



Knowledge grows

Yara Green Financing Framework

July 2022



1. Introduction

Yara International ASA is a leading global fertilizer company and provider of environmental solutions. Yara's ambition is to Grow a Nature-Positive Food Future that creates value for Yara's customers, shareholders and society at large and contributes to a more sustainable food value chain.

The core of Yara's operations is the production and sale of nitrogen-based fertilizers. Founded in 1905 to solve the emerging famine in Europe, Yara established itself as the industry's only global crop nutrition company. It operates an integrated business model with around 17,000 employees and activities in over 60 countries. In 2021, Yara reported revenues of USD 16.6 billion.

Today, agriculture causes about 20% of the global greenhouse gas (GHG) emissions, with land use change originating from agricultural expansion being the main cause. Implementing sustainable farming practices can contribute to reverse land use, preserve soil as natural carbon sink, and reduce in-field emissions by precision agriculture. Decarbonizing fertilizer production would in addition help to achieve carbon neutral food chains.

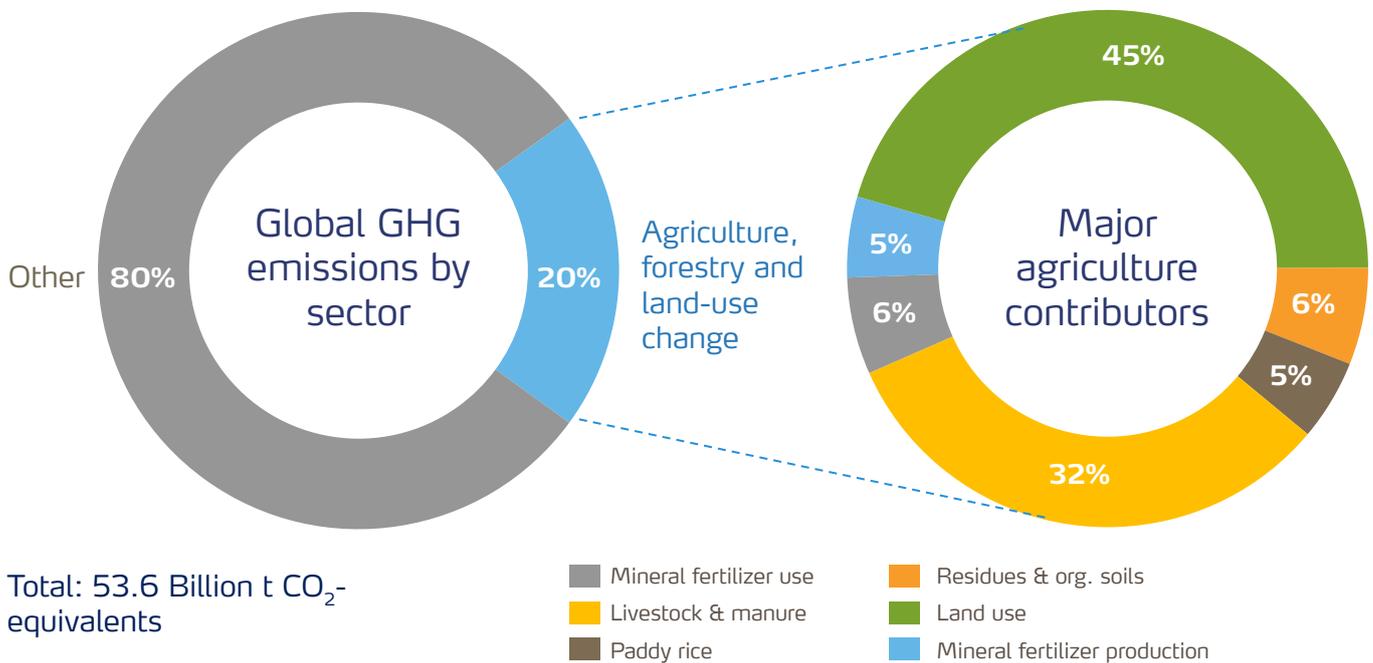


Figure 1: Agriculture emissions. Source: FAOSTAT (2020)

To meet the food demand of the growing world population, sustainable agriculture will continue to require mineral fertilizer inputs.

Fertilizers are used to replace the nutrients that are removed from the soil at harvest. Without the addition of fertilizers, crop yields and agricultural productivity would be significantly reduced, requiring more land to feed the growing population.

The three most common mineral fertilizers are those based on:

- Nitrogen (N), the most critical nutrient required for the yield. It plays a key role in chlorophyll production and protein synthesis,
- Phosphorus (P), supplies the energy for many processes in the plant, and
- Potassium (K) regulates the plant's water content and expansion.

