



AgriNurture Inc. Green Bond Second Opinion

March 29, 2021

AgriNurture Inc. (ANI) is an agro-commercial business in the Philippines, focusing on the production and trade of fresh organic produce. ANI was established in 1997 and was listed at the Philippine Stock Exchange in May 2009. The company has commercial activities in China, Hong Kong, and Australia and had gross revenue of EUR 78 million in 2019. ANI exports its products to Asia, Middle East, Europe, and North America. ANI's brands include kiosks, cafeterias and coffee shops, providing a range of fruit beverages and food products.

Organic farming has positive environmental benefits, but the relationship to overall GHG emissions is complex. The benefits include reduced use of fertilisers and pesticides, reduced water use, and improved soil organic content. Greenhouse Gas (GHG) emissions on a per hectare basis are lower for organic farming compared to conventional farming, but the implications of possible increases in land-use are still being debated in the scientific community.

Eligible project categories include, among others renewable energy, energy efficiency, environmentally sustainable management of living natural resources and land use, and clean transportation. The most significant investments are expected in the environmentally sustainable management of living natural resources category, focusing on organic banana and corn/rice production.

ANI shows a genuine commitment to sustainability and has high ambitions for becoming a sustainable producer of organic agricultural food-products. Banana production can be associated with deforestation and high use of water and pesticides, however, ANI plans to invest in organic/sustainable banana plantations by using a combination of proven organic technologies and methods and without the use of new agricultural land. The company's planned corn-rice project aimed at replacing rice with more climate- friendly corn is innovative and forward-thinking. The Philippines is exposed to climate-related weather events, and as such ANI is vulnerable to physical climate change. However, ANI has conducted climate risk assessments and mitigation activities to reduce the risks.

ANI has strong governance procedures and ambitions to improve further. The company has an overarching target for the AgriNurture Group to be climate neutral by 2030, as well as targets related to renewable energy and organic farming. The issuer has performed climate risk assessments and aims to start reporting in line with the TCFD-recommendations in 2021. However, planned impact reporting for the bond is limited and would benefit from being expanded.

Based on the overall assessment of the eligible green assets under this framework and governance and transparency considerations, ANI's green bond framework receives a **CICERO Medium Green** shading and a governance score of **Good**. To improve the framework ANI could ensure implementation of reporting in line with the TCFD-recommendations and improve their GHG- and impact reporting.

SHADES OF GREEN

Based on our review, we rate the AgriNurture's green bond framework **CICERO Medium Green**.

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in AgriNurture's framework to be **Good**.



GREEN BOND PRINCIPLES

Based on this review, this Framework is found in alignment with the principles.





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1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated March 2021. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences, and email correspondence.

Expressing concerns with 'Shades of Green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green



Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.



Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.



Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.

Examples



Wind energy projects with a strong governance structure that integrates environmental concerns



Bridging technologies such as plug-in hybrid buses



Efficiency investments for fossil fuel technologies where clean alternatives are not available

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



2 Brief description of AgriNurture Inc.'s green bond framework and related policies

AgriNurture Inc. (ANI) is an agro-commercial business in the Philippines, focusing on the production and trade of fresh organic produce. ANI was established in 1997, and was listed on the Philippine Stock Exchange in May 2009. ANI has also applied and has been approved by the US Stock Exchange to issue American Depositary Shares.

ANI includes four operating divisions and wholly or majority-owned subsidiaries. The Philippine operations group has three business units; export, manufacturing and retail and distribution, whereas the foreign operations unit is engaged in produce trading in the Asia Pacific Region. The company has commercial activities in China, Hong Kong, and Australia. ANI Group's gross revenue in 2019 was ca EUR 78 million. The issuer has around 320 domestic and 70 international employees, as well as 125 farmers and 2500 contract farmers.

The issuer supplies vegetables, fruits, and grain to retailers in the Philippines, as well as manufactures and distributes processed fruit and vegetable products, vegetarian and dairy products, and flowers. ANI exports to Asia, Middle East, Europe, and North America and includes international clients like Walmart, making ANI one of the biggest exporters of produce in the Philippines. ANI's brands include several kiosks, cafeterias and coffee shops, providing a range of fruit beverages and food products.

Environmental Strategies and Policies

ANI aims to make agriculture more environmentally sustainable and plans to execute a measurable corporate reduction of the greenhouse (GHG) footprint and pollution throughout the value chain. ANI has an overarching target that the whole group should be climate neutral by 2030. Examples of measures to achieve this include:

- Investing in projects using green technologies and processes and decrease the use of plastics for packaging.
- Reducing agriculture water consumption and the use of chemical fertilisers. According to the issuer, the target is to reduce chemical fertilisers by 10% in 2022 and by 25% by 2025 among ANI's contract farmers.
- Shift towards the use of renewable energy and reduce electricity consumption. According to the issuer, existing solar installations supply 50% of the electrical needs in their operations. The goal is to achieve 90% renewable sourcing by 2025.

