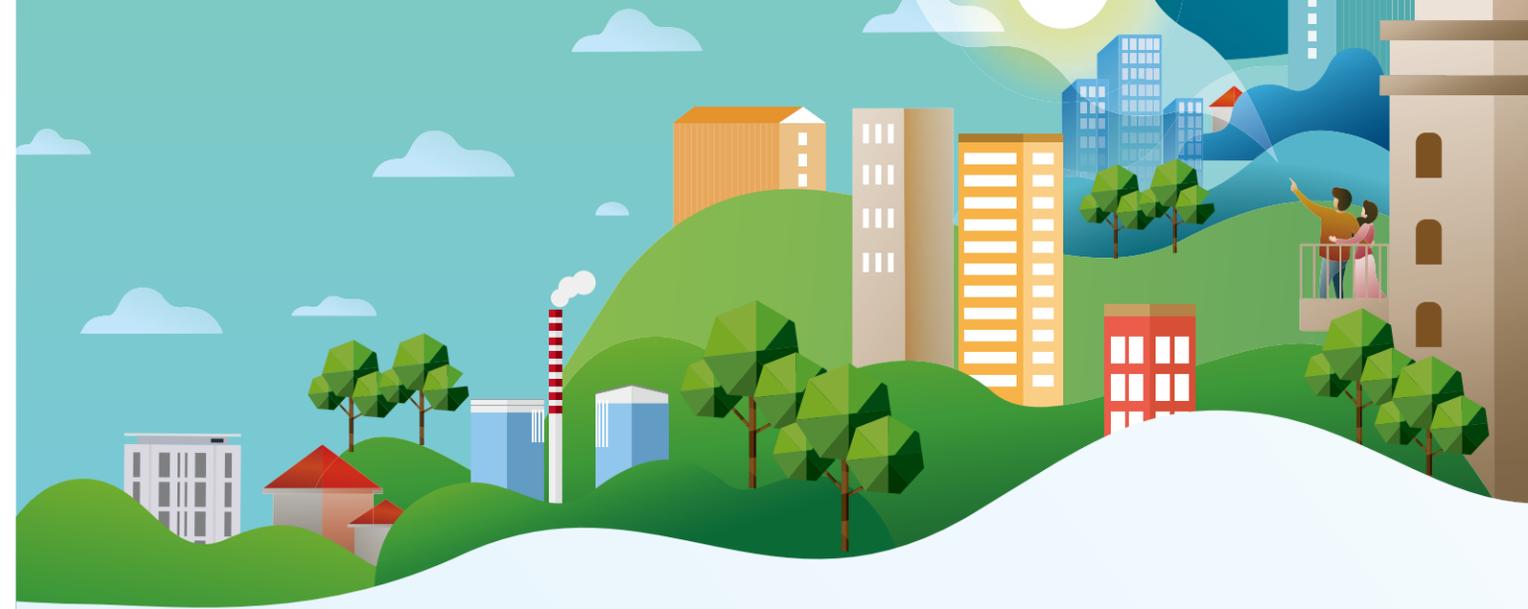




High-Quality Development for a Brighter Future

APP China Sustainability Report 2019



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About this Report

Message from Chairman



In 2019, we celebrated the 70th anniversary of the founding of the People's Republic of China. During those seven decades, China's industry has forged ahead at an unprecedented pace. The glorious course has witnessed the booming development of China's papermaking industry and APP China's impressive strides every step of the way. From introducing and gradually deepening the "Integration of Plantation-Pulp-Paper" industrial layout to establishing a model of clean production and green development, and to enabling transformation and upgrading through technological innovation, APP China has contributed to and accompanied China's transition from being an ancient paper manufacturer to a strong paper manufacturing power through concrete actions.

Nowadays, China's economic development is taking a historic turn from high speed to high quality. How to conquer challenges like oversupply, raw material shortages, and increasing regulatory scrutiny while ensuring high-quality development is a new issue that all companies in the papermaking industry have to learn to navigate. With full confidence and initiative, APP China thrives on pressure and steps up efforts in the three areas of intelligent manufacturing, environmental protection, and product innovation, endeavoring to join hands with the wider papermaking industry in China to boost high-quality development in the new era.

Embrace intelligent manufacturing to foster new drivers of high-quality development

Since Industry 4.0 was proposed in 2015, we have been systematically delving into intelligent manufacturing and continuously ramping up the construction of a technology-driven, intelligent industry chain to gain a first-mover advantage in the new round of technology-driven industrial revolution. We continue to automate the papermaking equipment and processes and strive for the realization of IT-based production data while improving the efficiency of large-scale production. Based on big data and other emerging technologies, we are gradually improving the company's information management capabilities and will eventually institute intelligent management throughout our entire business process. Moreover, we have started building intelligent industrial bases, fully integrating artificial intelligence, big data, 5G, and other cutting-edge technologies from the planning stage. We will join forces with companies of the upstream and downstream industry chain as well as our industry partners to quicken transformation and upgrading and boost industrial development in terms of both quality and speed.

Endorse environmental protection to provide the basis for high-quality development

We firmly believe that the rational use of the limited natural resources and the protection of the ecological environment on which human survival depends are the basis for achieving high-quality development. We respond promptly to the national call to reduce and ban plastic. Giving full play to our advantages as a modern papermaking company in terms of eco-friendly sourcing and technological leadership, we have developed a series of "zero plastic" degradable packaging solutions. We continue to increase the proportion of wood pulp procurement from certified forests and strongly advocate CFCC/PEFC forest certification labeling so that the concept of sustainable forest management reaches more consumers. At present, a growing collection of APP China products are joining the "labeling family". As regards clean production, we closely follow national and local environmental protection requirements, set strict environmental targets, and seek continuous improvements in our environmental protection practices and performance through measures like equipment renovation and process and technology optimization.

Innovate and upgrade products to guarantee sustained high-quality development

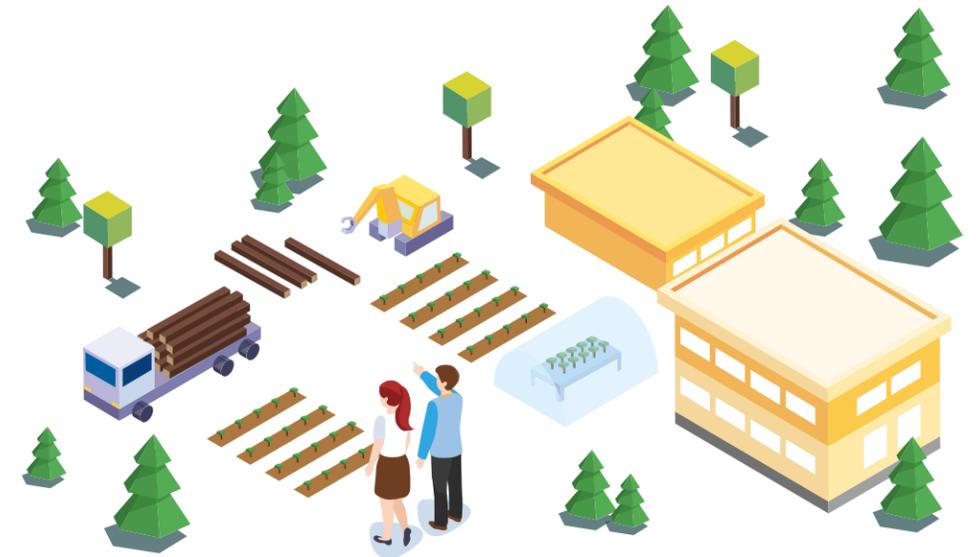
Relying on tremendous R&D strengths and forward-looking market deployment, we boldly innovate and gear up to build a beautiful, safe, and quality world of paper for people. Focusing on the real needs of the consumers and customers, we relentlessly explore products that are functional and innovative and continuously refine our product categories. Taking tissues as an example, we have continued to optimize our raw material composition and use ingredients that are safer for the human body in response to consumers' increasing concern for health and safety; meanwhile, we have used a number of patented technologies to produce products with moisturizing, anti-bacterial, and sanitizing effects to safeguard consumers' health.