Yara is involved in the complete value chain of nitrogen fertilizer production, starting from ammonia, intermediate products (e. g. nitric acid) and finished fertilizers, such as urea, nitrates, NPKs, and other products. In addition, Yara has a global distribution network, focusing on agricultural knowledge and providing the best fertilizers and application tools to meet the farmers' needs.



2. Integrating Sustainability into Strategy

Yara's mission to responsibly feed the world and protect the planet is inspired by the company's commitment to the UN Sustainable Development Goals and the Paris Agreement.

2.1. Yara is supporting scaling up regenerative¹ agriculture

As one of the leading companies with strategic agriculture footprint, Yara aims to improve sustainability and resilience in agriculture. Being a member of OP2B (One Planet Business to Biodiversity), Yara has adopted the OP2B's framework for regenerative agriculture. As a crop nutrition solutions provider, Yara believes in a science-driven approach and aims to contribute with knowledge and products for more efficient use of fertilizers, optimizing soil carbon and improving income of the farmers.

2.2. Yara's roadmap for putting Europe's Farm to Fork Strategy into action

With the Farm to Fork (F2F) Strategy, the European Union in 2020 set several aspirational goals to make the food systems fair, healthy, and environmentally friendly. Reducing nutrient losses from agriculture by 50% and increasing the share of EU farmland under organic farming to 25% by 2030 are just two examples of the goals brought forward by the European Union. Yara's farm to fork roadmap for Europe rely on three solutions:

- **Using the right mineral fertilizer**, since all the nutrients do not have the same impact. For example, replacing all urea-based fertilizers with ammonium nitrate could prevent 63% of overall ammonia losses from fertilizer application in Europe.

¹ - Regenerative agriculture (as defined by OP2B): Scaling up alternative farming practices that will leverage the power of plants to keep carbon in the soil (carbon sequestration), increase the capacity of soils to hold water, enhance the resilience of their crops, support the livelihoods of their farmers, and regain the nutrient density of food while decreasing reliance on synthetic inputs

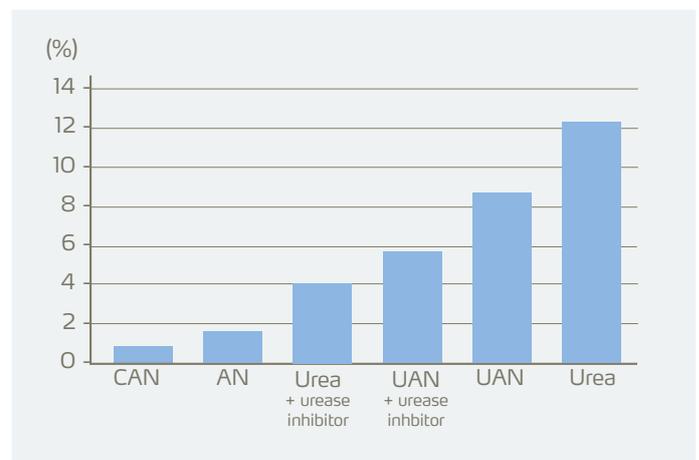


Figure 2: Ammonia emission factors for different nitrogen fertilizers applied to normal soils in Europe (pH ≤ 7)

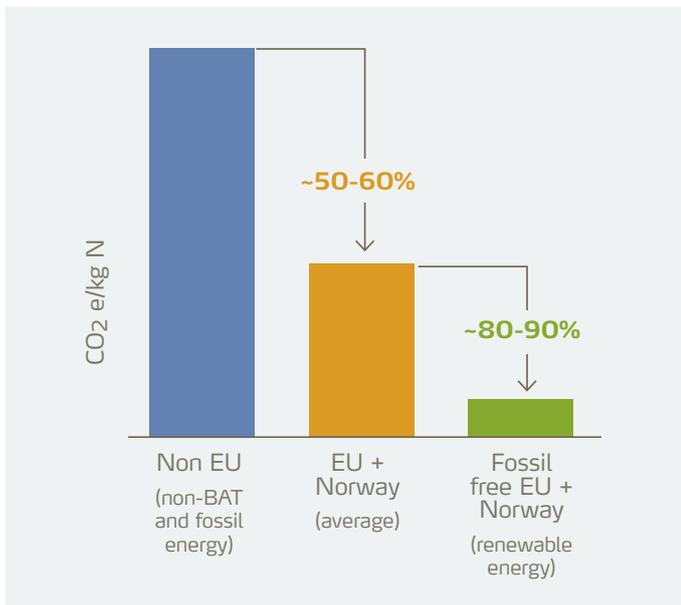


Figure 3: Significantly lower carbon footprint with fossil-free fertilizers

- **Using fertilizers with the lowest carbon footprint:** Mineral fertilizers produced in EU and Norway already have a significantly lower carbon footprint (-50-60%) compared to most non-EU fertilizers thanks to the use of the nitrous oxide (N₂O) abatement catalyst. This catalytic abatement technology was first developed by Yara and then shared with other providers to reduce emissions during nitric acid production. Transition to fossil-free ammonia production can reduce the carbon footprint further.