The issuer has identified scope 1, 2, and 3 CO₂-emissions for their operations. This is not yet included in ANI's annual reporting, but the issuer informs that this will be included in future reports. Emissions are given in the table below and show that scope 1 emissions constitute the highest share. Emissions were reduced between 2019 and 2020, primarily due to reduction in number of days of production due to the pandemic. However, ANI expects significant decrease in scope 1 GHG emission when it launches its electric vehicles through the green bonds proceeds. Emissions from farming, e.g. from rice fields, banana production etc is not yet included in the reporting. For scope 2 emissions, reductions were mainly due to the replacement of purchased grid-based electricity by on-site renewable energy generation. Reductions in scope 3 emissions were mainly a result of the non-use of refrigerated transport (that carries mushroom logs) from China to the Philippines due to the pandemic. According to the issuer, with the proposed production of mushroom logs through the green bonds proceeds, the use of refrigerated transport from China to the Philippines will be permanently eliminated, thus the GHG emission is expected to be reduced by 20% per year.



CO ₂ -emissions	2019 (metric tons)	2020 (metric tons)	Main sources
Scope 1	439.4	376.0	Fuels used in vehicles and boilers.
Scope 2	440.0	221.0	Purchased electricity
Scope 3	106.1	95.6	Truck transport: 33.21 tons Plastics: 12.24 tons Fertiliser: 3.79 tons Water transport: 1.144 tons

ANI is vulnerable to physical climate change, and has through climate assessments, identified increased temperatures, increased rainfall variability, increased frequency of extreme weather events, and sea-level rise as the major risk factors. These changes may lead to, among others, increased pest infestations, productivity loss, and price volatility. ANI has identified the supply chain to be particularly vulnerable. To mitigate supply chain risk, the company has established 24/7 communication lines with local farmers and agreements with suppliers in the different parts of the Philippines to be less vulnerable to local weather events. They are also expanding their cold storage capacity. The company has not yet started reporting in line with the TCFD-recommendations but informs us that this will be a priority for 2021.

ANI is monitoring their suppliers through performance evaluations and annual plant visits, including monitoring of environmental compliance with national laws and regulations.

ANI signs contracts with both individuals and clusters of farmers, and new contract farmers are given training on farming techniques on ANI's own farms. ANI maintains open communication with the farmers, i.a. through regular visits to follow up on e.g. the use of fertiliser (being one of the items monitored in the farming agreements). To increase farmers' access to finance, ANI has developed a digital marketplace called IANI. Farmers use Agri Tokens capital to purchase components (e.g., fertiliser, seedlings, etc.) from ANI. ANI guarantees to buy all the produce from the farmers it supports at minimum market price.

ANI owns banana plantations in the Philippines but gets their produce mainly from contract farmers. ANI's own plantations are mainly used for training purposes. The issuer furthermore informs us that they have not acquired new land to create new plantations, and this minimises the risk for deforestation.

ANI has certified some of their end products according to internationally recognised certification schemes in markets where this is required, among others, for the sale of coconut water outside of the Philippines. According to the issuer, they have introduced farming techniques that can give maximum yield while maintaining the fertility of the soil. The goal is to increase organic fertilisers and pest control by 10% per year for the next five years. The issuer further informs us that they are working towards introducing organic farming of all their produce and reduce water use as well as the use of fertiliser and pesticides through the farming contracts. However, the company has decided not to apply for any further certification schemes – due to cost considerations.

In 2021 ANI aims to establish lifecycle assessments (LCAs) of their products. The LCAs will inform the strategies of reduction of pollution, waste, and energy use. The process will focus on the primary corporate activities of the value chain. According to the issuer, they relate to several of the Sustainable Development Goals, including SDG 6 (clean water and sanitation), SDG7 (affordable and clean energy), SDG 12 (responsible consumption and production), and SDG 13 (climate action).

Social aspects. ANI is open about the presence of social risks in their supply chains and states that the most material ones are related to peace and order situations. The company has indicated that it is essential that contract farmers and employees engage with the company of free will and that this is also the case for indigenous people.



The company emphasises the concept of mutual trust in its relationships with farmers and employees. It is illegal in the Philippines to take ownership of indigenous land.

Use of proceeds

ANI will allocate an amount equal to the green bond's net proceeds issued under the green framework to finance planned projects, assets, or expenditures that gives a positive environmental outcome and meet the eligibility criteria. These projects or assets will be defined as eligible assets. Net proceeds may be used to refinance corporate debt as long as it is supporting existing eligible assets.