In 2020, APP people have remained fully responsive and committed in the face of a raging epidemic, springing into action and demonstrating a deep sense of responsibility and duty at a critical time. We immediately donated RMB100 million and needed supplies to the Overseas Chinese Charity Foundation of China to aid in the epidemic control efforts. Meanwhile, we implemented strict epidemic prevention measures for reopening to ensure the health and safety of our employees; we managed to resume production against all odds and mobilized resources to ensure the smooth delivery of products to our customers; we provided care and assistance in ways that we could to the community residents and tenants of our commercial buildings who were affected by the epidemic, as well as overseas Chinese and Chinese students studying abroad. In this "smokeless war" against the epidemic, we have braved the hardships and forged ahead, working with our stakeholders to build a solid line of security.

The post-epidemic era presents both challenges and opportunities. APP China will continue to align efforts with its founding purposes and walk down the path of high-quality development with conviction. We will bravely embrace the new digital economy with our constantly open and innovative attitude, promote all-round digital transformation, and look forward to working with our stakeholders to make greater contributions to the sustainable development of the industry and wider society.

黄志源

Teguh Ganda Wijaya
Chairman and President of Sinar Mas Group



About APP China

Company Profile

With operations dating back to 1938, Sinar Mas Group was officially founded by the prominent Indonesian Chinese Mr. Eka Tjipta Widjaja in 1962. The Group currently has hundreds of legal entities and owns seven main business pillars: Pulp & Paper, Financial Services, Agri-business & Food, Real Estate, Energy & Infrastructure, Telecommunications, and Healthcare.

As a core business sector of Sinar Mas, Asia Pulp & Paper (APP) was set up in 1972 and its line of business ranges from pulp, industrial paper, cultural paper, and tissues to various types of paper products. APP started investing in China in 1992. With the establishment of two seedling research centers, 17 forestry companies, 267,400 hectares of plantations, and seven major pulp & paper mills, APP China implements green-cycle development based on the concept of "Integration of

Plantation-Pulp-Paper", where forests support paper, the paper industry nurtures forests, and forests and paper are integrated.

Together with its parent company Sinar Mas Group, APP China has long been actively responding to China's Belt and Road Initiative (BRI), fully leveraging its advantages to contribute to BRI development. In January 2019, the Cooperation Agreement on APP Science and Technology Park & MOU on China-Indonesia "Belt and Road" Science and Technology Park was officially signed. It further finalized details of cooperation laid out in the Framework Agreement on Suzhou APP Science & Technology Park signed between the two sides a

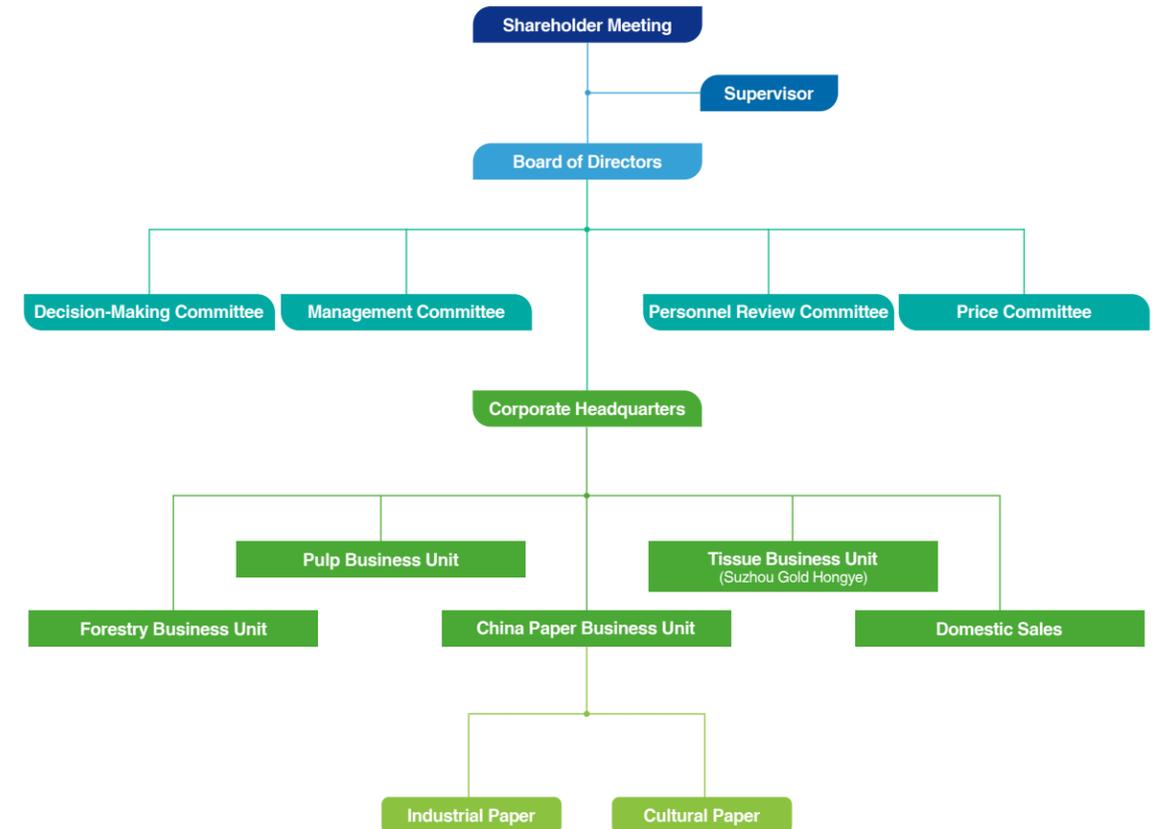
year before while confirming the goal of jointly building the China-Indonesia Science and Technology Industrial Park in Indonesia.

In August 2019, four major projects, including the APP Science and Technology Park, were launched at the opening ceremony of the China (Jiangsu) Pilot Free Trade Zone. With a focus on biomedicine, artificial intelligence, integrated circuits, high-end equipment, and other fields, Suzhou Industrial Park (SIP) and Sinar Mas Group would spend the next three to five years completing the early-stage construction of the high-tech industrial park which integrates R&D, manufacturing, and headquarters management.

