

Yara Sluiskil (YSLU)

Sector	Revenue	Emissions	Pledge	Transparency	Integrity
Chemicals	Yara: € 22.9 bn YSLU: no data identified	Yara: 62.7 MtCO _{2e} YSLU: 2.7 MtCO _{2e} (S1)	Climate neutral by 2050	Low	Very Low

1. Tracking & disclosure of emissions Transparency & Integrity

<p>Yara: 62.7 MtCO_{2e} YSLU: 2.7 MtCO_{2e} (S1)</p> <p>● Subsidiaries are covered.</p>		<table border="1"> <caption>Yara and YSLU Emissions (MtCO_{2e})</caption> <thead> <tr> <th>Category</th> <th>Yara</th> <th>YSLU</th> </tr> </thead> <tbody> <tr> <td>S1</td> <td>14.9</td> <td>2.7</td> </tr> <tr> <td>S2</td> <td>1.0</td> <td>1.0</td> </tr> <tr> <td>S3↑</td> <td>10.2</td> <td>?</td> </tr> <tr> <td>S3↓</td> <td>36.7</td> <td>?</td> </tr> </tbody> </table>	Category	Yara	YSLU	S1	14.9	2.7	S2	1.0	1.0	S3↑	10.2	?	S3↓	36.7	?
Category	Yara		YSLU														
S1	14.9		2.7														
S2	1.0	1.0															
S3↑	10.2	?															
S3↓	36.7	?															
Major emissions sources	Most of Yara's reported emissions stem from the use of sold goods (S3 category 11), followed by S1 emissions.																
Disclosure	Yara discloses annual data on S1, S2 and S3. It reports S2 using both a market-based and a location-based approach, while using the highest estimate for emission aggregates. For S3, only categories 1, 3, 4, 9 and 11 are reported. Only the sum of categories 1 and 3 and the sum of categories 4 and 9 are disclosed. Hence, a distinction between S3 downstream and S3 upstream cannot be made. In the figure it is assumed that the ratio between S3 categories 4 and 9 is the same as in 2021 between upstream and downstream (22 percent vs. 78 percent). It is not reported why other S3 categories are not tracked. The company also discloses data on other non-GHG climate forcers. We did not find data from YSLU for S2 and S3. Recent S1 data is disclosed through the EU ETS reporting system.																

2. Setting emission reduction targets Transparency Integrity

Headline target or pledge	Climate neutrality by 2050	Moderate	Low
Short- & medium-term targets (up to 2030)	Short-term targets are identified:		
Scope coverage	<p>1 2 3</p> <p>Subsidiary level (YSLU) Net reduction of 85-90% by 2030 (baseline 1990) in S1. No targets for the other scopes are found. The available data does not facilitate an integrity assessment.</p> <p>Group level (Yara)</p> <ul style="list-style-type: none"> - 30% absolute reduction in S1 and S2 emissions by 2030 (baseline 2019) - 11.1% absolute reduction in S3 emissions category 11 (use of sold products) by 2030 (baseline 2021). - GHG emissions intensity target for S1, S2 and production of third-party ammonia consumed by Yara of 10% reduction (baseline 2018) by 2025 		
Own emission reductions (compared to full value chain in 2019)	<p>Subsidiary level ?% by 2030 (1990 baseline)</p> <p>Group level ~14% by 2030 (2019 baseline)</p>		
Long-term vision (beyond 2030)	Long-term targets are identified.	Low	?
Scope coverage	<p>1 2 3</p> <p>Subsidiary level (YSLU) Zero-emission plant by 2050. This target does not cover S2 or S3. The 2030 roadmap does not specify what portion of that long-term target will be achieved through absolute emissions reductions.</p> <p>Group level (Yara) All GHG emission scopes are included in the climate-neutrality target for 2050. No further long-term targets are found. Yara does not prominently specify what portion of that target will be achieved through absolute emissions reductions.</p>		
Own emission reductions (compared to full value chain in 2019)	<p>?% by 2050</p>		

3. Reducing own emissions		Transparency	Integrity
Emissions reduction measures	Several detailed emission reduction measures for YSLU are reported for S1, including emissions reduction potentials. For S2 emissions and upstream S3 emission reduction measures the company has provided information, but to a limited extent. For downstream S3 emissions, no information is given. For Yara, a climate roadmap to 2030 is presented (Sustainability Report, p.93).	Moderate	Low
Renewable electricity procurement	YSLU purchases renewable electricity procured with GO certificates. In addition, it facilitates renewable energy production, like solar and wind, in its surroundings. In the Netherlands, Yara also procures nuclear electricity.	Low	?

