Carbon Neutrality and Green Impact Report 2020



Asia Green Fund 绿动资本

2021.4



AGF'S DECLARATION ON GREEN IMPACT INVESTMENT

As China's leading and the most influential market-oriented green impact private equity investment institution, we aim to:

- Adhere to the vision of "Invest Greenergize China Impact Asia", and take market-driven approach to investing in companies that can maximize green impact;
- Make a positive contribution to "carbon- neutrality" and achieve a positive total annual carbon emission reduction from all assets under management;
- Uphold our commitment to green impact investing, and use a series of quantitative indicators including carbon emission reduction and other green benefits as criteria for investment decisions;
- Continue to assist portfolio companies in formulating carbon-neutrality strategies, and help them become a benchmark for green development in their respective sectors;
- Leverage our network to build a carbon neutral ecosystem that connects investors, portfolio companies, environmental protection organizations, financial institutions, industry associations, independent certification/assessment agencies, carbon trading platforms and other partners;
- Build a scientific and objective evaluation model through in-house development and in collaboration with external parties, and utilize the model to continuously evaluate and report the carbon footprints of the fund manager and assets under management;
- Report our green impact practices and results, on a regular basis, to our investors, portfolio companies, the general public, and international impact investors in our network.



Executive Summary

In 2020, China made pledges to reach peak emissions by 2030 and become carbon neutral by 2060. These ambitious goals will require trillions of dollars of investment each year into green businesses and technologies to transform traditional industries. Private equity firms can play an important role in leading the transformation. As one of the earliest private equity firms focusing on green impact investment in China, Asia Green Fund (AGF) has established a comprehensive green impact investment system through years of industry experience. AGF's system has well-established policies, processes, and methodologies to influence and empower portfolio companies to champion green development in their respective sectors. This report provides a comprehensive summary of the carbon emissions reduction and other environmental impact contributions, in quantitative terms, of the portfolio companies under AGF's management in 2020. This is the first ever carbon neutrality and green impact performance report published by a private equity firm in Asia.

As a market-driven private equity firm, AGF has been pursuing both financial return and environmental impact (green impact) in its investments since its inception. AGF takes a proactive approach to selecting and investing in companies with evidence or potential to make a significant green impact. AGF has incorporated environmental, social, and governance (ESG) evaluation metrics into its investment and post-investment management processes to ensure positive contributions to carbon neutrality and green development in every single investment and its entire investment portfolio.

In practicing green impact investing, AGF pays particular attention to proactively influencing and empowering its portfolio companies through its role as a shareholder. In addition to helping portfolio companies improve their financial and operational capabilities, AGF also guides them in establishing "green strategies", introducing financing sources that share green ambitions and facilitating collaborations with industrial and strategic partners. Besides standard financial and operational monitoring and reporting, AGF has developed a quantitative impact assessment model, the Carbon Neutrality and Green Impact Assessment System (CNGIAS), to constantly evaluate the green impact performance of each portfolio company. With the basic financial and operational data inputs, CNGIAS quantifies the environmental impact of each portfolio company, including but not limited to the carbon emissions reduction, air pollutant emissions reduction, wastewater reduction, hazardous wastes reduction, etc.



By also factoring in the investment size, the model generates two indices to quantify environmental impact by investment. One index, called the AGF Carbon Neutrality Index (AGF CNI), is designed to reflect the carbon emissions reduction for every RMB 100 million Yuan of AGF investment. The other index, the Green Impact Index (GII), is designed to reflect the cost savings in environmental remediation due to reduced air pollution, water pollution, and waste of every RMB 1 Yuan of AGF investment. The two indices are first calculated for each portfolio company and then aggregated at the fund level over the entire fund lifecycle to reflect the total contribution of the fund.

CNGIAS was developed based on proprietary research by AGF, with support and collaboration from third-party institutions. AGF works closely with portfolio companies, leading internationally renowned independent verification, authorization, and certification organizations, environmental data, and carbon management service providers, to ensure the objectivity, integrity, and accuracy of the assessment.

Today, AGF is pleased to release the 2020 Annual Carbon Neutrality and Green Impact Report. This report quantifies and presents the environmental contribution of each portfolio company as well as the aggregated contribution at the fund level of all the assets under management. Through the long-term monitoring of these indicators, AGF will continuously guide its portfolio companies on carbon neutral and green development strategies and optimize the fund's overall green impact investment portfolio.

The 2020 report shows that assets under AGF's management have achieved 2.64 million tCO2e in carbon emissions reduction, nearly 800 tons in air pollution reduction (excluding CO2), 1.64 million tons in water pollution reduction, and 45,000 tons in hazardous waste reduction in year 2020. The above impact implies that AGF has achieved 173,000 tCO2e reduction for every RMB 100 million Yuan invested and saved RMB 0.36 Yuan in environmental remediation on every RMB 1 Yuan invested.