As of the end of 2019, APP China has

Products marketed in over **160** countries/regions across **6** continents
 About **11.78** million tons of annual capacity
RMB65.1 billion in annual sales revenue
RMB191.4 billion in total assets

Organizational Chart



1992 Ningbo Zhonghua was formed through joint investment by APP of Sinar Mas, China Strategic Holdings Limited from Hong Kong, Ningbo Duplex Board Factory, and China Paper and Pulp Import and Export Co., Ltd. and is the first mill invested in and set up by APP in China.

1992

1996 Gold Huasheng Paper (Suzhou Industrial Park) Co., Ltd. was established, and has become one of the largest diversified cultural paper product providers in China and Asia.

1996

1998 Gold Hongye Paper Group Co., Ltd. located in Suzhou started operation. Its Breeze™ Tissue (Qingfeng) has become a leading brand in China's tissue market. In the same year, APP China Headquarters was established in Shanghai.

1998

2005 Hainan Jinhai Pulp & Paper, APP China's first pulp mill, was officially put into operation.

2005

2004 Ningbo Asia Pulp & Paper, equipped with one of the world's largest single-machine production capacities and most advanced industrial paperboard production lines, was put into operation.

2004

2010 With an annual chemi-mechanical pulp (CMP) production of 300,000 tons, the first phase of Guangxi Jingui "Integration of Plantation-Pulp-Paper" project started operations, and its 600,000-ton papermaking production line had a grand opening.

2010

2012 APP announced the Sustainability Roadmap Vision 2020, placing natural resources conservation at the center of its business strategy.

2012

2014 APP China announced plans to make full use of existing plant buildings for rooftop photovoltaic (PV) power generation with an overall capacity of over 200MW.

2014

2017 APP China responded actively to the Belt and Road Initiative and signed a strategic agreement to build intelligent production and R&D bases by adopting Industry 4.0 and artificial intelligence.

2017

2019 The high-grade tissue industrial base of Gold Hongye was officially launched and will be built into a world-leading paper base that is intelligent and environmentally friendly. In the same year, APP China Headquarters settled in the Shanghai Magnolia Square, opening a new era.

2019

1995 APP started plantations in China, embarking on a progressive journey of modernized papermaking.

1995

1997 Gold East Paper was officially established and is today one of the world's largest coated paper mills in terms of single product capacity. In the same year, Yalong Paper Products (Kunshan) Co., Ltd. was officially put into production and is now one of the most important paper product fine-processing companies in China.

1997

2013 APP published the Forest Conservation Policy (FCP), imposing a moratorium on all-natural forest clearance across its supply chain. For forests that are of high conservation value and high carbon stock, APP would take targeted protective measures based on assessment results.

2013

2015 APP China moved its headquarters to Shanghai ARCH and in the same year became a global partner of the China Pavilion at the Milan Expo 2015.

2015

2018 APP appeared at the first China International Import Expo with the concept of green-cycle "Integration of Plantation-Pulp-Paper".

2018

2020 Standing united with Wuhan and the whole China, Sinar Mas Group donated RMB100 million and also RMB350,000 worth of Breeze™ hygienic cleansing wipes to the Overseas Chinese Charity Foundation of China to fight against COVID-19. It is thus the first overseas-Chinese-funded enterprise to respond to the call of the All-China Federation of Returned Overseas Chinese to make donations to the affected areas.

2020

Achievements and Honors

	Honors and Awards	Issuers
APP China	2019 Best Practices by Chinese Companies on Achieving SDGs	Global Compact Network China
	Environmentally and Socially Responsible Enterprise of 2019, Model Enterprise for Green Development 2019	China Environment News
	Award for Responsible Brand of 2019	The 9th China Charity Festival
Gold East Paper	2018 Model Enterprise for High-Quality Development of Zhenjiang New Area	CPC Zhenjiang New Area Work Committee, Zhenjiang New Area Management Committee
	Top 20 Manufacturing Enterprises for Taxable Sales of 2018	Zhenjiang Municipal Bureau of Industry and Information Technology
	Certificate for China Environmental Labeling (Type II)	China Environmental United Certification Centre (CEC)
	2018 Advanced Unit for Ecological Protection	Environmental Protection Committee of Zhenjiang New Area
	Unit for Outstanding Contributions to Social Welfare	Charity Federation of Zhenjiang New Area
	Zhenjiang Green Factory	Zhenjiang Municipal Bureau of Industry and Information Technology
	Green Raw & Auxiliary Material Product, Printing Industry Pioneer of the Times for 70th Anniversary of the Founding of the People's Republic of China	China Association for Printing Technologies
	2019 Zhenjiang Demonstration Enterprise for Innovative Application of Informatization-Industrialization Integration	Enterprise Informatization Association of Zhenjiang
Hainan Jinhai Pulp & Paper	Top 10 Papermaking Enterprises in China's Light Industry	China Light Industry Council, China Paper Association
	2019 Top 100 Private Enterprises in Hainan Province	Hainan Industry & Commerce Association
	National IPR Advantageous Enterprises	National Intellectual Property Administration
	Gold Patent Award of Hainan Province	Intellectual Property Office of Hainan Province
	Certificate for China Environmental Labeling (Type II)	China Environmental United Certification Centre (CEC)
	BV DDS Certification	Bureau Veritas Certification Co., Ltd.
	Award for Overachieving 2018 Energy Conservation Targets	Development and Reform Commission of Hainan Province
Gold Huasheng	2019 Outstanding Economic Contribution Award – Top 30 Tax Contributions	CPC Suzhou Industrial Park Work Committee, Suzhou Industrial Park Management Committee
	Certificate for China Environmental Labeling (Type II)	China Environmental United Certification Centre (CEC)
Guangxi Jingui Pulp & Paper	2018 Publicly Posted Contract- and Commitment-Compliant Enterprise of Guangxi Zhuang Autonomous Region	Guangxi Zhuang Autonomous Region Administration for Market Regulation
	2019 Top 20 Papermaking Enterprises in China	China Pulp & Paper Industry
	"Guangxi Key Foreign Trade Brands for Cultivation and Development" Enterprise (2019-2022)	Guangxi Zhuang Autonomous Region Department of Commerce
	2019 Water-Saving Enterprise of Autonomous Region	Department of Industry and Information Technology of Guangxi Zhuang Autonomous Region
	Guangxi Demonstration Unit for Grassroots-Level Statistical Work Standardization of the New Era	Guangxi Zhuang Autonomous Region Bureau of Statistics
	2019 Merit Member of Qinzhou Branch of China Council for the Promotion of International Trade (Chamber of International Commerce)	Qinzhou Branch of China Council for the Promotion of International Trade, Qinzhou Branch of China Chamber of International Commerce
	AEO Advanced Certified Enterprise	Nanning Customs District PRC

