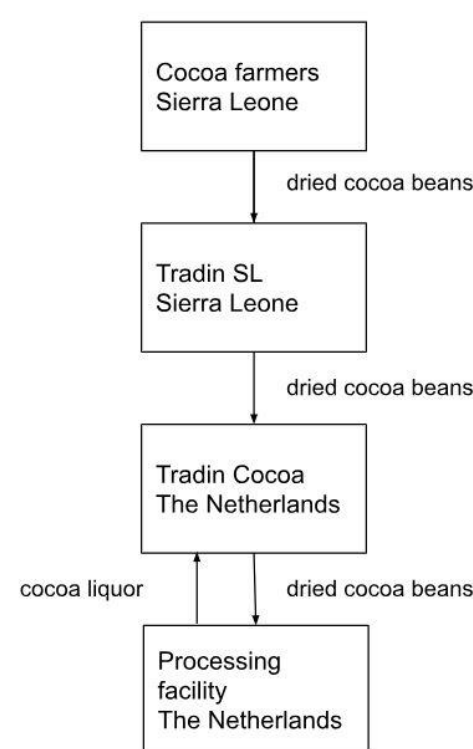


Figure 1: Scope of assessment: supply chain actors and outputs

## Total results

Hidden costs show what impact the product has on planet, people and prosperity, that are currently not reflected in the prices charged for the goods along the value chain. The impact can be negative or positive. The negative costs are based on costs of prevention, meaning the costs necessary to eliminate the negative impact. The total hidden costs of 1 ton of cocoa liquor are **€ 427,22** (Figure 2). The average sales price of 1 ton of cocoa liquor is **€ 4320,00** meaning the hidden costs are adding **10%** onto the sales price. Figure 3 displays the negative hidden costs per supply-chain partner.