Eligible Assets are projects, assets, or expenditures that deliver positive environmental outcomes consistent with the Green Bond Principles and/or other market guidelines, principles, or standards that may be developed domestically or globally from time to time.

Project categories included are renewable energy, energy efficiency, pollution prevention and control, environmentally sustainable management of living natural resources and land use, clean transportation, sustainable water and wastewater management, eco-efficient and/or circular economy adapted products, production technologies and processes. The largest investments are expected in the environmentally sustainable management of living natural resources and land use category, focusing on organic banana and corn plantations to integrate ANI's rice-corn blend (Big-Ma) in the product portfolio.

According to the issuer, around 60% of the proceeds will be allocated to new projects/assets, and 40% to extension of existing projects/assets. Green bond proceeds will not be used for fossil fuel investments.

Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance CICERO Green places on the governance process.

ANI has established an ANI Green Bond Executive Team (AGBET) responsible for the green framework, including evaluation and selection of eligible assets. The president and CEO and the CFO co-chair the committee, which also consists of executives from finance, treasury and operations. ANI may involve additional internal experts if considered appropriate. According to the issuer, the CEO and CFO have environmental competence through experience with agro-industrial projects focusing on environment-friendly production. If necessary and appropriate, the AGBET may involve additional internal and/or external experts.

AGBET is responsible for ensuring that the proceeds of a green bond are allocated to eligible assets, securing alignment with the ANI Group's sustainability objectives and conformance with the Green Bond Principles. The committee shall also monitor eligible green projects through a sub-committee that will focus mainly on monitoring the green projects financed or refinanced through green bonds. Regular assessments and reporting will be conducted through the aid of external or internal experts. Eligible assets approved by the AGBET during each financial year will be added to a register of eligible assets and reported in the annual Use of Proceeds Report.

The issuer informs us that in the event of a controversial project, the AGBET will first secure the necessary clearance and/or endorsement from the appropriate government agency and relevant local associations /organisations.

Life Cycle Assessments, avoidance of lock-in, avoiding rebound effects, climate risk assessments or supply chain considerations are not yet part of the screening projects for selecting new projects.



Management of proceeds

CICERO Green finds the management of proceeds of ANI to be in accordance with the Green Bond Principles. ANI will use green bond proceeds to finance or refinance eligible assets, and the corporate finance team will separately manage any surplus funds. The proceeds will be disbursed on a per-project basis in tranches. If the value of projects being undertaken by ANI is greater than the proceeds of green bond issuance, ANI will fund these projects through traditional funding sources. The corporate finance team will track the receipt use of a green proceeds via its internal reporting systems, to ensure that eligible assets financed or refinanced by green bonds are appropriately identified. The lookback period would be three years for financing project extensions.

The group treasury team will monitor the use of proceeds every quarter to ensure they remain allocated to the eligible assets. If green bond proceeds have not yet been assigned to eligible assets or have been returned and are awaiting re-allocation, unallocated proceeds shall be managed by the corporate finance team and held as cash or cash equivalent instruments, held in temporary investment instrument not inconsistent with the delivery of low-carbon and climate resilient economy, before being redrawn for use for eligible assets.

When the green bond is outstanding, ANI shall disclose its periodic reconciliation of the green account against project expenditures and show how any unallocated balance is placed. An auditor will verify the internal tracking and allocation process. Green bond proceeds will be used only to finance projects which are aligned with the UN Sustainable Development Goals and AgriNurture's GREEN Vision 2030. Potential unallocated proceeds cannot be invested in fossil fuel assets or companies associated with oil and gas. Furthermore, since ANI is a listed company, transparency in its operations is a regulatory requirement of the Philippine Stock Exchange.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs. Procedures for reporting and disclosure of green finance investments are also vital to build confidence that green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

ANI will regularly monitor and report the use of green bond proceeds until full allocation. The investor report will consist of an allocation report and an impact report.

The allocation report will be prepared for each calendar year and show aggregated data (not project-by-project data) of the total amount of green bond proceeds deployed.

The impact report will for each calendar year show aggregated data, and data on project level when this is feasible. ANI intends to align its reporting with the ICMA Handbook. Examples of indicators are:

- Improved pH value of wastewaters (pH)
- Annual greenhouse gases avoided (tCO₂eq)
- Annual renewable energy generation (GWh)
- Reduction of agricultural water consumption (km³)

The Pollution Control Officer will be responsible for reporting. All data required for the calculation of the GHG-emissions, including the grid factor used, will be disclosed. AGBET may form a sub-committee in charge of the reporting to investors and employ internal/external experts for the purpose if needed. All green bond investor reports will be made available on the issuer's website. Two specialised universities in the Philippines will externally evaluate the impact reports.