4. Climate contributions & offsetting		Transparency	Integrity
Responsibility for unabated emissions	YSLU uses carbon capture and utilisation (CC(U)S) to lower carbon emissions.	Low	Low
Climate contributions	- No climate contributions identified.	N/A	Low
Offsetting claims today	- YSLU has been using CC(U)S as an offsetting method	Low	Low
Offsetting plans for the future	YSLU aims to achieve emission neutralization in the future by using carbon capture and utilization through e.g. carbonation of drinks and underground storage of captured carbon.	Low	?

RATINGS **Transparency** refers to the disclosure of information. **Integrity** refers to the quality and credibility of the approach.
Overall Average of sections 1-4 ■High ■Reasonable ■Moderate ■Low ■Very Low;
Sections 1-4 Average of criteria in each section ■High ■Reasonable ■Moderate ■Low ■Very Low;
Rating criteria See methodology for rating criteria ■High ■Moderate ■Low.

Source: SEO Amsterdam Economics' interpretation of identified public documentation from Yara

Yara Sluiskil

Yara Sluiskil (YSLU), the Dutch subsidiary of Yara International (Yara), a Norway-based fertilizer producer, has committed to achieving climate neutrality by the year 2050. In 2022, the emissions of Yara are estimated at 67.2 MtCO_{2e} and the emissions of YSLU are estimated at 2.7 MtCO_{2e}. We note that the disclosed data is not complete, since YSLU does not disclose its S2 and S3 emissions and Yara does not disclose data on all S3 categories. As part of their long-term neutrality targets, both Yara and YSLU have published interim targets. Lastly, both entities mention that they plan to use offsets in the future. The entities do not prominently specify which percentage of their 2050 targets will be achieved through the use of offsets.

About the tracking and disclosure of emissions of Yara

- Yara reports transparently on all three scopes, although not always for everything within these scopes. For YSLU, limited information on emissions is found. Yara (2023a, p. 113) reports on its S1, S2 and a selection of S3 emissions (for 2022: 62.7 MtCO_{2e} in total). S2 emissions are reported using both a market-based and location-based approach. However, S3 emissions are only reported for the sum of categories 1 and 3, the sum of categories 4 and 9 and category 11. Yara does not explicitly explain why other categories are not reported on. S3 category 11 – GHG emissions from the use of sold products – is the primary source of the reported emissions, namely 56 percent (35.3/62.7 MtCO_{2e}) of total emissions (Yara, 2023a, p. 113). Yara also reports on non-GHG climate forcers, such as waste handling and the handling of byproducts (Yara, 2023a, p. 114).
- YSLU is Yara’s biggest production location (2022a, p. 17). According to the EU Emission Trading Scheme (ETS), the subsidiary’s installations emitted 2.7 MtCO_{2e} in 2022 (NEa, 2022). Both S2 and S3 emissions are not disclosed. Given the ratios of its parent company, we expect S3 to make up the largest share of the emissions of YSLU.

About the emission reduction targets of Yara and YSLU

- Yara has set a climate-neutrality target for 2050. This long-term neutrality target includes S1, S2 and S3, hence covering the full scope of emissions (Yara, 2023b, p. 120). In its documents, the company does not prominently specify what portion of this long-term neutrality target will be achieved through absolute emission reductions and what portion will be achieved through offsets. However, in its 2022 annual report it mentions that the “groundbreaking CCS project in Sluiskil” plays a part in achieving this target.
- To achieve its long-term target, Yara has set interim targets. The first target is a GHG emissions intensity target of 2.7 tCO_{2e}/t N by 2025 (Yara, 2023b, p. 27). This equals reducing the carbon intensity of S1, S2 and emissions from the production of third-party ammonia consumed by 10 percent by 2025 (baseline 2018; Yara, 2023a, p. 82, p. 92).¹ Secondly, Yara has submitted two near-term targets to the Science Based Targets initiative, namely a 30 percent absolute reduction in S1 and S2 by 2030 (baseline 2019), and a 11.1 percent absolute reduction in S3 from the use of sold products – S3 category 11 – by 2030 (baseline 2021; Yara, 2023b, p. 56). With these current reduction targets, the company is not aligned with 1.5°C global benchmarks and sector benchmarks (see the integrity assessment for Yara in this report for more information).
- YSLU reports its ambition to become a zero-emissions plant by 2050 (Yara, 2022a, p. 15). As an interim target, it aims to reduce its ‘net’ GHG emissions² by 85-90 percent by 2030 (baseline 1990). However, the scope of this target is unclear. The roadmap mentions that in 2020 the gross GHG emissions of YSLU were 3.3 MtCO_{2e}. From