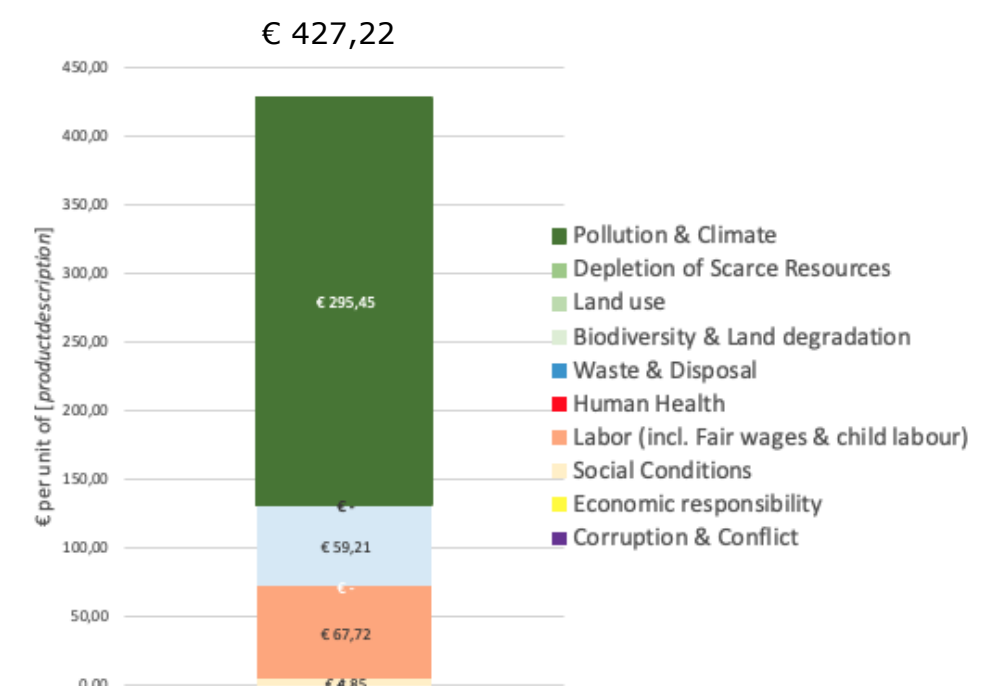


Figure 2: Negative hidden costs of 1 ton of cocoa liquor

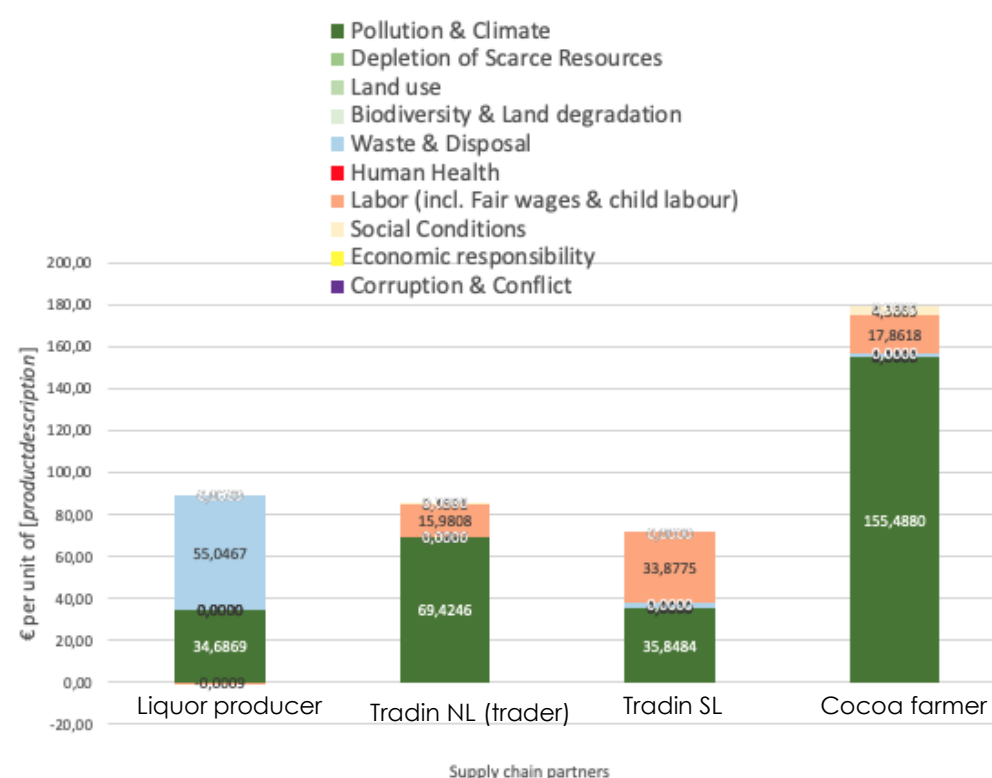


Figure 3: Negative hidden cost per supply-chain partner

from the category **Pollution & Climate**, connected to the CO<sub>2</sub> emissions of cocoa farming. Despite the lack of artificial fertilizers and agro-chemicals used, it still results in **€ 155,49** costs for the farmers. Furthermore, CO<sub>2</sub> emissions from the processing of cocoa beans into liquor is also present, resulting in the total cost of **€ 34,68** for the producer. Lastly, pollution costs concerning the transport of beans from Sierra Leone to The Netherlands, and then further to the international market, are also prominent, which results in **€ 35,84** and **€ 69,42** for Tradin Sierra Leone and Tradin Netherlands, respectively.



The second and third biggest cost categories are **Waste & Disposal** and **Labour**. Concerning the former, most costs, i.e., **€ 55,04**, are related to the residual steams in the processing facility. Regarding the latter, labor costs are connected to the risk of child labor in the cocoa farms, as well as the lack of investments on health insurance plans, resulting in **€ 17,86** costs for the farmers, but also **€ 15,98** related to inequality ratio between the likely highest and lowest paid salary for Tradin Netherlands.

Despite these hidden negative costs, this assessment also demonstrated the absence of negative impacts on various aspects, such as **Depletion of resources, Biodiversity & Land Degradation** and **Land Occupation**. These results are supported by several factors, such as minimum input needed for harvesting of cocoa beans, including the lack of artificial fertilizers, agro-chemicals and irrigation, as well as Tradin Organic's investments on agroforestry programs and the promotion of sustainable agriculture practices, focused on soil health and improvement. Additionally, under **Labour**, the assessment also shows that concerning **fair wages**, farmers get fairly remunerated for their products.