3 Assessment of AgriNurture Inc.’s green bond framework and policies

The framework and procedures for ANI’s green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where ANI should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in ANI’s green bond framework, we rate the framework **CICERO Medium Green**.

Eligible projects under the ANI’s green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed and that the selection process should be “well defined”.

Category	Eligible project types	Green Shading and some concerns
Renewable energy	<ul style="list-style-type: none"> The Company will install Solar panels on the roofs of stores, terminals, infrastructures, and distribution centres. It will cut energy usage and reduce the environmental footprint. Energy-efficient solar-powered cold storage investments will reduce carbon emission. The new cold storage capacity to be built will extend the shelf life of produce and minimise spoilage/weight reduction. This asset will also improve food safety and food security. The new product lines for plant-based frozen items and dairy-free coconut ice cream requires investment in cold storage facilities and cold chain refrigeration equipment. Solar panels and solar tiles will be utilised as a 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ According to the issuer, existing solar installations supply 50% of the electrical needs in their operations. The goal is to achieve 90% renewable sourcing by 2025. According to ANI, CO₂-emissions from purchased electricity were reduced from 440 to 221 tons from 2019 to 2020 because purchased energy from a fossil-dominated grid was partly replaced by renewable energy generation. ✓ According to the issuer, the cold storage facility will be closer to market and therefore reduce carbon footprint due to reduced transport of produce and reduced food waste. ✓ Cold storage facilitates reduction of food waste which is considered a sound climate mitigation activity. ✓ The investment will cover both the cold storage extension and the solar panels.



primary energy source for the construction.

- ✓ According to the issuer, the plant-based products include pies, vegetarian balls, and vegetarian chicken/pork/fish meat. Plant-based products normally have a lower CO₂-footprint than animal products.

Energy Efficiency

Greenhouse facilities and cultivation of Shiitake Mushrooms project. The production of mushroom logs will be produced locally, resulting in fewer emissions.

- Introduction of the Energy Management Centre to monitor and manage energy consumption across all key activities, including retail stores, manufacturing plants, and other outlets. Real-time visibility of our energy usage and allow us to optimise our energy consumption through data and analytics. Measurements will be made across soft and hard indicators. ANI will conduct annual Energy Audits through a third-party contractor to identify critical energy inefficiency areas by analysing energy patterns and identifying areas to improve efficiencies while developing optimal investment solutions.

Medium Green

- ✓ According to the issuer, the shiitake mushroom production will reduce the carbon footprint due to the reduced need to source this produce from other provinces. This will reduce emissions from transport.
- ✓ Greenhouses can be energy intensive and depending on the energy source, contribute to high GHG footprints. According to the issuer, electricity for the greenhouses will be sourced from renewable sources such as the green energy provided from a geothermal energy plant and from solar panels.
- ✓ According to the issuer, agricultural water consumption for shiitake mushroom cultivation is estimated to be reduced with ca 78% in the next six years due to the use of the hydroponic and aquaponic greenhouses. The goal is to eventually achieve no water wastage by reusing 100% of the treated wastewater for hydroponics and shitake mushroom cultivation.
- ✓ ANI informs us that cooling is provided via misting and thus refrigerants are not needed. Heating is provided by natural and artificial lighting and the greenhouse effect.
- ✓ Energy management to increase energy efficiency is important to increase the awareness of the energy used and to reduce emissions.

Pollution prevention and control

- The retail and manufacturing divisions' plastic products for packaging will be reduced gradually and replaced with bio friendly alternatives. The indication is that it would correspond to 48 million pieces being de-plasticised (forks, straws, salad packing, etc.).

Dark Green

- ✓ The investments will be related to the replacement of plastic products in packaging and store operations to bio-friendly alternatives.
- ✓ Reducing single use plastics and increasing reuse is considered important in the circular economy.
- ✓ According to the issuer, this refers to a gradual reduction of use of plastics within a 5-years period.



Environmentally sustainable management of living natural resources and land use

- The Company will invest in Banana plantations. These plantations traditionally require high water consumption, and they make intensive use of pesticides. ANI plans to invest in organic/sustainable banana plantations by introducing a combination of proven organic technologies and methods. The Banana plantation project will promote the soil's biodiversity, reduce waste of water resources (e.g., drip irrigation), and gradual introduction of biocontrol mechanisms (i.e., natural enemies to reduce pests during disease management).
- The BigMa project will reduce rice importation and reduce the carbon footprint by transporting less rice from Southeast Asia to the Philippines. The substitute is corn which requires less water footprint to produce.
- The Company will invest in the development, operation, and management of the rice and corn plantation. Simultaneously, the indigenous people will be entitled to an annual royalty fee Annual Net Profit share in the project. All employment and labour requirements of the project shall be primarily sourced from the indigenous people. Ten thousand new jobs are expected to be created under this venture.
- ANI will make capital investments to integrate manufacturing operations in Mindanao, including the relocation of operations of Fruitilicious from Cagayan de Oro to Davao. Mindanao integrated processing facility will expand organic coconut water production on Mindanao island to capture North America's growing demands. The primary aims of the