Asia Green Fund Carbon Neutrality and Green Impact Key Performances in 2020



Green Impact Index

Cost savings (RMB Yuan) for carbon mitigation and environment treatment driven by every RMB 1 Yuan investment by AGF in 2020

*Enterprises invested less than 12 months and those have been exited by the end of 2020 are not included



CHALLENGES AND OPPORTUNITIES FOR PRIVATE EQUITY IN

PURSUING CARBON NEUTRALIZATION GOALS

1.1 CARBON NEUTRAL AND GREEN DEVELOPMENT TRENDS

Since the Industrial Revolution, climate change driven by carbon dioxide and other greenhouse gases has been exacerbated, becoming one of the major challenges facing mankind. In 2015, 195 countries around the globe signed the Paris Agreement, a legally binding international treaty on climate change, which set a clear goal to limit global warming to well below 2 °C, and preferably to 1.5 °C, compared with pre-industrial levels. To achieve this long-term temperature goal, countries established various timelines for reaching peak emissions of greenhouse gases in efforts to achieve a carbon neutral world by mid-century. According to the Intergovernmental Panel on Climate Change (IPCC), carbon neutrality refers to the balance of anthropogenic carbon emissions and carbon removal on a global scale, that is, net-zero carbon emissions. In 2020, 19 signatory countries submitted long-term, low-emission development strategies (LTS) to the United Nations Framework Convention on Climate Change (UNFCCC) in response to the requirements of the Paris Agreement. Among them, 11 countries committed, to various extents, to achieving carbon neutrality targets in their respective strategies.¹

In September 2020, China declared its goal to hit peak CO₂ emissions by 2030 and become carbon neutral by 2060. China's commitment to carbon neutrality has greatly boosted the confidence and determination of the global climate governance and is an important pillar for achieving global carbon neutrality targets.

China's 30.60 Targets have brought new challenges and opportunities for private equity investors. On April 15, 2021, at a high-level forum on "Green Finance and Climate Policies" jointly held by the People's Bank of China (PBOC) and the International Monetary Fund (IMF), Yi Gang, governor of PBOC, predicted that it would require investments of RMB 2.2 trillion per year by 2030, rising to RMB 3.9 trillion per year by 2060, to achieve the country's carbon neutrality goal. Public funds are far from sufficient, and more private investments would be

¹ UNFCCC. The Paris Agreement. 2016[2021.04]. https://unfccc.int/process-and-meetings/the-parisagreement/ the-paris-agreement



needed to achieve carbon emission reduction. According to preliminary estimates by the China Investment Association, about RMB 70 trillion of infrastructure investment will be directly or indirectly tapped into by 2050.² Most of these green and low-carbon projects rely on private capital, and external financing channels usually lead to private equity. Therefore, the establishment of a green financial system with private equity as a major component is crucial to the promotion of green and low-carbon projects.

1.2 GREEN IMPACT INVESTING FOR CARBON NEUTRALITY

A challenge facing private equity firms is how to play an effective role leading the way for green investment and to amplify the impact of the capital invested and assets under management in order to achieve the carbon neutrality targets.

In the 1990s, "responsible investing" emerged as an investment philosophy that promotes environmental protection and sustainable development. Since then, investment institutions have gradually shifted from simply excluding companies with negative effects on society and the environment to more comprehensive and systematic evaluation and selection of enterprises with positive ESG attributes in their investments. Currently, ESG and impact investing have become the most important models for the international community to promote sustainable development goals.

As carbon-neutrality has gradually become the focus in all walks of life worldwide, more and more financial institutions have started to realize the importance of green investing. Additionally, new concepts focusing on sustainable investments such as green investment, ESG, and impact investment are on the rise. Various organizations have developed a series of sustainable investment frameworks, such as the one raised by the GRI (Global Reporting Initiative), ESG integration process specifications recommended by UN-PRI (United Nations Supported Principles for Responsible Investment)/GIIN (Global Impact Investing Network) and UNSDG (United Nations Sustainable Development Goals).

ESG INVESTING

As mentioned, ESG stands for Environment, Social Responsibility and Governance. ESG investing refers to an investment class that seeks to invest in companies that have positive environmental, social, and corporate governance performance through the evaluation of non-

² Institute of Climate Change and Sustainable Development, Tsinghua University, 2020, China's long-term low carbon development strategy and pathways.



financial indicators. Taking environmental indicators as an example, according to the GRI report, "E" (environmental) indicators for publicly listed companies mainly include greenhouse gas emissions, air pollution, wastewater treatment, solid waste treatment, vulnerability to climate change and other environmental risks. However, these indicators are mainly used for informational disclosures and companies are not mandated to make positive contributions. Additionally, stipulations on carbon emissions are very vague.