- **Increasing efficiency to reduce nutrient losses in the air and water.** Nutrient losses can be reduced by increasing efficiency and making sure that the different nutrients applied by farmers to nourish their crops end up in the harvest and not in the environment. A key indicator is the **Nitrogen Use Efficiency (NUE)**. It describes the relationship between nitrogen supply to a crop and nitrogen removal from the field by harvest, or the percentage of nitrogen contained in the crop (kg) of the nitrogen applied (kg). The European Nitrogen Expert panel recommends a NUE target of between 75% and 90%, keeping in mind that NUE has improved from 56% in 2000, to over 60% in 2005 and 65% in 2014. Use of specific Yara fertilizers combined with precision tools, such as N-tester, places achieved NUE in the recommended corridor.

In addition to the three elements, Yara is focusing on two main areas to contribute to the EU objective:

- **Investing in clean (blue and green) ammonia and hydrogen** with the goal to offer carbon-free fertilizers. Through collaboration with several renewable energy focused companies, pilot projects are being developed to produce ammonia with renewable energy sources, called green ammonia. Clean ammonia is also the most promising zero-emissions fuel for the shipping industry.
- **Encouraging the adoption of climate-positive farming practices**, especially with the launch of initiatives such as the Agoro Carbon Alliance, helping to transform practices on every farm, generating reliable Farm Carbon Credits and certified climate-smart crops, and Atfarm, an easy-to-use digital platform that help farmers make more informed decision, by using inter alia art satellite imagery.

2.3. Yara's carbon footprint and climate commitments

In 2021, Yara's GHG emissions totalled 75.4 million tonnes of CO₂ equivalents for scopes 1, 2 and 3 combined. Approximately 25% of these total emissions result from the manufacturing of mineral fertilizers (Scope 1 and 2 emissions), mainly due to the natural gas required to produce ammonia (NH₃) in a conventional way. Yet, the most significant climate-related phase of the fertilizer life cycle is use of fertilizers (Scope 3 emissions²), where microbial activities in the soil can result in the formation of nitrous oxide (N₂O).

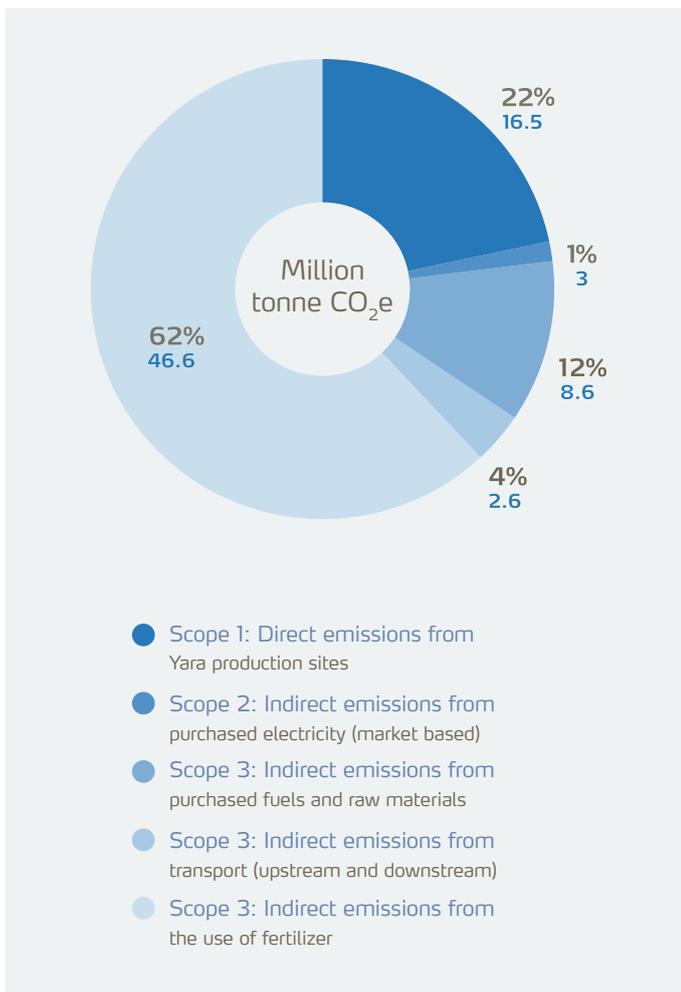


Figure 4: GHG emissions from fertilizer production and use

Yara has reduced its total direct GHG emissions (scope 1) by about 45% globally since 2005. Its most significant initiative to reduce GHG emissions so far has been the development and installation of N₂O catalyst technology in its nitric acid plants. This technology removes about 90% of the N₂O emissions in Yara's plants and enables Yara to offer nitrate fertilizers with lower climate impact.