Medium Green

- ✓ The issuer informs us that organic fertiliser and more natural growing methods will be used in growing the bananas. ANI estimates a reduction of GHG in the sowing, growing, spraying, packing, transport and other processes in the banana production, from the current 28.6M tCO₂eq (data based on 1000 hectares planted to Cavendish Banana for export) 24.4M tCO₂eq in 2026. According to the issuer this represents a reduction of 5% in 2022, 10% in 2024 and 15% in 2026.
- ✓ ANI exports parts of its produce (e.g. bananas and coconut water). Transport of ANI's products takes place mainly by road but also by sea (not by air). In 2020 GHG emissions from sea transport to consumer markets were 1.144 tons CO₂ and represented 1.2% of the scope 3 emissions, whereas truck transport emissions were 33.21 tons and represented 34.7% of the scope 3 emissions.
- ✓ The issuer informs that the banana production will be intercropped to reduce monoculture production where the location permits it.
- ✓ Rice production may result in high GHG-emissions from among other methane from the paddy-fields.
- ✓ The issuer informs that the main investments under the BigMa project will be related to organic corn production.
- ✓ According to AgriNurture they have upon mutual agreement entered into an agreement with a native tribe to plant rice and corn within the tribe's ancestral land. The project aims to generate direct and indirect employment to the tribe, as well as the nearby communities.
- ✓ According to the issuer, the BigMa¹ project will reduce the carbon footprint by reducing the import of rice, as well as lessen the water footprint of local corn production which the issuer claims is only 25% compared to rice production. Estimated reduction in water consumption is 2000 liters per kg of corn replacing rice. Emission reductions are also expected from a reduction in the use of

¹ The BigMa is a product line using a rice-corn blend formula of 50:50 ratio to reduce import requirements of the Philippines with 50% and a substitute for local corn production.



- Mindanao Integrated Processing Facility are to produce quality products that contain no chemical residues, the development of environment-friendly production methods and production techniques that maintain fertile soil.
- Contract growing via the innovative digital platform with ANI's affiliated banks ensures food security and food safety. The platform will connect millions of farmers across the country. The company will provide financial cards to the farmers via its subsidiaries and affiliates, including the Agricultural Bank of the Philippines, Agri Token, Inc., and Binangonan Rural Bank with EMI License and EMV compliance. The card also contains an e-wallet and QR-code to claim interventions provided by the Philippine government.
- ✓ fertilisers and pesticides, and from reduction in transport from import of rice.
 - ✓ ANI confirms that no new land will be used for the establishment of the plantations which will decrease the risk of deforestation.
 - ✓ Organic methods of planting bananas, rice and corn will be funded, as well as the development and operation of the plantations.
 - ✓ According to ANI, contract farming enables the company to work directly with the farmers to reduce the use of water, fertilisers and pesticides. The target is to reduce the use of chemical fertilisers by 10% in 2022 and by 25% by 2025 among ANI's contract farmers.
 - ✓ The issuer informs that the coconut water is certified according to i.a. the HACCP Codex², the Non-GMO-project³, Good Manufacturing Practice⁴ and USDA National Organic Program⁵.
 - ✓ According to the issuer, the main part of the electricity for the coconut water production line will be sourced from renewable energy.
 - ✓ Fossil fueled machinery cannot be funded.
 - ✓ Increased digitalisation will improve the communication with contract farmers, and give them financial access. It also enables the farmers to sell their products online as well as buy their production needs online. This will also enable discussions related to the need for growing and harvesting of crops, which again will decrease wasted produce.
 - ✓ Organic farming may have many positive environmental features, however the variety of different goals of organic farming (health, animal welfare, environment, climate) is too complex to allow an overarching climate assessment on the benefits of organic versus conventional farming.