¹ Yara mentions that in 2018 its GHG emissions intensity was 3.0 tCO_{2e}/t N. Therefore, a reduction of 10 percent would result in an intensity target of 2.7 tCO_{2e}/t N.

² With its net GHG emissions, YSLU means its total (gross) GHG emissions after correcting for CC(U)S (2022a, p.14).

documentation of the NEa, we deduct that this concerns the direct (S1) emissions of YSLU (NEa, 2020). Therefore, we assume that the scope of this target covers only S1. The methodology of NCI that is used for this assessment requires that the company clearly specifies the scope coverage of this target (NCI, 2022, p. 16). For YSLU, we argue that this is not the case. Furthermore, we did not find information on the full emissions of YSLU (NCI, 2022, p.11). Therefore, we conclude that the information provided does not facilitate an integrity assessment.

- YSLU mentions that it will reach its S1 target through three parallel lines of measures. The first is the adaptation of existing plants and is associated with a 0.4-0.6 MtCO₂e reduction. The second line concerns offsetting (CCS), which leads to a 0.8 MtCO₂e reduction. The third line concerns the use of green hydrogen and is associated with a 0.1 MtCO₂e reduction in 2030 and an unknown amount in the years thereafter. In 2030, the total S1 emission target is 2.9 MtCO₂e, of which 2.2 MtCO₂e is removed by CC(U)S, resulting in net GHG emissions of 0.7 MtCO₂e in 2030 (Yara, 2022a, p. 14). At the same time, Yara mentions the phasing in of green hydrogen and a focus on further reductions in the chain, both regarding energy intake (S2) and the use of products (S3), but it does not mention concrete targets (Yara, 2022a, p. 15). As the company only targets S1 emissions, the decrease in absolute full value chain emissions will likely be limited.

On renewable energy

- In its CDP disclosure (2022, p. 34), Yara reports that in 2022 its consumption of purchased or acquired electricity equalled 3.162 GWh. According to the company, all of this electricity came from non-renewable sources. In the disclosure, Yara mentions that it wants to reduce its S2 emissions by buying Guarantees of Origins (GOs; CDP, 2022, p. 19). We did not find any further documentation on the procurement of renewable energy.
- In its 2022 roadmap brochure, YSLU (2022a, p. 23) mentions that the company is committed to reduce its carbon footprint by focusing on electricity consumption with a low-carbon footprint, which is ensured through GOs. We did not identify any information on the amount of electricity procured with GOs. In the same document, YSLU mentions that it facilitates the production of sustainable energy in its surrounding areas, which is showcased with two examples (44 MW of wind power and 70 MW of solar power). In total, the company consumed 221.291 MWh of low-carbon, nuclear electricity in the Netherlands (CDP, 2022, p. 40), supported by energy attribute certificates (EACs). We do not know to what extent the total was supported by EACs nor what kind of bundles were bought. According to the methodology of NCI (2022, p. 25), "Renewable Energy Certificates (RECs) [or GOs or EACs] often do not contribute to additional renewable electricity capacity. They are not a suitable approach for corporates to address electricity-related emissions." We conclude that we do not have enough information for a proper assessment.

On climate contributions and offsetting

CC(U)S measures form a significant pillar of YSLU's climate strategy. According to the company, implementing CC(U)S measures has the potential to offset its S1 emissions by 2.2 MtCO₂e in 2030 (Yara, 2022a, p. 14). These measures encompass various initiatives, such as utilizing carbonic acid in beverages, employing CO₂ in greenhouses to cultivate vegetables, and storing carbon in depleted natural gas fields (Yara, 2022a, p. 19). As noted in NCI's previous edition of this monitor, both the storage in beverages and its use in greenhouses do not have a permanent character and carbon capture and underground storage come with significant drawbacks, most notably substantial costs, environmental concerns and risk of leaks (NCI, 2022, p. 173). Lastly, based on the published documents by Yara and YSLU, we do not know to what extent their long-term targets rely on the use of offsetting.