Today, domestic and foreign institutions continue to develop and improve ESG evaluation algorithms and rating systems based on GRI, ISO26000, SASB and other frameworks. The ratings provide investors with a solid basis to quantitatively evaluate companies' ESG performances on a global scale and build asset portfolios that meet their own ESG investment standards.

ESG investing has been booming globally. According to the GSIA report, as of November 2020, the total ESG assets under management reached US \$31 trillion, accounting for 30% of the global asset management volume. Domestic ESG investment also shared a similar trend. According to the "China Responsible Investment Annual Report 2020", as of the end of October 2020, China had a total of 127 ESG-linked public fund products, totaling RMB 120 billion in assets under management.

IMPACT INVESTING

According to GIIN, impact investing aims to exert a quantifiable, positive impact on the society and environment through investment in companies and organizations. Impact investing often helps companies and organizations complete their plans or projects that are beneficial to society and the environment. Among them, green impact investing focuses on leveraging capital to generate positive environmental impacts including carbon emissions reduction, pollution reduction, and biodiversity protection. In doing so, green impact investors discover and invest in companies with potential to make a significant environmental impact.

In recent years, impact investing has grown rapidly in developed countries. According to the GIIN report, the total assets under management in impact investing class has increased from US \$120 billion in 2016 to US \$500 billion in 2018. Impact investing as a whole can fill the US \$12 trillion gap that is needed to achieve the United Nations Sustainable Development Goals (UNSDG) by 2030, representing a significant investment opportunity.

Given the varied focus of ESG investments and impact investments, AGF believes that green impact investment is an important impetus to help China achieve "carbon-neutrality".



An essential characteristic of private equity investing is discovering and investing in enterprises that can bring about innovation or disruption through technologies and business models. Realizing carbon-neutrality will inevitably rely on the application of an immense amount of innovative green technologies and investments to meet the financing needs of low-carbon and zero-carbon projects. With sufficient capital injection, enterprises will further innovate and develop green technologies.

As the direct shareholders of entrusted assets, private equity firms have direct access to company's detailed data. Compared with general impact rating agencies, the fine granularity of financial and operational data held by private equity shareholders is the key to forming highquality impact investments.

Private equity investors have strong financial acumen. Such institutions are astute in finding the intrinsic link between technologies and business models to carbon-neutrality targets. This allows them to effectively identify industries and companies that have both high economic returns and a positive impact on the environment. Driven by carbon-neutrality, market-oriented private equity investment institutions will continue to optimize their capital allocation to reflect macro-economic development trends that will increasingly favor better energy efficiency, lower fossil fuel-based energy consumption, and less negative environmental impact. It is anticipated that the push towards carbon-neutrality will eliminate obsolete manufacturing capacities and accelerate the application of smarter and greener technologies as a result from both top-down policies and competition in the marketplace.

Private equity investors can leverage their shareholder position through capital to influence and guide portfolio companies on green development strategies and enhance companies' performance through post-investment services including financing, technology integration, and industry collaboration. This will in turn amplify private equity's contribution to "carbonneutrality", resulting in positive environmental impacts.



AGF'S DECLARATION ON "CARBON NEUTRALITY"

2.1 AGF 'S IMPACT INVESTMENT POSITIONING

AGF has set a clear vision, "Invest - Greenergize China - Impact Asia", since its establishment in November 2016 and has become China's leading green impact private equity firm. While pursuing market-risk adjusted financial returns, AGF proactively influences and drives each and every portfolio company on their green development strategies with quantifiable green impact goals.



Figure 1: Illustration of AGF's Impact Investment Positioning

2.2 AGF DECLARATION ON GREEN IMPACT INVESTMENT

As China's leading and the most influential market-oriented green impact private equity investment institution, we aim to:

• Adhere to the vision of "Invest - Greenergize China - Impact Asia", and take marketdriven approach to investing in companies that can maximize green impact;



- Make a positive contribution to "carbon- neutrality" and achieve a positive total annual carbon emission reduction from all assets under management;
- Uphold our commitment to green impact investing, and use a series of quantitative indicators including carbon emission reduction and other green benefits as criteria for investment decisions;
- Continue to assist portfolio companies in formulating carbon-neutrality strategies, and help them become a benchmark for green development in their respective sectors;
- Leverage our network to build a carbon neutral ecosystem that connects investors, portfolio companies, environmental protection organizations, financial institutions, industry associations, independent certification/assessment agencies, carbon trading platforms and other partners;
- Build a scientific and objective evaluation model through in-house development and in collaboration with external parties, and utilize the model to continuously evaluate and report the carbon footprints of the fund manager and assets under management;
- Report our green impact practices and results, on a regular basis, to our investors, portfolio companies, the general public, and international impact investors in our network.