Clean transportation

- A transition towards electric transport replacing fossil-fueled trucks & vehicles.
- ANI plans to roll out a Mobile Cart (Electric Vehicles or Power Inverter type), which serves as its rolling store

Dark Green

- ✓ ANI informs us that they are working on transitioning its fleet of trucks and cars to electric transport, and confirms that electrically powered mobile carts, conventional delivery trucks and vehicles

² Hazard original and critical control point. [HACCP Principles & Application Guidelines | FDA](#)

³ [The Non-GMO Project – Everyone Deserves an Informed Choice](#)

⁴ [Good Manufacturing Practice \(GMP\) Resources | ISPE | International Society for Pharmaceutical Engineering](#)

⁵ [National Organic Program | Agricultural Marketing Service \(usda.gov\)](#)



	version of ANI Mart. The mobile cart can also be utilised for deliveries and serves as a mobile billboard.	will be supported. Fossil fueled and hybrid vehicles will not be funded.
Sustainable water and wastewater management	<ul style="list-style-type: none"> Improvement of wastewater effluent values and reducing agricultural water consumption by upgrading the existing mechanical and electrical mechanisms of all wastewater treatment facilities. Increase in production of organic canned drinks. The expansion of the canning line ultimately promotes organic farming, which reduces the exposure of products to chemicals, helps build healthy soil, supports water conservation and water health, and fights the effect of global warming. 	<p>Medium to Dark Green</p> <ul style="list-style-type: none"> ✓ According to the issuer, wastewater will be treated with effluents in such a way that it will not cause water pollution if it will be released to the open environment. ANI expects an improved wastewater effluent value from pH 8.8 to pH 8 in 2022, pH 7.5 in 2024 to pH 7.0 in 2026. ✓ ANI intends to use the treated wastewater to water its crops and other agricultural products. ✓ AgriNurture estimates a reduction in GHG from coconut and fruit materials of around 20% due to reduced use of fertilisers and pesticides. ✓ According to the issuer, the main parts of the electricity for the canned drinks production line will be sourced from renewable energy. ✓ We note that the issuer has chosen to list the project related to organic drinks under this category due to improvement in wastewater treatment.
Eco-efficient and/or circular economy adapted products, production technologies, and processes	<ul style="list-style-type: none"> The solar-powered Hydroponics and Aquaponics greenhouse infrastructure aim to produce high-value crops. They will serve local communities and reduce the water footprint. Without the need to source such crops from other provinces – it will equally reduce the need for transport. Shiitake Mushrooms and mushroom logs production will be expanded, supported by research and development in collaboration with Benguet State University. 	<p>Medium Green</p> <ul style="list-style-type: none"> ✓ Hydroponic and aquaponic greenhouses for can have an important role to play in food production, among others because pesticides used for soil borne pests as well as soil fertilisers are not needed. Space needed will be reduced compared to traditional field farming methods. ✓ According to the issuer, the technical know-how from the Benguet State University will help ANI improve its production to be more green-leaning.

Table 1. Eligible project categories

Background

ANI operates in a sector with important linkages to climate change – both in terms of mitigation and adaptation. On the one hand, agriculture can be both a source and a sink for GHG emissions – depending on production methods and crop types. On the other hand, agriculture is also a sector that is very vulnerable to climate change (such as changes in temperature and seasonal patterns, drought, flooding, and extreme weather events) and can itself be a potential source for adaptation and resilience through its provision of ecosystem services and regulating



services (e.g. reducing soil erosion). The Philippines is among the most vulnerable countries to climate-related weather events and temperature increases and has already experienced some increased intensity in heavy rain and wind intensity in cyclones. The Philippines is exposed to tropical cyclones, with an annual average of 20 tropical cyclones⁶.

The Philippines gets around 88% of its energy from fossil fuels and around 10% from low carbon energy sources, including renewables. Approximately 36% of fossil fuels are coal⁷. However, the Philippines is the first country in the Southeast Asian region to set a moratorium on new coal and implementing several measures to support renewables⁸.

Agriculture is an essential sector in the Philippines. However, according to the World Bank, the Philippine agro-sector is in a need of reform to create a more efficient and sustainable sector. The growth in the agriculture sector has been slower than the growth in the overall economy and was 1.3% between 2016 and 2019⁹.

Organic farming has many environmental benefits, such as reduced use of fertilisers and pesticides, which in turn tends to improve soil health (reduced erosion, greater carbon and water retention), and greater biodiversity. On a per hectare basis, GHG emissions will be lower than with conventional farming. However, as organic farming tends to be less productive (per hectare) there is an argument that organic farming may lead to greater overall GHG emissions globally as other grasslands and forests are cleared for agriculture. There is an ongoing debate about this amongst scientists and policymakers, which investors should be aware of.

The banana sector is of economic importance for the Philippines. Banana production is in some cases associated with deforestation, high use of pesticides to maximise yield, and risk of depletion of soil due to mono-crop cultivation. A combination of strict regulations, economic incentives for improved technologies, and broadening the use of nonchemical methods must all be included in a strategy to meet this challenge. In addition to the regulation of chemical applications, there are a number of complementary measures or production techniques that can contribute to reducing environmental side effects. Among these are the adoption of improved water management techniques and organic production as well as avoiding monoculture cultivation. Organic production offers additional challenges to combat major diseases, as organic production requires more intensive management and knowledge¹⁰.