Sources

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Yara Sluiskil

Low

Integrity assessment for short- and medium-term target(s) towards 2030

What do the short- and medium-term targets actually mean?

What are the targets for the short to medium term?

Yara:

- By 2030, 30 percent absolute reduction in S1 and S2 emissions (baseline 2019) (Yara, 2023b, p. 56).
- By 2030, 11.1 percent absolute reduction in S3 emissions cat. 11 (baseline 2021) (Yara, 2023b, p. 56).

YSLU:

- By 2030, 85-90 percent reduction of net S1 GHG emissions (baseline 1990) (Yara, 2022a, p. 14).

How do these targets equate to emission reductions across the value chain (compared to a 2019 baseline)?

Yara:

- The company has set two targets for 2030 (see text above)
- The first target covers a 30 percent absolute reduction of S1 (17.1, 2019) and S2 (1.4, Market B., 2019). This equals an absolute reduction of 5.55 MtCO₂e by 2030.
- The second target covers a 11.1 percent absolute reduction of S3 cat. 11 emissions (44.0, 2021). This equals an absolute reduction of 4.884 MtCO₂e by 2030.
- Combined, this yields an absolute reduction of 10.434 MtCO₂e by 2030. The total emissions of the company in 2019 were 74.2 MtCO₂e (2023a, p. 1113). This means that approximately 14 percent of the 2019 emissions will be reduced by these two targets.

YSLU:

- YSLU lacks sufficient emissions data to accurately calculate the extent of the emissions reduction impact by 2030 throughout its complete value chain (only S1 emission data is disclosed).

Do these targets cover both the short term (within 5 years) and medium term (up to 2030)?

A short-term target (2025) is set for Yara, and medium-term targets (2030) are set for both Yara and YSLU: a GHG emissions intensity target (S1, S2, and emissions from the production of third-party ammonia consumed by Yara) of 2.7 tCO₂e/t N by 2025 (Yara, 2023b, p. 27).

Do these emission reduction commitments align with a 1.5°C trajectory for the sector according to available literature?

Global benchmarks: The expected 14 percent absolute reduction of emissions by 2030 of Yara seems not to be in line with global benchmarks, which demand a 48 percent reduction of CO₂ and a 43 percent reduction of GHG emissions. We are unable to evaluate the integrity of YSLU's interim target to reduce emissions by 2030 in the context of global efforts required to limit global warming below 1.5°C. In the absence of targets and disclosed emissions for S2 and S3, YSLU is likely not aligned with global efforts to limit global warming below 1.5°C.

Sector-level benchmarks: Sectoral benchmarks for chemical industries require a 52 percent reduction by 2030 across S1, S2 and S3 compared to a 2019 baseline (Teske, 2022, p. 322). Specifically for the subsector of 'agricultural chemicals', a reduction across the full value chain of 50 percent is needed. This is not in line with Yara's and YSLU's current indirect emission levels. Apart from this study, there are few benchmarks specifically for the chemical industry.



Integrity assessment for long-term target(s) (post-2030)

What do the long-term targets actually mean?

What are the targets for the long term beyond 2030?

Yara:

- By 2050, climate neutral in all three scopes (Yara, 2023b, p. 120). It is not clear which part of this is achieved by offsetting (including offsets from product benefits) and which part by absolute emission reduction. Apart from the headline neutrality pledge, we did not identify any other long-term targets.

YSLU:

- By 2050, zero-emission plant. This does not cover S2 or S3 emissions (Yara, 2022a, p. 8). It is unclear to what extent this objective of becoming a zero-emission plant will rely on offsetting measures.

How do these targets equate to emission reductions across the value chain (compared to a 2019 baseline)?

The information provided does not facilitate an assessment.

Do these emission reduction commitments align with a 1.5°C trajectory for the sector according to available literature?

Sector-level benchmarks: Teske (2022, p. 322) considers an 85 percent reduction for chemical industries and a 100 percent reduction for the subsector of 'agricultural chemicals' sufficient to limit global warming to 1.5°C. Neither Yara nor YSLU explains why it considers the net-zero plant and 2050 climate-neutrality target aligned with the Paris Agreement's temperature limit of 1.5°C. We are unable to evaluate the integrity of YSLU's commitment to bringing S1 carbon emissions to net zero by 2050. Hence, both on a global and on a sector level, no assessment can be made.