2.3 AGF'S IMPACT INVESTMENT ECOSYSTEM

Building on more than four years of practices, AGF has been devoted to establishing an ecosystem that promotes the green impact of our investments. AGF did so by connecting investors (LPs), portfolio companies, independent institutions, data providers, the general public, and international impact institutions throughout all phases of the fund lifecycle – including investment activities, fundraising, post-investment management, and exits.

Portfolio Companies

When selecting investment targets, we look for companies that share our vision and philosophy of green investment and have the potential to bring green impact to their respective sectors through technological and business innovations. Through equity investments, we bring these companies, with demonstrated capabilities or potential to make green impact, into our investment portfolio. Because we have an in-depth understanding of their businesses and are able to gather critical operational and environmental data from our portfolio companies, we can apply AGF's green impact evaluation model to quantify and track each company's emissions and discharges from their business activities including their supply chain, manufacturing, transportation, consumption, disposal, and recycling. By comparing each company's emissions



to the relative baseline, we can help each portfolio company quantify their contributions to carbon neutrality and other environmental impacts with the results certified by third-party certification institutions.



Figure 2: AGF Green Impact Investment Ecosystem

Independent inspection and certification agencies

AGF actively collaborates with third-party independent inspection and certification agencies to evaluate and certify the methodology for quantifying carbon emission reduction and green impact that was developed internally. On April 14, 2021, AGF and Bureau Veritas signed a strategic cooperation agreement. The two parties agreed to carry out a long-term collaboration in research on green impact assessment systems as well as green assessment/verification projects for AGF's portfolio companies. Bureau Veritas is a world-renowned consulting company offering testing, inspection, certification, and technical support. They have strong capabilities and credentials in providing customers with services related to green development, including training, benchmarking, solutions, measurement, verification, reporting and certification.



Third-party environmental data and carbon management service providers

A growing number of data providers are participating in establishing big data practices with carbon emissions and the environment. AGF has been working closely with environmental data and carbon management service data companies. Access to the associated large databases allows AGF to continuously optimize the green impact assessment system.

Limited Partners (LPs)

When AGF raises a fund, it communicates clearly with LPs about its impact investment strategy of pursuing both financial returns and green impact to make sure all LPs are aligned with AGF. We report carbon emissions reduction and green impact of assets under management and green development strategies to our LPs on a regular basis. We actively connect investors with portfolio companies to look for synergies in business as well as green development.

General Public

AGF recognizes the importance of raising public awareness and participation in environmental protection. Therefore, AGF regularly communicates to the public its green commitment to society as a responsible investment institution. Through publications, seminars, forums, and charity activities, AGF strives to educate the public on carbon emission mitigation and environmental protection while encouraging green and responsible consumer behavior.

International Networks and Alliances for ESG and Impact Investing

AGF is actively working with international institutions on ESG and impact investing. In 2020, AGF officially became a signatory member of the UN-PRI and the GIIN. AGF has already been developing the methodology, processes, and reporting system for impact investing in accordance with international standards. After UN-PRI and GIIN, AGF will be able to work even closer with other global institutions to build green impact investment frameworks and standards. AGF's practice of green impact has also been recognized by international authoritative organizations. In March 2021, Private Equity International (PEI), a global sight and analysis provider for private equity industry, released the "Responsible Investment Report 2021", in which Asia Green Fund was selected from over 130 applicants to be featured in the list of "Innovators in ESG and Impact Investing 2021" for its innovative ideas of promoting sustainable development in China through private equity investing.



S GREEN IMPACT ASSESSMENT SYSTEM

3.1 OVERALL FRAMEWORK

Collaborating with the parties within the above-mentioned ecosystem, AGF has established CNGIS, a comprehensive and quantitative system for carbon neutrality and green impact assessment.

At the data collection layer, companies' financial, operational, and environmental data, industry-specific environmental data, and product- and scenario-based emission factors are gathered and fed into the model. AGF then builds a company-specific business process model for each portfolio company and uses an AGF methodology that has been verified and certified by an independent authoritative institution to calculate and quantify the contribution to carbon neutrality and green impact. Based on key indicators from each portfolio company, the system then aggregates the data from portfolio companies to generate a fund-level carbon neutrality and green impact contribution including all assets under management.