	Honors and Awards	Issuers
Ningbo Asia	2018 Top 50 Ningbo Taxpayers in Manufacturing Industry	The People's Government of Ningbo Municipality
	Award for Environmental Friendliness	Ningbo Association of Enterprises with Foreign Investment
	2018 Advanced Group for Work Safety in Beilun District, Ningbo City	Beilun District People's Government, Ningbo
	2017-2018 National Top 10 Corporate Newspapers of Papermaking Industry	National Paper Industry Newspaper Association
Ningbo Zhonghua	2018 Ningbo Municipal Voluntary Blood Donation Unit of the Year	Ningbo Municipal Office of Leading Group for Blood Donation
	Top 100 Fastest-Growing Enterprises in Zhejiang Province	Zhejiang Province Enterprise Confederation, Zhejiang Province Enterprise Directors Association, Zhejiang Federation of Industrial Economics
Suzhou Gold Hongye	2019 Top 100 Most Competitive Enterprises of Ningbo, 2019 Top 100 Manufacturers of Ningbo, 2019 Top 100 Comprehensive Enterprises	Ningbo Enterprise Confederation, Ningbo Enterprise Directors Association, Ningbo Federation of Industrial Economics
	2018 Ningbo Municipal Voluntary Blood Donation Unit of the Year	Ningbo Municipal Office of Leading Group for Blood Donation
	2017-2018 Suzhou AA-Rated Unit for Labor Security	Suzhou Human Resources and Social Security Bureau, Suzhou Office of the Leading Group for the Development of Social Credit System
Hainan Gold Hongye	2018 Outstanding Economic Contribution Award – Headquarters Economy, Revenue Growth, Tax Contribution	CPC Suzhou Industrial Park Work Committee, Suzhou Industrial Park Management Committee
	2018 Suzhou Industrial Park AAAAA-Level Unit for Labor Security Credit Rating	Suzhou Industrial Park Labor and Social Security Bureau
APP China Forestry	2019 Top 100 Enterprises in Hainan Province	Hainan Province Enterprise Confederation, Hainan Province Enterprise Directors Association
	Employment Training Base	Yangpu Bureau of Human Resources Development
	(First batch) China Forestry and Grassland Industry Innovation Base – "Raw Material Forest Base for Integration of Plantation-Pulp-Paper"	Chinese Forestry Industry Association



Star Employees at APP

A company's success is inseparable from the hard work of all its employees. The power of role models can be seen everywhere at APP. Ordinary as their roles may be, a large group of APP people have made extraordinary achievements by upholding honesty, diligence, and novelty at work. Those shiny stars gather to form a splendid galaxy that illuminates APP's way ahead.

Living Positively with a Fighting Spirit

Wang Wei impresses everyone as an optimistic and upbeat person. However, an accident happened to him in November 2007 when he was handling a failure in the boiler ash system at work, costing him his right arm. Never weakened mentally by the physical loss, he rose to his feet again with a strong will.

In 2008, Wang Wei returned to the Heat & Power Division but turned down the "special treatment" offered by his superiors. He started as an Industrial Safety Officer and used his own experience as an example to raise his colleagues' awareness of safe working practices. After that, he gradually took on new roles as well, including Officer of the Total Productive Maintenance (TPM) Group and Hourly Worker Manager at the Heat & Power Division. As the manager, he takes the initiative to help supervise cleaning of the boilers. He is always seen offering help every time a boiler is closed down for maintenance, even late at night. In those two new roles, Wang Wei gets actively involved in tasks like environmental cleanup, safety hazard correction, labor protection supplies management, and employee support – no work is too trivial for him. The results have been impressive under his management, with zero work-related injuries recorded for over three consecutive years. "He's got our back and our full trust," said his colleagues.



“As long as you stay, I will never leave your side.”

Wang Wei
Heat & Power Division
Gold Huasheng

Living the Craftsmanship Spirit

Yan Guilin works at Gold East Paper's Maintenance Pulping Division of Maintenance Department and has been in the line of mechanical maintenance for 27 years. He is the owner of two utility model patents and has received an array of honors from the company such as Advanced Manufacturing Worker and Outstanding Employee of the Year. With a heightened focus on technical innovation, Yan Guilin has submitted a total of 60 rationalization suggestions. He has made notable contributions to the company in terms of energy conservation and consumption reduction and helped it win the High-Tech Enterprise Achievement Award for developing a new drive system for GCC (Ground Calcium Carbonate) grinding mills.

To his colleagues, Yan Guilin is a mentor and friend. As a humble and sincere person, he maintains smooth communication with his colleagues; as a skillful worker, he has helped the company solve one technical challenge after another. Every department has benefited from his services.

He lives the craftsmanship spirit of being professional, meticulous, and grounded. Apart from delivering solid work in technical research and innovation, he also makes a point of "teaching, helping, and guiding". He has formulated various rigorous equipment maintenance plans, actively conducts on-the-job training, and passes on his own technical experience to his colleagues to help train more accomplished craftsmen.



“We should be driven by the craftsmanship spirit, stay committed to our work duties, and be responsible and also good at it so that we can be truly accountable for our own roles and deliver reliable work.”

Yan Guilin
Maintenance Department
Gold East Paper

Nothing Is Too Small

Li Zhisheng is in charge of work related with the on-site devices and vehicles and TPM in the Packaging Team of the Organizing Department of Hainan Jinhai Pulp & Paper. Others may see those duties as too trivial to bear fruits, but Li Zhisheng has managed to shine through those small things by putting in relentless work.

There are a number of handheld scanning guns at the Organizing Department, which are very important single small devices. They are used for organizing information and closely tracking the paper products. Therefore, once they break down, the work efficiency would be undermined. By conducting online research, studying how the scanning gun is structured and designed to work, and taking apart the broken ones, Li Zhisheng managed to acquaint himself with all of its components. Now fully prepared, he started to purchase parts to take on the repair himself and fixed eight scanning guns in four months. More than that, he also shared his experience with other groups to pass on his repair skills.

Li Zhisheng's constant attention to detail has allowed him to make many improvements at the site. For instance, he attached reflective strips to the columns that the devices might bang into when carried in and out of the site; he made a rake that was light, practical, and easy to use to sweep sawdust from under the devices, which was a tough spot. It is roughly estimated that those small improvements can help reduce expenses by about RMB100,000 a year.



“I will learn with modesty and continue to fulfill my duties conscientiously and to be a fighter who shines.”

Li Zhisheng
Packaging Team of
Organizing Department
Hainan Jinhai Pulp & Paper

Excellence Lies in Diligence and Thinking

Usually, Xu Zhaozhi does not give the impression of being a salesperson upon first meeting. He does not appear to be eloquent or diplomatic; rather, he is highly trusted and liked by the customers for his diligence, sincerity, and perseverance.

During product sampling, Xu Zhaozhi would often stay with the press operators through the night shifts at the customers' factories; by day he would be communicating with workers from production, technical, or other departments, which enables him to understand and solve the sampling problems in a timely manner. Whether it is pharmaceutical packaging, handbags, business cards or blister cards, every time he sees a good paper product, Xu Zhaozhi would tear it open to find out how and where it is made; every time he sees a product made from APP paper, he would make sure to introduce it to everyone. Small efforts like those have translated into an outstanding sales record for Xu Zhaozhi and won him the honor of Excellent Employee for three consecutive years.