Yara aims to become climate neutral by 2050 (Scope 1, 2 and 3). It has intermediate targets to:

- reduce carbon intensity (CO₂ equivalents per tonne of N produced) for Scope 1, 2 and upstream Scope 3 emissions from imported ammonia by 10% by 2025
- reduce its absolute scope 1 & 2 emissions by 30% by 2030.

A pathway for Scope 3 emissions will be defined through the process of establishing Science based targets, including a process to determine a Sectoral Decarbonization Approach for its industry. Yara's activities aimed at improving farmer practices and fertilizer application are as well directed to bring positive impacts for Scope 3 emissions. However, digital connectivity as well as collaboration across the food chain and involvement of the agricultural ecosystem would be important to create even more significant improvements.

² - Scope 3 emissions for purchased fuels, raw materials and transport are estimated based on the emission factors used in the Fertilizers Europe Carbon Footprint calculator. Scope 3 emissions for fertilizer use is calculated based on 2006 IPCC Guidelines for National Greenhouse Gas Inventories (table 11.3 of Ch11 N₂O emissions from Managed soils)

3. Rationale for the Framework

With this Green Financing Framework (“Framework”), Yara aims to further underline its commitment to sustainability and to engage with stakeholders of the Group on this topic. It represents an additional step in Yara’s commitment to Sustainable Finance, after the signing of its Sustainability-linked Revolving Credit Facility in 2019.

Yara has established this Green Financing Framework as an overarching platform under which the company intends to issue Green Financing Instruments, which may include bonds (including private placements), loans, guarantees, hybrids, and any other financial instrument where the proceeds³ will be exclusively allocated to finance and/or refinance Eligible Green Projects as defined in this Framework.

³ - All references to the “proceeds” of any Green Financing Instrument within this Framework refer to an amount equivalent to the net proceeds of any such Green Financing Instrument.

4. Green Financing Framework

The Green Financing Framework is aligned with market best practices outlined by the International Capital Market Association (“ICMA”) 2021 Green Bond Principles⁴ and the Loan Market Association (“LMA”) 2021 Green Loan Principles⁵, updated from time to time, and includes the following four core components:

- A. Use of Proceeds
- B. Process for Project Evaluation and Selection
- C. Management of proceeds
- D. Reporting

The Framework also follows the recommendations of the Green Bond Principles and Green Loan Principles regarding External Review.

4.1. Use of Proceeds

An amount equivalent to the net proceeds of the Green Financing Instrument(s) will be used to finance, or refinance in whole or in part, new or existing, eligible green investments or assets as defined in the table below as “Eligible Green Projects”.

The financing of such Eligible Green Projects is expected to create substantial environmental benefits by decarbonizing the food chain, including fertilizer production and application, and limiting the need to expand farmland.

In the case of refinancing existing Eligible Green Projects only investments made within a three-year period preceding and including the year of issuance of a Green Financing Instrument shall be considered.

⁴ - ICMA Green Bond Principles 2021 - <https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf>

⁵ - LMA, APLMA, and LSTA Green Loan Principles 2021 - <https://www.lsta.org/content/green-loan-principles/>



Eligible Green Projects:

Eligible Green Projects	Eligibility Criteria	Cicero Shade of Green ⁶
<p>Green Ammonia, that aims at producing carbon-free fertilizers or decarbonized shipping fuel (cf. glossary)</p>	<p>Investments in sites/projects that produce fully decarbonised ammonia, i.e., ammonia produced from green hydrogen, including investments in conversion of conventional Ammonia production into Green Ammonia.</p>	 <p>^{°C}CICERO Dark Green</p>
<p>Premium fertilizer production assets (eg. Nitrates, NPKs) (cf. glossary)</p>	<p>Maintenance and growth CAPEX and OPEX for the plants that produce premium fertilisers, including intermediate products. While these plants are today operating using fossil-based ammonia, these plants can operate as they are, also in a decarbonized future on basis of blue or green ammonia. This category excludes production of conventional Ammonia, urea, and non-fertilizer products. Nitric acid production which is above 0.038 CO₂e/t N threshold is also excluded.</p> <p>Examples of eligible production assets:</p> <p>1. Nitrates plants, for example producing:</p> <ul style="list-style-type: none"> ▪ Calcium ammonium nitrate (CAN), a mixture of ammonium nitrate (AN) and calcium/magnesium carbonate. It contains 25 to 28 percent nitrogen, that can be immediately absorbed by plants. ▪ AN, a more concentrated source of nitrogen containing 33.5 percent to 34.5 percent N. <p>2. NPKs and phosphates plants: the products supply several chemically combined major nutrients, mainly nitrogen (N), phosphorus (P) and potassium (K). Some NPKs also contain secondary and micronutrients. NPK products have consistent size and mass, which makes accurate spreading easier.</p> <p>3. Fertigation plants: fertigation is the combined application of water and nutrients to a crop – a mix of fertilizing and irrigating.</p>	 <p>^{°C}CICERO Medium Green</p>
<p>Carbon Capture and Storage (CCS)</p>	<p>Investments in carbon capture and storage technologies that allow Yara's brown ammonia production sites to capture and permanently store CO₂ emissions and thus produce blue ammonia.</p>	 <p>^{°C}CICERO Dark Green</p>