Figure 3: Overview of AGF's Carbon Neutrality and Green Impact Assessment System



3.2 EVALUATION METHODS



Figure 4: Illustration of the Portfolio Company's Assessment Model

OVERVIEW OF CARBON NEUTRALITY AND GREEN IMPACT ASSESSMENT

As mentioned above, based on the understanding and analysis of the business processes of portfolio companies or potential investment targets, AGF builds a company-specific model for evaluating carbon neutrality contribution and green impact. Each model is closely related to the company's operational and business processes. Input parameters include basic operational data (such as project volume and operational data, production and sales, active users etc.) and comprehensive environmental data, including raw materials, supply chain, energy consumption and energy structure, water, gas and solid waste, transportation and recycling, consumption (such as discarding and disposal), etc., as well as the industry's carbon emissions and other environmental big data sources. The output of the model includes each company's environmental impact indicators, such as carbon emissions reduction, energy conservation, and waste reduction. By factoring in the investment size, these indicators can be normalized to generate a carbon-neutrality contribution and green impact per investment unit.



METHODOLOGY, STANDARDS, VERIFICATION AND OPTIMIZATION

To ensure the objectivity and authenticity of AGF's evaluation, the design of the assessment model for each invested company strictly follows the internationally accepted carbon emission evaluation standards, including the corporate and project carbon emission verification standards such as ISO14064 and ISO/WDTR4069, and life-cycle carbon footprint assessment standards, such as ISO14044, ISO14067, and PAS2050. Whenever applicable, the models referenced methodologies of various authoritative carbon credit verification mechanisms including CDM, JI, and China's certified voluntary emission reductions CCER.

AGF works closely with portfolio companies and institutions in the ecosystem. To make a quantitative assessment of a specific company, we analyze the company's operational and business processes, determine organizational boundaries for the verification of carbon emissions and other environmental indicators, establish industry benchmarks, and build the corresponding models. AGF's assessment methodology has been independently certified by an international authoritative verification and certification agency.

AGF's assessment models are easily accessible by enterprises and financial institutions as most of the data inputs into the model are financial and operational data points that company managers and financial investors know well.

We continue to cooperate with external partners, such as authoritative certification agencies, third-party data providers, and environmental modeling and research firms, to optimize our assessment model, enhance data quality, and achieve a higher level of digitization in the data collection process and result certification.

3.3 FUND-LEVEL EVALUATION METHOD

After completing the calculation of the carbon-neutrality and green impact indicators of the portfolio companies, we then aggregate the results from all our portfolio companies to generate the fund-level carbon neutrality and green impact indicators. We then classify and process the data to produce the following indicators:

• Total carbon emissions reduction from assets under management;

•Total reduction in discharge of wastewater, hazardous solid waste, and air pollution from assets under management;

• AGF Carbon Neutrality Index (AGF CNI): carbon emission reduction on every RMB 100 million of AGF investment;

• Green Impact Index (GII): cost savings in environmental remediation due to reduction in wastewater, solid waste, and air pollutants on every 1 RMB of AGF's investment.





Figure 5: Low Carbon Environment's contribution to Carbon Neutrality and Green Impact in 2020

COMPANY PROFILE

Low Carbon Environment Company Limited (Low Carbon Environment) is a one-stop wastefree service provider that invests, designs, builds, and operates hazardous waste treatment projects. The services provided by Low Carbon Environment rely on cement kilns to co-process hazardous waste. The services provided by Low Carbon Environment require lower capital investment and operating costs compared to the other ways to treat hazardous waste. Therefore, the company can generate higher profits while delivering complete disposal and low emissions. Low Carbon Environment is a leader in the harmless disposal of hazardous waste industry.

The traditional process of hazardous waste disposal includes collection, transportation, incineration, and landfill. Each step in the process can cause significant air pollution, soil contamination, and water pollution. Compared to the traditional processes, Low Carbon



Environment uses cement kilns to co-process hazardous waste, an innovative process that has greater advantages in energy consumption, environmental impact, and economics. Because hazardous waste is incinerated in the cement production process, it does not require additional sources of energy for incineration. Additionally, incineration of solid waste generates a considerable amount of energy in the decomposition furnace, reducing the energy consumption in the cement production. Finally, the co-processing mechanism allows remnants from the waste disposal to be mixed with raw materials and fed into cement products, reducing the soil and underground water contamination that is often associated with traditional waste disposal.

Low Carbon Environment has partnerships with the leading cement companies across China, such as Southwest Cement, China United Cement Corporation, China Resources Cement and Yatai Group. As of today, Low Carbon Environment has signed more than 1 million tons/year of contracts, with more than 250,000 tons/year of processing capacity permitted, ranking at the top in the industry.