“A good salesperson needs to be attentive, sincere, and observant.”

Xu Zhaozhi
Industrial Paper Business Unit of
Wuxi Domestic Trade Co., Ltd.

Taking the Lead in Promoting "Production-Marketing Integration"

As the mill manager, Yang Huizhan is always on the frontline of exploring "production-marketing integration". He actively drives the effective collaboration between production and marketing so that there is mutual understanding between the two and sales can constantly reach new heights.

When working at the Xianyang mill, Mr. Yang invited the marketing team to take a tour at the manufacturing site. Through consulting and product training sessions, he helped the frontline marketing team gain a better knowledge of the company's products and instilled in them a stronger sense of belonging and confidence in the company. Before the back-to-school sales campaign kicked off, he invited the business director to give mill staff a training session on marketing skills; he made a "100% pure base paper shelf" that allowed customers to try out the products; he also personally drove over 100 kilometers to bring company staff to the campus sales outlet in Xi'an to carry out sales activities. Thanks to a number of initiatives such as experience sharing and sales reward system, the sales campaign was a big success. During the peak hours on weekends and holidays, Mr. Yang would often be seen at sales events in major stores in Xi'an with his team, and the sales performance of the Northwest KA (Key Account) stores has thus been greatly improved.



“The road ahead is bound to be full of bumps and obstacles, but I am confident that success will be achieved in the end!”

Yang Huizhan
Tianjin Mill (currently)
Gold Hongye

Sustainability Strategy

Sustainability Roadmap: Vision 2020

APP announced the "Sustainability Roadmap: Vision 2020" in 2013, which set forth 19 targets to be achieved by 2020 in ten key impact areas. They include fiber sourcing, reforestation, conservation & biodiversity, human rights & indigenous people, community empowerment, climate change, emissions, water management, solid waste, and employee welfare. Sixteen targets had been achieved by the end of 2019, with targets concerning climate change project implementation, energy intensity reduction, and safety incidents still in progress.



Scan the QR code to learn about the detailed progress of 2020 targets

Sustainability Roadmap: Vision 2030

APP attaches great importance to the United Nations Sustainable Development Goals (SDGs) and actively leverages its own business to contribute to their implementation and achievement. Based on a comprehensive benchmarking against the SDGs, APP hopes to make further sustainability commitments and plans to expand the goals further under "Sustainability Roadmap: Vision 2030". Vision 2030 focuses on three main areas closely related to APP, namely production, forest, and people.



Scan the QR code to see 2030 targets

Target Area	Production	Forest	People
Overall Target	30% reduction in carbon footprint	Continuously improving the percentage of sustainable fiber sourcing	Improving the lives of millions
Specific Issues As regards every issue, APP sets specific goals for 2030. For more information, scan the QR code.	Low Carbon Product Innovate Products	Fiber Sourcing Forest Protection Integrated Fire Management	Sustainable Livelihood Workforce Management Business Ethics & Conduct

Strategic Areas and Action Directions for APP China Sustainability

Research & Development



Continuously optimizing and developing seedling strains; actively participating in industry exchanges to support the innovative development of the forestry and grassland industry; setting up a center at all the pulp and paper production bases to continuously introduce innovative solutions to environmental protection and health based on a product life-cycle perspective.

- Producing more than 10 million seedlings annually from two large nurseries
- RMB1.835 billion in annual R&D investment
- Filing 117 patent applications (45 invention patents, 41 utility model patents, and 31 design patents)
- Successfully developing a series of "Paper for Plastic" products

Forest Management



Conducting forestry in strict accordance with the APP Forest Conservation Policy (FCP); continuing to perform CFCC/PEFC-FM (forest management) certification, high conservation value (HCV) assessment, and ecological impact monitoring; continuing to strengthen protection of forests against risks like fires and illegal logging to keep them safe.

- Owning 246,700 hectares of certified plantations
- 92.27% plantations certified
- 145,500 hectares of plantations HCV-assessed
- Providing training on forest carbon sink calculation to lay the groundwork for implementing carbon-neutral projects in the future

Production



Building intelligent industrial bases to improve efficiency and reduce consumption; promoting sustainable procurement to drive responsible operations of suppliers; continuing to perform CFCC/PEFC-CoC (chain of custody) certification; committed to clean production and continuous review, optimization, and innovation of production processes and technologies; providing training on carbon emissions calculation and related areas to be fully prepared for entering China's carbon trading market; continuing to reinforce production safety to create a secure work environment for employees.

- 16 affiliated entities obtaining CFCC/PEFC-CoC certification
- Water reuse rate of 95.94%
- 6.37 tons of waste water discharge per ton of paper produced
- 11.62 tons of waste water discharge per ton of pulp produced
- 0.29 kg of COD emission per ton of paper produced
- 0.63 kg of COD emission per ton of pulp produced

Sustainable Consumption and Reuse



Actively engaged in promoting CFCC/PEFC forest certification labeling and spreading the concept of forest certification, and calling on the public to help protect forests through sustainable consumption; launching the "Paperback" waste paper recycling program to drive public attention to and participation in waste paper recycling.

- The number of APP China products with the forest certification label continuing to grow
- Procuring 198,100 tons of waste paper as raw material
- The "Paperback" program cumulatively recycling 7.91 tons of waste paper

Community and Philanthropy



Driven by a passion for and commitment to philanthropy, continuing to make a positive impact on education, youth capacity building, paper culture promotion, and other aspects; improving community communication and participating broadly in community construction.

- RMB31.97 million in total external donation
- 18,618 hours of volunteer time clocked
- Gold Huasheng Paper Culture Experience Center receiving over 3,100 person-times of visits from students of all ages

Bravely Fighting the Battle against the Epidemic

In January 2020, the sudden outbreak of a novel coronavirus disease (COVID-19) caught the whole society off guard. When disasters hit, help rolls in from all directions. Enterprises are a powerful force in the fight against the epidemic. During this special period, Sinar Mas Group lost no time in becoming part of the fight; the company has put in place comprehensive prevention measures to keep its employees and the communities safe; everyone has worked together to overcome difficulties and resume work and production, thus ensuring continuous supply of products. The epidemic will eventually pass, but we will go forward with a sense of responsibility and do our best to give back to society.

Mobilizing All Staff to Combat the Epidemic

After the outbreak of the epidemic, APP President Teguh Ganda Wijaya, who was then in Indonesia, paid close attention to its development. On January 26, Sinar Mas Group announced a donation of RMB100 million and also RMB350,000 worth of Breeze™ hygienic cleansing wipes to the Overseas Chinese Charity Foundation of China. It is thus the first overseas-Chinese-funded enterprise to respond to the call of the All-China Federation of Returned Overseas Chinese to make donations to the affected areas. Meanwhile, APP China management promptly set up an

emergency response team for leading epidemic prevention and control. APP China Headquarters joined hands with all its business units and mills and mobilized all the staff to be part of the national fight against the epidemic.