Food production is responsible for around a quarter of the world's greenhouse gas emissions. Animal-based food tends to have a higher carbon footprint than plant-based food, where the largest share of emissions result from land-use change and emissions during farming. GHG emissions from transportation typically make up a small amount of the emissions from food and what you eat is far more important than where the food travelled from. For plant-based produce with relatively small GHG-emissions, the emission from transport will however make up a larger share of the emissions, even if they are small compared to other food products¹¹. For banana production, the use of nitrogen-based fertilisers, the use of pesticides and transport represents the highest emission sources¹².

⁶ [PAGASA \(dost.gov.ph\)](http://dost.gov.ph)

⁷ [Philippines: Energy Country Profile - Our World in Data](#)

⁸ [Philippines | Climate Action Tracker](#)

⁹ [World Bank Document](#)

¹⁰ <http://www.fao.org/3/i5697e/i5697e.pdf>

¹¹ [You want to reduce the carbon footprint of your food? Focus on what you eat, not whether your food is local - Our World in Data](#)

¹² [Carbon footprint of the banana supply chain | World Banana Forum | Food and Agriculture Organization of the United Nations \(fao.org\)](#)



In the Philippines, rice is cultivated either in rainfed submerged fields or in irrigated fields. Methane emitted through anaerobic decomposition of organic matter will be ¹³. Corn-production is considered to have considerably lower GHG-emissions than rice-production, primarily due to the methane emissions coming from the rice paddy fields. Corn-production will also require substantially lower water use which is favourable in dry areas such as parts of the Philippines.

In March 2020, a technical expert group (TEG) proposed an EU taxonomy for sustainable finance that included a number of principles including “do-no-significant-harm (DNSH)-criteria” and mitigation thresholds for various types of activities.¹⁴ In November 2020, the EU published its draft delegated act to outline its proposed technical screening criteria for climate adaptation and mitigation objectives, respectively, which it was tasked to develop after the Taxonomy entered into law in July¹⁵. ANI’s eligible activities might relate to several taxonomy activities, among others *Agriculture, Electricity generation using solar photovoltaic technology, Urban, suburban, and road passenger transport in the draft published, Water supply, sewerage, waste management, and remediation* (a group of categories) in the draft published in November 2020¹⁶. CICERO Green has not assessed alignment with the EU Taxonomy in this SPO, but note that some of the criteria related to Agriculture are:

- Crops should not be grown on land with high carbon stock: wetlands, peatlands, continuously forested areas, land with a certain number/height of trees, and permanent grasslands must be maintained.
- Farms must create a Farm Sustainability Plan which must be verified annually.
- Farms must comply with management practices given in the EU Taxonomy and keep records. The practices contain details on fertiliser use, energy use, crop rotation etc.
- DNSH criteria are related to i.a. climate change adaptation, water stress, pollution prevention from fertiliser use.
- Livestock production is classified as a ‘transitional activity’, and criteria are listed around feeding practices (to reduce GHG emissions)

Governance Assessment

Four aspects are studied when assessing the ANI’s governance procedures: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

ANI has the ambition to produce high-quality food in an organic and sustainable way. The company has an overarching target for the AgriNurture group to be climate-neutral by 2030. ANI also has targets related to the deployment of renewable energy, organic farming and to the reduction of water consumption, fertiliser and pesticide use to make the production more sustainable.

The company has calculated their scope 1, 2, and 3 emissions, and is planning to include this in future reporting where relevant. ANI has performed climate risk assessments of their operations and supply chain. They have not

¹³ [\(PDF\) Greenhouse gas emissions from rice production in the Philippines based on life-cycle inventory analysis \(researchgate.net\)](#)

¹⁴ Taxonomy: Final report of the Technical Expert Group on Sustainable Finance, March 2020.

https://ec.europa.eu/knowledge4policy/publication/sustainable-finance-teg-final-report-eu-taxonomy_en

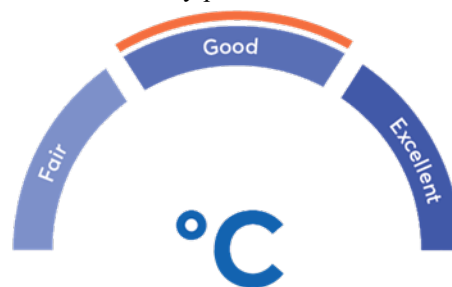
¹⁵ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12302-Climate-change-mitigation-and-adaptation-taxonomy#ISC_WORKFLOW

¹⁶ [EU Taxonomy: Annex to the Commission Delegated Regulation, supplementing Regulation \(EU\) 2020/852, November 2020. https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-da-2020-annex-1_en.pdf](#)



yet started reporting in line with the TCFD-recommendations but inform us that they plan to do this within 2021. In 2021 the company also aims to develop Life Cycle Assessments of their products.