⁶ - Dark Green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Medium Green is allocated to projects and solutions that represent steps towards the long-term vision but are not quite there yet.



4.2. Process for Project Evaluation and Selection

Yara has put in place a dedicated Sustainable Working Group (“Working Group”), which will meet at least annually, decide by consensus and consists of representatives from:

- Sustainability Governance
- Treasury Department
- HESQ Department
- Energy & Environment Department
- E&C (Ethics and Compliance Department)
- Financial Department

The Working Group is responsible for:

- reviewing and updating the content of the Framework
- overseeing the process of selecting, evaluating, and monitoring Eligible Green Projects against the eligibility criteria set out in section 4.1
- removing an Eligible Green Project from the Eligible Green Projects Portfolio in case it has become the subject of a controversy or no longer meets the eligibility criteria outlined above.
- preparing and publishing the annual allocation report (including impact report)
- Yara’s Corporate Management team (Group Executive Board) will have oversight of the Working Group and be responsible for providing final approval on the Eligible Green Projects Portfolio and annual reporting.

Policies in place to identify and mitigate potential environmental and social risks

Yara has put in place a strong evaluation and selection process, corporate sustainability and risk management framework in order to ensure mitigation of potential environmental and social risks associated with the Eligible Projects, in addition to applicable national and international environmental & social standards and regulations. Yara’s Capital Value process requires all projects to comply with risk assessment principles, ref. p. 119 in the 2021 Integrated report⁷. For larger projects this includes involvement of the corresponding expert functions that perform the risk assessment. Smaller maintenance investment projects follow the established internal governance, which is based on the Capital Value process principles, but decisions and risk assessment can be taken at corresponding approval levels.

⁷ - Yara Integrated Report 2021



4.3. Management of Proceeds

Yara has set up an internal tracking system to monitor the allocation of the proceeds. An amount equivalent to the net proceeds of each Green Financing Instrument will be earmarked for allocation to Eligible Green Projects as validated by the Working Group and approved by the Group Executive Board.

Pending the full allocation of the proceeds of the issued Green Financing Instruments to Eligible Green Projects, Yara will keep unallocated proceeds as cash or cash equivalents.

Yara intends to allocate all the proceeds of the Green Financing Instruments to Eligible Green Projects within two years of issuance of each Green Financing Instrument.

If a financed Eligible Green Project no longer meets the eligibility criteria, it will be replaced by another Eligible Green Project as soon as feasible.

4.4. Reporting

Yara will publish an annual report on its website until full allocation of the Green Financing Instrument net proceeds, detailing the allocation of the net proceeds of the Green Financing Instruments. This report will also contain information on the environmental impact of the Eligible Green Projects. Impact reporting may continue post the full allocation of the Green Financing Instruments.

Allocation Reporting:

- Allocation of net proceeds per Eligible Green Project Category
- Balance amount of unallocated net proceeds, if any
- Portion of financing and refinancing
- Examples of Green Projects that have been funded by the Green Financing Instrument

Impact Reporting:

Yara will provide impact reporting at the level of each Eligible Project Category, which may include the following estimated Impact Reporting Metrics:

- Attributable GHG emissions avoided/reduced from Green Ammonia as compared to conventional Ammonia in tonne of CO₂ equivalent
- Attributable GHG emissions avoided/reduced from CCS in tonne of CO₂ equivalent
- Volume of Green and Blue Ammonia produced
- Volume of Premium fertilizers produced
- Carbon Capture Capacity

5. External Review

5.1. Second Party Opinion

Yara has appointed Cicero to provide a Second Party Opinion on the Green Financing Framework, its transparency, governance and alignment with the Green Bond Principles and Green Loan Principles.