Locally, APP China mills also played an active part, making donations of money and supplies to aid the respective regions in their efforts to control the epidemic. Hainan Jinhai Pulp & Paper donated 6 tons of disinfectant produced by the company itself to the Yangpu District Center for Disease Control and Prevention (CDC) to be used in local communities, public places, streets, and other places. Ningbo Asia and Ningbo Zhonghua cumulatively donated 3,000 masks to neighboring communities to give the grassroots community workers better protection. Chinese Communist Party (CCP) members from Guangxi Jingui Pulp & Paper all took the initiative to donate money to make their own contributions.

From January 24 to March 31, 2020, Shanghai Huashan Hospital sent a total of 273 medical staff to aid Wuhan in the battle against the epidemic, the largest number that any hospital in China dispatched in support of Wuhan. Ten percent of our RMB100 million donation was directed to Huashan Hospital to be used as solatium to frontline medical workers and for setting up a fund for training young physicians and renovating the hospital's infectious diseases building.



Suzhou Gold Hongye urgently producing protective equipment needed for containing the epidemic ▲



Ningbo Asia and Ningbo Zhonghua providing nucleic acid testing for returned employees ▲

Warm Companionship During Epidemic

APP China puts its employees' safety and health first. As a responsible employer, we promptly developed comprehensive epidemic control measures for safe reopening after the outbreak to ensure a safe and healthy workplace for our employees.

We have drawn up detailed regulations and behavioral guidelines on employee return, employee commuting, temperature checking, office disinfection, meeting arrangements, meal arrangements, visitor control, and other matters and provided our employees with protective equipment such as masks and alcohol cotton as well as flexible work hours. Moreover, we publish daily epidemic briefings and work to keep our employees updated, equip them with a proper knowledge of the epidemic, and take care of their mental wellness. Ningbo Asia and Ningbo Zhonghua promptly responded to the call of the People's Government of Ningbo Municipality for giving returned employees free, rapid nucleic acid testing so that they felt safe back at work.

To guarantee sound customer service during this special period, APP China Paper Business Unit launched the "Little A Online Classroom". It allows customers to interact with the company in real time through means like video, voice and text messaging and to take customized courses focused on a variety of topics such as product introduction, technical communication, information sharing, and strategic thinking.

Shutdowns during the epidemic weighed on many industries. Some tenants in APP's two major commercial complexes in Shanghai, namely the Shanghai ARCH and the Shanghai Magnolia Plaza, were also affected. In response, we offered them a rent reduction and free protective supplies such as disinfectant cotton balls and disinfectant tissues to tide them over this difficult time.

With the epidemic's accelerated spread overseas, we are also paying close attention to the safety of overseas Chinese and Chinese students studying abroad. Of the RMB100 million donation we made, RMB10 million has been directed to the Overseas Chinese Charity Foundation of China in support of their efforts to work with local federations of overseas Chinese to give away health packages to those groups. The packages contain disposable masks and gloves and Chinese medicine (grains or capsules), among other infection control items.

Overcoming Difficulties to Guarantee Production

Paper is of high relevance to the epidemic. Tissues, pharmaceutical packaging, food packaging, etc. are all essential paper products during an epidemic. Therefore, besides efforts to contain the epidemic, resuming production as soon as possible became another key task for APP China during this time. The company had to do this by overcoming staff shortages

caused by quarantine orders as well as the challenge with logistics and the upstream and downstream supply chain. In this context, all APP China employees have shown great cohesion and we achieved a nearly 100% resumption rate in less than two months by going all out to coordinate resources, optimizing work patterns, etc.

Raw Materials Crossing the "Epidemic Defense Line"

In February 2020, when the epidemic was at its worst, Gold East Paper's own port completed a total throughput of 229,000 tons, an increase of 26.71% over the same period last year. Behind this number were the unremitting efforts made by the company to overcome the obstacles of road closures. Road closure is a conventional measure for epidemic prevention and control, but materials are needed to feed factory production. For this reason, the

company instituted a multi-departmental coordination and cooperation mechanism. While maintaining active communication with the administering department for epidemic control, the company arranged for its logistics personnel to take turns to pick up trucks at the highway entrances every day so that a steady supply of raw materials continued to pass through the "epidemic defense line" and reach the mill, thus ensuring continuous production.



Employees working at the port ▲

Staying United in an Unwavering Commitment

To ensure that the products reached customers on time, Gold Huasheng employees took the initiative to work overtime to overcome the short-handedness. The production and engineering management teams held daily communication meetings to coordinate various matters. The supervisors sacrificed their personal time to work on tough problems in the workshop, such as tracking and coordinating the arrival of raw materials and helping employees with the various aspects of their life. All of the employees of Gold Huasheng have exhibited responsibility and commitment through concrete actions.

Urgently Resuming Work and Production to Meet Paper Needs

In February 2020, toilet paper in supermarkets across Hong Kong was sold out as a result of the epidemic. To meet the needs of Hong Kong citizens, Hainan Gold Hongye resumed production with urgency on February 7, cumulatively shipping 583 tons of tissues to Hong Kong in February. The Logistics Department went all out to coordinate various related parties, managing to have the shipping company increase their frequency of shipment to Hong Kong from once a week to every three days so as to ensure that tissue products were delivered to Hong Kong as soon as possible.

Volunteer Delivery Squad

One top priority for Suzhou Gold Hongye during the sudden outbreak of an epidemic is to deliver products to customers fast with the logistics system being limited. On the evening of February 13, the company called on the employees to use their own cars for delivery, to which they responded actively. Within 16 hours, a delivery squad of more than 1,200 employee volunteers was formed. What they delivered to the customers was not just the products but the company's sense of responsibility as well, and it was praised highly by the customers.

Supporting Pharmaceutical Packaging Companies

Jinli white cardboard produced by Ningbo Asia and Jin Die Lan white cardboard produced by Guangxi Jingui Pulp & Paper are the primary paper used for pharmaceutical packaging in China. Jin Cai antibacterial white cardboard, Jin Bei whiteboard, and Chieftain white cardboard produced by Ningbo Mills are also the primary packaging paper for making medical masks. As part of the epidemic control efforts, the container yards had all been closed as required by the government, so no containers were available for logistics. To fulfill the paper needs of pharmaceutical packaging companies and mask manufacturers, Ningbo Mills managed to have four container yards reopened after repeated communication with the government and local government agencies like the Municipal Bureau of Commerce, thus successfully resuming product shipping.

01

Creating Superior Value Through High-Quality Development

The development of China's modern papermaking industry is a history of continuous renovation and upgrading underpinned by environmental protection, technology, and innovation. As China's economy transitions from a phase of rapid growth to a stage of high-quality development, it embraces innovative, coordinated, green, and open development that is for everyone. This places a higher demand on the manufacturing industry, the paper industry included, to pursue quality and efficiency, balance and coordination, and sustainability in its development.

Looking back on APP China's course of growth, we have never strayed away from green development. We took the lead in driving the green recycling industry model to take root in China; we actively embrace intelligent manufacturing, using digital technologies to empower automated, networked, and intelligent development of the entire industry chain; we strengthen innovation and R&D and continuously introduce quality products to meet people's work and life needs, doing our part to boost high-quality development.