Figure 4: Photo of cocoa fruits

### Positive costs

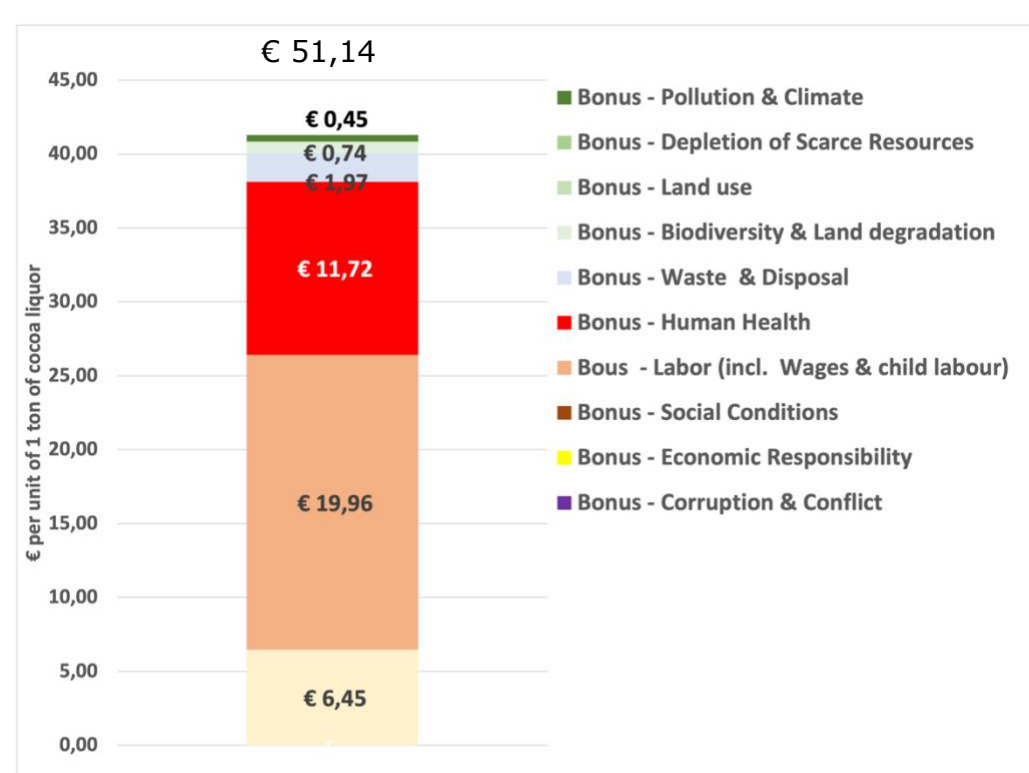


Figure 5: Positive costs of 1 ton of cocoa liquor

Besides negative hidden costs, positive costs were also calculated (Figure 5). Positive costs are based on actual company spending, benefitting others than the ones involved in the transaction. **Positive costs** of € 51,14 were found, mostly spent by Tradin Sierra Leone and Tradin Netherlands. Highlights of CSR programs include those focused on improving farmer communities' food security (under the category **Human health & Social conditions**), monitoring and addressing the root causes of child labor (under the category of **Labor**), promoting sustainable and regenerative agricultural practices and investing on farmers' technical skills, as well as agroforestry programs (under the category of **Pollution & Climate, Biodiversity & Land degradation**).

### Data specificity

Hidden costs are calculated as the sum of the quantity of an issue (performance data), and the costs to prevent the issue (prevention costs). Both performance data and prevention costs can be company-specific or generic database-sourced.

**Performance data** are measuring the sustainability performance of companies (e.g. kWh used). All value chain actors were able to complete the assessment using mainly company-specific data.

**Prevention costs** are data on the costs of sustainability mitigation measures (e.g. investing in solar panels). None of the value-chain partners were able to provide much company-specific prevention costs, as it takes time to make investment proposals to mitigate the impact. This should be a focus when the assessment is repeated. So, all prevention costs were calculated by used default value

### Company reflection

"Despite the complexity of the process, the results are practical and lead to a better understanding of where further corporate sustainability investments are needed. The required collaboration and transparency has given us a better perspective of the complexity of our value chains. The Oiconomy Tool has definitely helped us, although its user-friendliness needs improvement."

"Within Tradin Organic the results get shared with the management and will be made available to all staff, also in Sierra Leone. The responsible teams will determine interventions based on the results."

- Sustainability Manager

Utrecht University thanks Tradin Organic for their transparency and cooperation. More information is available online on the explanation of the Oiconomy Pricing [method and its principles](#), the Oiconomy Pricing [tool](#), and [examples of companies applying the method](#). For contact, please reach out to [oiconomy@uu.nl](mailto:oiconomy@uu.nl)

Disclaimer: this assessment was based on company data, but not independently verified.

Authors: Anne Floor van Dalfsen, Beatriz Daim, Pim R. Croes, Walter J.V. Vermeulen, Anna Walker

Date of publication: 11-09-2023

DOI: 10.5281/zenodo.8296465