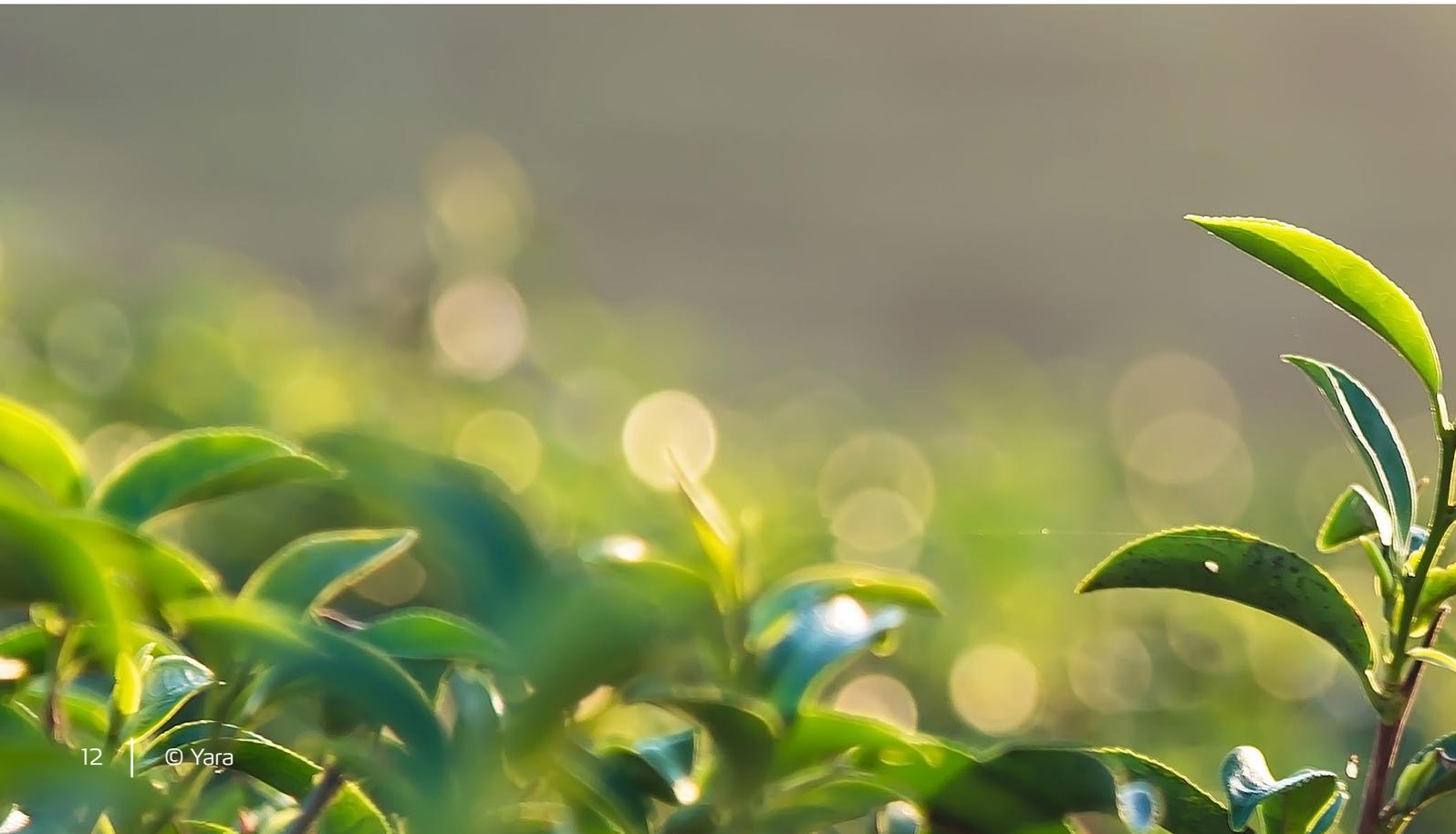
This Second Party Opinion document will be made publicly available on Yara's website.

5.2. Post Issuance External Verification on Reporting

An external verification on the allocation of the Green Financing Instruments will be provided by an external auditor, on annual basis and until the complete allocation of proceeds.