Introduction: On the Great Cause of Papermaking Development in China

Throughout history, paper has been integral in the development and preservation of human civilization. To celebrate the 70th anniversary of the founding of the People's Republic of China, China Central Television (CCTV) released *The Story of Chinese Paper*. It is a documentary that captures the invention, popularization, and application of paper and the papermaking industry of the present day, portraying an epic picture that spans paper's past and present. As an important witness of and participant in the development of China's modern paper industry, APP China took part in the shooting, using as the setting its numerous affiliations such as Gold East Paper, Ningbo Asia, Suzhou Gold Hongye, Hainan Jinhai Pulp & Paper, and APP China Forestry. APP China has demonstrated the advanced manufacturing technologies and strong R&D capabilities of today's papermaking companies in China and the dedication of generations of papermakers who have worked hard to create a better life.

From bringing the "Integration of Plantation-Pulp-Paper" model to China in the 1990s to large-scale production following the 12th Five-Year Plan, and to the exploration of intelligent production and management, APP China continues to innovate and improve. By doing so, the company helps propel China's paper industry towards high-quality development and contributes to the preservation of China's paper civilization.



APP China mills participating in documentary shooting ▲

Pioneer of "Integration of Plantation-Pulp-Paper"

In 1992, APP entered China with the mission of "Implementing green cycle-based development, advancing papermaking civilization, and improving the quality of life". While the concept of "Integration of Plantation-Pulp-Paper" was still quite new in China, APP China was already making efforts to put this green, circular development model into practice. Since 1995, APP China has been growing plantations in Guangdong, Hainan,

Guangxi, Yunnan, and other provinces to gradually map out the forestation industry. APP China's first pulp and paper plant, the Hainan Jinhai Pulp & Paper, was officially opened in 2005. This has announced the official formation of an integrated industry chain combining plantations, pulping, and papermaking, initiating a virtuous cycle where forests support paper, the paper industry nurtures forests, and forests and paper are integrated. The completion

and maturity of this industry chain have enhanced APP China's comprehensive capabilities of resource security and risk resistance, thus ensuring sound and robust operations. Moreover, this model embeds low-carbon and environmental considerations throughout the entire industry chain, thus ensuring a balance between social and environmental benefits.

Doer Who Innovates and Pushes Boundaries

The year 2000 marks the beginning of a "golden decade" for China's paper industry, witnessing its rapid development and the near tripling of annual paper output. APP China continues to upgrade the industry chain and manages to make the "Integration of Plantation-Pulp-Paper" model truly excel by continuously improving its core strengths in production and management technology, product quality, customer service, etc. This has set a prime example of development with constantly improving quality and effect for modern papermaking companies in China.

APP China has established industrial bases in Jiangsu, Hainan, Guangxi, Zhejiang, and other places and continues to increase investment. In 2019, APP China launched the construction of a high-grade tissue industrial base in Rudong, Jiangsu Province. Combining technology-based manufacturing with circular economy, the base will adopt the world's best manufacturing technologies, equipment, and control systems and fully apply the principles of clean production as it strives for the goal of green development

with high efficiency and low consumption. In addition to the Rudong Industrial Base, 2019 also saw us initiate the construction of new projects in Ningbo (Zhejiang) and Qinzhou (Guangxi). While expanding the Group's industry chain deployment, we do this to continue to boost local economy and industrial upgrading.

To further facilitate holistic development and optimized industrial structure, in 2019,

Sinar Mas Group started the acquisition of Bohui Group, a leading white cardboard paper company in China, to explore more innovations and breakthroughs in this field. In the future, we will continue to follow the industry trend of integrated development and join hands with more Chinese paper companies to seek new opportunities in the new era.



Concept plan of Rudong High-Grade Tissue Industrial Base ▲

Leader of Industry Development

As China's economy phases into a new normal where the quality of growth outweighs the speed, papermaking companies now need to be more innovative and embrace transformation and upgrading in order to adapt. APP China continues to deepen R&D and innovation and strengthen cooperation and communication with industry partners to explore advanced ideas, technologies, and products. In 2019, we had in-depth dialogues with industry associations on topics such as China's plastic ban and companies' strategic restructuring and structural adjustment and made suggestions to the 14th Five-Year Plan regarding the papermaking industry.

Following its first appearance, APP China attended the 2nd China International Import Expo (CIIE) again in 2019, where we signed a deal with many companies on the use of the APP Foopak Bio Natura™ biodegradable food cardboard. This was a step forward for expanding APP's innovative "Paper for Plastic" solutions in China.

Taking advantage of our expertise, we continue to help promote industry technology optimization and standard

development. We have begun exploring the application of nanocellulose technology, conducting in-depth research and analysis on its future evolution, application, preparation methods, and the challenges involved. We have had deep discussions with industry peers from home and abroad. This has informed our plan for future exploration of nanotechnology and lays the groundwork for the successful application of cutting-edge technologies in the future. Moreover, we participated in the discussions of the

China National Paper Industry Standard Technology Association on standards related with fluff pulp, unbleached pulp, and the calculation of the comprehensive energy consumption of pulp & paper companies. We also co-hosted the 2019 China Paper Industry Sustainability Forum themed "Green Cycle – Empowering High-Quality Development", where we joined our industry peers in discussions on the high-quality, sustainable, and healthy development of the paper industry in the future.



China Paper Industry Sustainability Forum ▲



Circular Model Fueling Development

In recent years, China has been prioritizing the improvement of ecological conditions and green development while continuing to implement a new mode of development. Such development is driven by industrialization and information technology and embraces circular economy and a low-carbon and energy-efficient approach. As an important provider of basic raw materials in the national economy, the modern paper industry is also making a gradual transition to highlight the use of renewable resources, clean production, and pollution control. APP China has long been taking concrete actions to help build a beautiful China, including actively exploring models of resource conservation and recycling and continuing to strengthen the management of clean production.

Pursuing Circular Economy

Based on the principle of "reduce, reuse and recycle", the circular economy is designed to maximize resource efficiency and recycling. It is a fundamental shift away from the traditional way of economic development that is high-pollution and high-consumption. APP China embeds the concept of circular economy throughout its manufacturing process, thus effectively reducing its environmental footprint while operating at a lower cost and higher efficiency.



Efficient Use of Natural Resources

With a commitment to sustainability, APP China actively explores green and circular solutions. By developing new technologies and improving and innovating the processes, APP China manages to reduce the use of raw materials and become resource-efficient, doing its utmost to put all resources to good use.

Case

Promoting the Integrated Development of Papermaking and Printing



The papermaking industry and the printing industry are in the same industry chain. To improve the entire chain entails that they integrate and thrive together. APP China has long provided the printing industry with high-quality, environmentally friendly products and superior services. Meanwhile, the company prioritizes fostering in-depth communication and cooperation to continuously drive the integration and joint innovation between those two major industries.