ANI has taken an active stand towards their suppliers and is performing a systematic evaluation, including monitoring of environmental compliance through, for example, annual visits. Planned impact reporting related to clean transportation, sustainable water, and environmentally sustainable management of living natural resources and land use is limited and could be expanded.



The overall assessment of ANI's governance structure and processes gives it a rating of **Good**.

Strengths

ANI's shows a genuine interest in and has high ambitions towards being a sustainable producer of organic agricultural food-products. The agricultural sector is essential in the Philippines, but there is a need to increase productivity and increase climate resilience and reduce GHG-emissions from the sector. ANI is targeting increased use of organic farming methods and aims to be carbon neutral by 2030. We welcome the company's leadership and enthusiasm in this work.

It is a strength that ANI is focusing on the generation of renewable energy. It is particularly important in a country with a high share of fossil energy in their electricity grid, such as the Philippines. ANI's leadership in this area can also function as a motivator for other companies and individuals to invest in renewable energy sources like solar power.

ANI is cooperating with several universities, e.g. the University of Benguet on Luzon island. The production and cultivation of mushroom logs are carried out in cooperation with the university, and technical know-how from the University will also help ANI improve its production to be more green-leaning.

Given the country context in which the company operates, with relatively lax legal standards compared to companies operating e.g. within the EU, ANI shows good environmental governance practices with ambitions to improve further. Even if the Philippines is a regional leader in sustainable finance¹⁷, the issuance of green bonds is still not common and ANI's green bond issuance will increase the share of green investment opportunities in the country.

Weaknesses

We find no material weaknesses in AgriNurture's green bond framework.

Pitfalls

ANI produces for the local Philippine market but also exports to Asia, Middle East, Europe, and North America. Transport of ANI's products takes place mainly by road but also by sea. To ensure that value chain emissions are kept at a minimum, we encourage the company to monitor transport options with an eye to choosing the lowest possible emission options.

¹⁷ [Philippines cited for ASEAN green-finance leadership | AC Energy | Ayala Corporation's energy platform](#)



The Philippines is exposed to climate-related weather events tropical cyclones, and as such, ANI is vulnerable to physical climate change. However, ANI has conducted climate risk assessments and mitigating activities to reduce the risk.

ANI is using the refrigerant R404a in their cooling devices. R404a is a HCFC (hydrochlorofluorocarbon)-free refrigerant used to replace HCFC with high Global Warming (GWP) and Ozone Depletion Potential (ODP). R404a have zero ODP but have a very high GWP¹⁸ and can, if not handled properly when decommissioned, leak and lead to increased GHG-emissions. Production and supply of R404a are gradually being banned in several countries, including India. CICERO Green encourages AgriNurture to consider replacing the use of R404a with more climate-friendly alternatives like ammonia and CO₂ when replacing existing devices. ANI informs us that they shifted from ammonia to R404a due to safety concerns, but they are planning to change to a more climate friendly alternative.

Research findings on the environmental impact of organic and sustainable agriculture are constantly evolving. The relationship between farming practices and GHG emissions is of particular interest to green bond investors and the climate change community at large. ANI should be mindful of staying abreast of new developments in the agro-scientific community, deploying the best available technologies and practices, and continue to communicate changes and results transparently and honestly to its investors.

¹⁸ R404a has a Global Warming Potential of 3922 in a 100-years perspective. [Climate-friendly alternatives to HFCs and HCFCs \(europa.eu\)](#)



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	AgriNurture Inc. Green Bond Framework, March 2021.	Green Bond Framework.
2	AgriNurture Inc. Green Bond Presentation Deck, February 2021.	Giving information relevant for green bond investors.
3	AgriNurture Inc., Amended manual for corporate governance, dated 31-05-2017.	Institutionalise the principles of good corporate governance in AgriNurture Inc.
4	AgriNurture Inc., Code of Business Conduct and Ethics, February 2021.	Guiding employees when dealing with business for and on behalf of the ANI Group.
5	AgriNurture Occupational Health and Safety Policy, April 2019.	Establishes a guideline for implementation of the best practices in health and safety in the workplace.
6	Internal Excel Sheet giving information on the use of funds.	Giving input to e.g. environmental benefits of the different suggested projects.
7	Certificate from SGS on the production of Coconut water according to HACCP Codex, dated June 2019.	Certifying that the company is meeting the required criteria.
8	Certificate from SGS on the production of Coconut water according to Good Manufacturing Practice, dated June 2019.	Certifying that the company is meeting the required criteria.
9	Certificate from ECOCERT according to the USDA National Organic Program, dated July 2020.	Certifying that the company is meeting the required criteria



Appendix 2: About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognised as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD).