ASSESSMENT MODEL

Figure 6: Low Carbon Environ's Assessment Model

BUSINESS PROCESS

Low Carbon Environment collects and transports hazardous waste to the co-processing cement kiln. After pretreatment, the hazardous waste is sent to the decomposition furnace, where it is



thermally recycled and mixed with other raw materials to produce the final product. This way, the residues are captured in the cement product. This method has the advantages of low operating costs, considerable profits, and less negative impact on environment.

EVALUATION BOUNDARY

Due to the fact that the waste transportation process by Low Carbon Environment is basically the same as that of the traditional waste process, this evaluation is focused on calculating the energy consumption of the disposal process, the emissions of air pollutants, and the energysaving and environmental protection effects compared with industry benchmarks.

SETTING BENCHMARK

Benchmark 1: Incinerators to treat hazardous waste by incineration and pyrolysis (traditional method for hazardous waste disposal).

Baseline 2: Traditional cement production without co-processing of solid wastes.

KEY PARAMETERS

Key inputs:

• Key processing data:

Treated volumes of solid waste, sludge, and medical waste of each project within an evaluation cycle

• Energy consumption data for hazardous waste treatment:

Coal consumption for co-processing hazardous waste, low calorific value of coal, carbon content per calorific value, carbon oxidation rate, and carbon emission factor

• Cement kiln co-processing energy consumption data, including:

Energy-saving data for cement production (coal demand per unit of cement production with/without hazardous waste used as fuel, coal-induced carbon emission factors, etc.)

• Baseline scenario energy consumption data

Amount of coal per unit of hazardous waste in a conventional incinerator, low-level calorific value of the coal, carbon content per calorific value, carbon oxidation rate and carbon emission factor



Key outputs:

• Carbon emission reduction per unit of hazardous waste co-processed in cement kiln

• Total carbon emission reduction from the disposal of hazardous waste by cement kilns in 2020

EVALUATION RESULT

In 2020, Low Carbon Environment attained a CO_2 emissions reduction of 124,143 tons, a hazardous waste emissions reduction of 29,047 tons, and an air pollution emissions reduction of 169 tons.



THIRD-PARTY CERTIFICATION

INDEPENDENT ASSURANCE STATEMENT



Introduction and objectives of work

BUREAU VERITAS has been engaged by Low Carbon Environment Co., Ltd. (Low Carbon Environment) to conduct an independent assurance to its emission reduction report for applying co-processing of hazardous waste in cement kiln in China. This information and its presentation in the report are the sole responsibility of the Low Carbon Environmental Technology and Carbonstop (Beijing) Technology Co. Ltd. Auditors were not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on its content. **Scone of work**

Main data and emission reduction calculation methodology in the report for period 2020.1.1-2020.12.31

■ The boundary of the project is the Fuquan, Wuhai, Liaoyang and Jiangyou project carried by Low Carbon Environment for applying co-processing of hazardous waste, sludge and medical waste by cement kiln in 2020. During the verification process, the verification personnel interviewed the relevant management personnel from Low Carbon Environment remotely.

- Excluded from the scope of our work is any assurance of information relating to:
 - Positional statements (statements of beliefs, goals, future intention and future commitment);

Operating and Financial data in this Report taken from external sources.

Methodology

As part of its independent assurance, Bureau Veritas undertook the following activities:

- Interviews with relevant personnel providing emission related data;
- Review of documentary evidence produced by Low Carbon Environment;
- Verification of sampled active data and emission factors;

Our work was conducted against Bureau Veritas' standard procedures and guidelines for external assurance of sustainability reports, based on current best practice in independent assurance. For this assignment, we have used the verification rules and instructions IASE3000 and AA1000. The work was planned and carried out to provide limited, rather than absolute assurance and we believe it provides a limited basis for our conclusions.

Conclusion

It has been verified that the Fuquan project, Wuhai project, Liaoyang project and Jiangyou project carried by Low Carbon Environment for applying collaborative disposing hazardous waste, sludge and medical waste by cement kiln in 2020 could result in about 124,142 tCO₂. The accounting method is objective and reasonable, no systematic or material errors was identified;

Statement of independence, impartiality and competence

Bureau Veritas is an independent professional services company that specialises in Quality, Health, Safety, Society responsibility and Environmental management with more than 190 years history in providing independent assurance services. No member of the assurance team has a business relationship with Nuoke. We have conducted this verification independently, and there has been no conflict of interest.