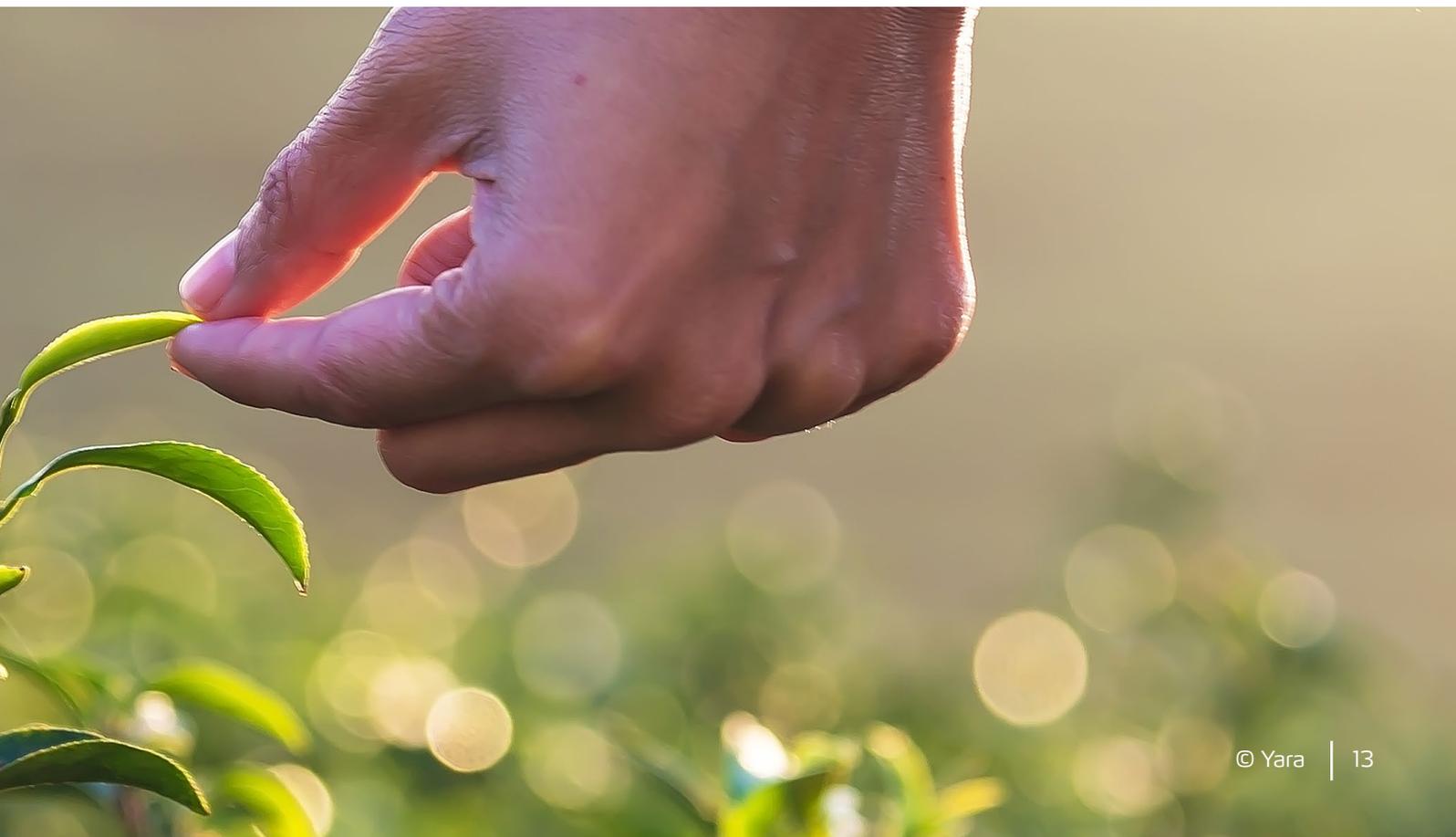
The external auditor will verify that the proceeds of the Green Financing Instruments are either allocated to Eligible Green Projects as defined in this Framework or invested in approved temporary investments.

This will be published on Yara's website.



6. Framework Updates

The Framework will apply to any Green Financing Instruments issued by Yara and / or its subsidiaries and will be applied as long as any such financing instruments are outstanding. This Framework may be updated from time to time to ensure continued alignment with voluntary market principles, emerging standards and classification systems. Any updated version of this Framework will either maintain or improve the current levels of transparency and reporting disclosures. Any Framework updated will be accompanied with an updated Second Party Opinion.



7. Glossary

Ammonia is the base of most mineral fertilizers and the second-most-widely produced commodity chemical globally, with an annual production of over 180 million tonnes. 80% of global ammonia production go into fertilizer, as an intermediate product for the production of most mineral fertilizers. Ammonia could also be used as shipping fuel or power generation. Ammonia is produced from nitrogen from the air reacting with hydrogen.

Conventional ammonia is derived from natural gas or other fossil hydrocarbons, using conventional technologies such as Steam Reforming and Haber-Bosch process.

Blue ammonia is derived from blue hydrogen, produced based upon natural gas, with the CO₂ stored in permanent reservoirs after a carbon capture and storage process.