Figure 7: Third-party Certification for Low Carbon Environment



4.2 XIANGXIANG.COM (HOREN)



Figure 8: Xiangxiang's 2020 Carbon Neutrality and Green Impact Results

COMPANY PROFILE

Xiangxiang.com (also known as Horen in oversea markets) is an IoT (Internet-of-Things) enterprise specializing in product design, manufacturing, SaaS (Software-as-a-Service), and services in Returnable Transport Packaging (RTP). Relying on its comprehensive R&D capabilities in logistics packaging across wide ranging industries like IoT technologies and SaaS, as well as its innovation in both technologies and operations, Xiangxiang provides customized logistics and packaging recycling services for bulk liquids, auto parts, food cold chain, biomedicine, and other industries to create low-carbon supply chain services. Xiangxiang.com is building a global service network. It has deployed 30 central warehouses and 2,000 outlets covering 200 cities in China. It has recruited local teams in over 10 countries including the United States, the United Kingdom, Japan, and Germany. The teams provide returnable packaging services for thousands of companies around the world.

In the near future, Xiangxiang.com will make its circular packaging platform an open system, providing technological and digital support to all business partners in the industrial packaging ecosystem building towards a carbon neutral future.



EVALUATION MODEL Traditional n Packaging 000 🛛 Raw materials Manufacturing Disposal Transportation and Use Tracking and Dispatching Services Reuse Xiangxiang 000 🛛 Disposal Transportation and Use Raw materials Manufacturing Smart Packaging Network

Figure 9: Xiangxiang's Assessment Model

BUSINESS PROCESS

Xiangxiang.com designs and manufactures foldable containers/boxes to provide customers with RTP services. Their containers/boxes are made of raw materials such as PP, coloring additives, and steel. The products can be used to meet customers' transportations needs for bulk liquids, fresh produce, and automotive parts etc. The box can last for years and be recycled many times between customer locations and service outlets of Xiangxiang.com. Since the containers/boxes are foldable when empty, they greatly reduce the transportation cost of the return journey. Additionally, the packaging used for Xiangxiang.com is equipped with smart sensors and IoT modules to collect data such as temperature and positioning that are important to specific customers. Utilizing cloud computing and big data, shipping routes can be optimized and rationally scheduled to enhance the utilization of the containers/boxes and reduce the loss rate. At the end of the life cycle, the containers/boxes will be disposed centrally.



EVALUATION BOUNDARY

According to the above-mentioned business process, the evaluation of the carbon footprint and other environmental impacts covers raw material acquisition, manufacturing, transportation, use, and final disposal of packaging materials.

SETTING BENCHMARK

The benchmark here is the standard process that uses disposable cartons to meet the delivery requirements of related products involving raw material acquisition, production, transportation, use, and final disposal.

KEY PARAMETERS

Key inputs:

Five packaging products and accessories for usable containers for fresh food (RPC), liquid tank, auto parts box, EU, and flowers

• Key processing data:

The service life and annual cycle time of packaging materials and accessories of the five commodities and the amount of packaging materials required

• Manufacturing:

Production volume, the total weight of the five major packaging products and accessories, the acquisition of raw materials and the emissions factor of the functional units at the production stage

• Transportation and usage:

The service life of the five major packaging products and accessories plus the annual number of cycles

• Disposal:

Unit emission factors for the five major packaging products and accessories when disposed



• Baseline:

The weight of the disposable cartons and the functional unit emissions factors of the raw materials at acquisition, production, and disposal stages

Key outputs:

- Carbon reduction per unit
- Total carbon reduction

EVALUATION RESULT

Xiangxiang.com has reduced CO_2 emissions by 252,008 tons, waste water discharge by 619,112 tons, and logging by 636,438 tons in 2020.



THIRD-PARTY CERTIFICATION

INDEPENDENT ASSURANCE STATEMENT



Introduction and objectives of work

BUREAU VERITAS has been engaged by Shanghai Xiangxiang Logistics Technology Co. Ltd. (Xiangxiang.com) to conduct an independent assurance to the emission reduction report for its reusable box products in China. This information and its presentation in the report are the sole responsibility of Xiangxiang.com and Carbonstop (Beijing) Technology Co. Ltd. Auditors were not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on its content.

Scope of work

■ Main data and emission reduction calculation methodology in the report for period 2020.1.1-2020.12.31.

The boundary of the project is using 5 types of reusable box products from Xiangxiang.com during raw material, production and recycling stages compared with the scenario of using disposable carton. During the verification, the verification team interviewed the relevant management personnel from Xiangxiang.com remotely.

- Excluded from the scope of our work is any assurance of information relating to:
 - Positional statements (statements of beliefs, goals, future intention and future commitment);
 - Operating and Financial data in this Report taken from external sources.