Carbon capture and storage (CCS) technologies allow Yara's conventional ammonia production sites to capture and store CO₂ emissions and in this way convert to producing blue ammonia under the condition that the CO₂ is stored permanently (>>100 years) underground, in locations with reliable monitoring, reporting and verification.

Green ammonia: unlike conventional ammonia, which is made using fossil fuels (typically natural gas) as the feedstock, the raw materials for green ammonia are hydrogen obtained through the electrolysis of water, a process powered by renewable energy sources, and nitrogen obtained from the air using an air separation unit. Green ammonia can then be synthesized from nitrogen and hydrogen via various methods, with the Haber-Bosch process currently the only method used on a commercial scale.

Nitric acid is a clear, yellow liquid with a strong odor. It is produced from ammonia and air and is an intermediate for the production of nitrogen fertilizers.

Nitrogen Fertilizers are produced from natural gas. In several transformation steps, natural gas, is upgraded by combination with nitrogen from the air to form nitrogen fertilizer. 80% of the gas is used as feed-stock for fertilizer while 20% is used for heating the process and producing electricity. Based on the two main end products, ammonium nitrate and urea, different fertilizer types are manufactured by mixing with ingredients such as phosphorus and potassium to form NPKs or dolomite to form CAN.

Phosphorus Fertilizers are produced by acidulating phosphate rock. By itself, phosphate rock is not soluble and so cannot provide phosphorus in an available form for plant use. Many of the sources of phosphorus are sedimentary deposits on old ocean floors which were later uplifted by upheavals of the earth. These deposits can also contain many other minerals and so contamination with heavy metals such as cadmium can be an issue. The other sources of phosphate rock are from igneous rock deposits, from molten lava, having volcanic origin. This rock is in general very low in contaminants. To produce a phosphorus fertilizer, the rock is treated with acid; sulfuric, phosphoric or nitric. Each method has its advantages and constraints. The sulfuric acid route produces a low phosphorus fertilizer – single superphosphate - which is half gypsum. The use of phosphoric acid produces a higher concentration phosphorus fertilizer.

The third manufacturing process is to use nitric acid to acidulate the rock phosphate. This process is a cleaner process with no waste products and produces two fertilizers:

- Nitro-phosphates which are combined with potassium to produce the complex NPK fertilizers such as YaraMila.
- Calcium nitrate (from the nitric acid combining with the calcium in the rock phosphate) as found in the YaraLiva range.

The limitation of this process is that the phosphate content of the fertilizer cannot exceed the nitrogen content.

8. Disclaimer

Potassium used in fertilizer production is taken from natural deposits of potassium chloride. The mined material is crushed and purified by the removal of rock particles and salt. Deposits of potassium sulfate and potassium nitrate are rarer, but when used, are treated in a similar manner. Deposits of potassium chloride are also reclaimed from the concentrated salts of places like the Dead Sea.

Urea is the most concentrated solid nitrogen fertilizer available (46 percent N) and has become the world's major source of nitrogen.

This Green Financing Framework (the “Framework”) contains certain statements which are not historical fact and constitute “forward-looking statements”. Even though Yara’s Management feels that the forward-looking statements are reasonable as at the date of this document, investors are put on notice that the forward-looking statements are subject to numerous factors, risks and uncertainties that are difficult to predict and generally beyond Yara’s control, which could cause actual results and events to differ materially from those expressed or projected in the forward-looking statements. You are cautioned not to place undue reliance on the forward-looking statements (as well as information and opinions) contained herein, which are made only as of the date of this document and are subject to change without notice. Other than as required by applicable law, Yara does not undertake any obligation or responsibility to release any updates or revisions to any forward-looking statements and/or information to reflect events or circumstances after the date of publication of this Framework. The information contained in this Framework does not purport to be comprehensive.

This document is not intended to be and should not be construed as providing legal or financial advice. This Framework does not constitute a recommendation regarding any securities of Yara. This Framework is not, does not constitute, nor it should be interpreted as, or form part of, any offer or invitation to underwrite, subscribe for or otherwise acquire or dispose of, any solicitation of any offer to underwrite, subscribe for or otherwise acquire or dispose of, any securities issued or to be issued by Yara. Any decision to buy or invest in securities shall be made solely and exclusively on the basis of the information set out in the relevant prospectus or equivalent or related documentation filed or otherwise made available to prospective investors by Yara or its subsidiaries. Under no circumstances will Yara have any liability whatsoever (in negligence or otherwise) for any loss or damage howsoever arising from any use of this Framework or its contents or otherwise arising in connection with this document.

© 2022 Yara. All rights reserved.

July 2022