Methodology

As part of its independent assurance, Bureau Veritas undertook the following activities:

- Interviews with relevant personnel providing emission related data;
- Review of documentary evidence produced by Xiangxiang.com;
- Verification of sampled active data and emission factors;

Our work was conducted against Bureau Veritas' standard procedures and guidelines for external assurance of sustainability reports, based on current best practice in independent assurance. For this assignment, we have used the verification rules and instructions IASE3000 and AA1000. The work was planned and carried out to provide limited, rather than absolute assurance and we believe it provides a limited basis for our conclusions.

Conclusion

It has been verified that using 5 types of reusable box products in 2020 from Xiangxiang.com compared with the scenario of using disposable carton could result in about 250,000 tCO2e during raw material, production and recycling stages. The accounting method is objective and reasonable, no systematic or material errors was identified; **Statement of independence, impartiality and competence**

Bureau Veritas is an independent professional services company that specialises in Quality, Health, Safety, Society responsibility and Environmental management with more than 190 years history in providing independent assurance services. No member of the assurance team has a business relationship with Xiangxiang.com. We have conducted this verification independently, and there has been no conflict of interest.

Pin Tian Assurance Team Leader Bureau Veritas Certification 2021-04 BUREAU VERITAS





CARBON NEUTRALITY AND GREEN IMPACT RESULTS

5.1 PORTFOLIO-LEVEL CARBON NEUTRALITY AND GREEN IMPACT

This report covers all assets managed by AGF, excluding those exited by the end of 2020 and those whose investment period is less than one year as of the end of 2020.



Figure 11: Portfolio company-level carbon neutrality and green impact results

All the portfolio companies have positive contributions to carbon neutrality and other environmental impacts during the assessment period. Through energy conservation and emissions reduction in supply chain, optimization of logistics and sales networks, circular economy, provision of green products, and promotion of green consumption behaviors, AGF portfolio companies have achieved annual carbon reduction ranging from 1,000 tons to 517,000 tons of CO₂ equivalent, wasted water reduction from 88,000 tons to 619,000 tons, hazardous waste reduction from 10,000 tons to 29,000 tons, and air pollution reduction from 169 tons to 266 tons.

Considering the investment sizes, AGF investments in portfolio companies achieved 1,000 to 1,438 million tons of carbon reduction per RMB 100 million Yuan of AGF investment, as defined



by AGF Carbon Neutrality Index. AGF investments achieved RMB 0.01 to 1.09 Yuan in environmental remediation cost savings on every RMB 1 Yuan of AGF investment.

OVERALL PORTFOLIO PERFORMANCE

AGF's managed assets achieved carbon reductions of 2.64 million tons of CO₂ equivalent in 2020, equivalent to the annual carbon emissions of 600,000 vehicles. Considering the capital deployed by the fund, as indicated by AGF Carbon Neutrality Index, AGF investments achieved 170,000 tons of carbon emissions reduction in 2020 on every RAM 100 million Yuan invested. Additionally, for every RMB 100 million Yuan invested, AGF investments reduced 45,000 tons of solid waste, 796 tons of air pollution and 1.64 million tons of wastewater.

In term of cost savings for environmental remediation, every RMB 1 Yuan of AGF investment saved RMB 0.36 Yuan in 2020.



* Excludes enterprises that have withdrawn and invested for less than one year at the end of 2020

Figure 12: AGF investment contribution to carbon neutrality and green impact



OUTLOOK

As China and the world enter a new era of carbon neutral economy, AGF continues to pursue its mission of green impact investing and make its own contribution to help the country achieve its carbon neutrality goal. A systematic, objective, and accurate green impact evaluation system is crucial in helping drive greater participation in green impact investing. In the past few years, AGF has put a great effort into building a green impact ecosystem that integrates stakeholders such as LPs, portfolio companies, international authoritative certification agencies, international impact investing firms, third-party data service companies, and the general public. Based on the positive and close interaction among the participants in the ecosystem, we have successfully built a comprehensive green impact evaluation system.

Through a systematic assessment of our assets under management, we have demonstrated that it is entirely possible for green impact investment firms to achieve market-rate financial returns while making real, quantifiable green impact from every dollar of investment. AGF's practice and results also show that impact investors can amplify the effect of capital on green impact by being a proactive shareholder via influencing and enabling portfolio companies.

We will continue to work closely with our partners and continually quantify, monitor, and report environmental contributions by assets under AGF's management. We will use quantitative results to continuously optimize our green impact evaluation model, help portfolio companies form and optimize carbon neutral and green development strategies, and invest capital in companies that can drive green development.

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