At the "Focus on Green" 2019 China Printing Industry Innovation Conference hosted by the National Press and Publication Administration (NPPA), APP China participated in the signing of the *Papermaking and Printing Integrated Development*

Initiative. By doing so, the company pledges to share information and responsibilities with its peers and remain

steadfast in its efforts to help boost the collaborative innovation and green development of both industries.



APP China participating in the signing of the *Papermaking and Printing Integrated Development Initiative* ▲

Case

Creative Use of Black Liquor from Pulp



Separating the cellulose required for paper from the raw materials by cooking is an important step in the pulping process. This process produces a large amount of waste liquid containing lignin and alkali. Dark in color and smelly, the liquid is often referred to as "black liquor". If discharged directly without being treated, the black liquor can cause serious environmental pollution.

APP China's pulp mills have recycled black liquor for many years and are able to use it for steam and power generation. And the mills continue to explore more possibilities for its effective use. On a daily basis, the black liquor recycling project helps Hainan Jinhai Pulp & Paper save 3,268.67 tons of standard coal and generates about 4,081 MWh of electricity, providing more than 90% of the mill's energy supply.

Case Saving the Use of Long Fibers



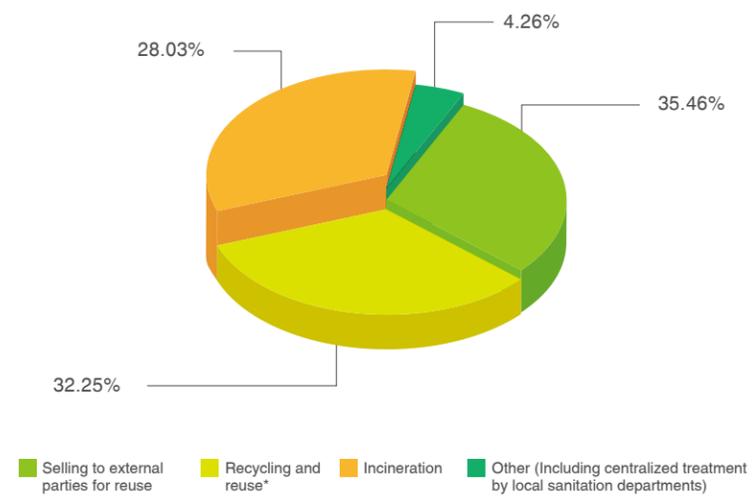
Long fibers from conifers lend the main toughness to paper. They are consumed in large quantities in the production of tissues, and reducing their use would lead to significant savings in resources and costs. In 2019, we successfully reduced the amount of long fibers used per unit of product through means like upgrading technology and improving the process, thereby reducing the use of trees.

Effective Waste Management

We have formulated the *Solid Waste Management Procedures*, defining the scientific classification and orderly disposal of major wastes such as coal ashes, sludges, gypsum, pulp residues, and wood dust. Meanwhile, we actively optimize our production processes and technologies to do a continuously better job in waste reduction and recycling. In 2019, the recycling rate of general solid waste within APP China's reporting scope reached 32.25%, an increase of over 20% from 10.35% in 2018.

The production process generates waste gases such as biogas, carbon dioxide, and sulfur dioxide. By recycling and using chemical reactions to produce by-products, we have reaped good economic and social benefits while promoting resource recycling and reducing the emission of greenhouse gases and air pollutants.

Methods of Solid Waste Disposal in 2019 within Reporting Scope



*Recycling and reuse refers to the recycling and reuse of waste through direct processing by APP China mills or through special cooperation with third-party agencies, such as making by-products from waste.

Case Maximizing Utilization of Waste



To guarantee more effective harmless and recycling-based treatment of sludge, Ningbo Asia installed two circulating fluidized bed (CFB) boilers with a sludge incineration capacity of 1,600 tons per day. Meanwhile, the biogas generated during waste water treatment is recycled after being transported to the incinerator through the pipeline. The heat of the waste gas is also recycled to fuel production as the steam generated from sludge incineration gets transported to the company's papermaking workshops. In addition, Ningbo Asia actively communicates with local environmental protection departments to help surrounding companies with sludge incineration, thus contributing to the construction of green communities.

In 2019, Ningbo Asia incinerated a total of **215,027** tons of sludge, including **8,004** tons of social sludge; it recycled a total of **1,699,458.4** cubic meters of biogas, which translates into **1,189.6** tons of standard coal or **RMB 946,300** saved.

Case Recovery and Recycling of Flue Gas



Ammonia-based desulfurization is a process that uses ammonia as an alkaline absorbent to remove sulfur dioxide from boiler flue gas. It has such advantages as high reaction rate, high absorbent utilization rate, and high desulfurization efficiency. What's more, ammonium sulfate, a by-product of desulfurization, can also be used as agricultural fertilizer. Gold Huasheng uses ammonia-based desulfurization to manage exhaust gas emissions, which guarantees higher desulfurization efficiency and favorable sales revenue from the by-products. In 2019, Gold Huasheng sold 6,024.34 tons of ammonium sulfate.

Adding water to quicklime produces hydrated lime, and carbon dioxide reacts with the

hydrated lime solution to produce light calcium carbonate, which can replace pulp as a raw material for cultural paper. With the assistance of a specialist company, Gold Huasheng recycled a total of 50 million cubic meters of carbon dioxide from the power plant's flue gas in 2019, using which it produced 66,600 tons of light calcium carbonate.



Building Green Logistics

Based on data analyses and forecasts about customer demand, APP China continuously explores economic logistics models that are more efficient and lower-carbon as it institutes measures like optimizing transport routes, improving packaging recycling, increasing the vehicles' loading efficiency, and integrating operational processes. In 2019, we implemented the intermodal transport mechanism between sea and rail, effectively reducing packaging waste that would otherwise have been

caused by secondary loading and unloading; we introduced the "Bulk Cargo Containerization" mode to realize intensive transport, which improved the utilization of resources such as containers; we continuously recycled pallets among mills to minimize the use of wood and related resources; we mix-loaded different raw materials and products to improve the loading efficiency; and we reinforced circular transport over long distances between different regions to reduce empty backhauls.



Commitment to Green Production

China is quickening its transition to green manufacturing. It continuously tightens regulations on pollution control and environmental protection, releasing a series of policies and rules in recent years, such as the *Cleaner Production Promotion*

Law of the People's Republic of China, the Green Industrial Development Planning (2016-2020), and the Plan for Energy Conservation and Emission Reduction in the 13th Five-Year Plan Period. APP China's mills have amplified efforts to

pursue clean production and establish a sound management system for energy, water resources, and waste gas emissions to minimize the negative impact of its operations on the environment.

Improving Environmental Management

Operating on the principle of "environmentally friendly pulping and green papermaking", APP China mills have all set up an environmental management system that complies with the requirements of ISO 14001. Meanwhile, they continue to increase investment in environment-related technological R&D, standard improvement, and technical transformation to ensure that their environmental conditions for producing paper and pulp and paper products meet and exceed the national standards. APP China invested RMB874.572 million in environmental protection in 2019, bringing the total sum to RMB12.758 billion.

In 2019, APP China mills continued to strictly implement environmental management measures to keep improving their performance in environmental protection. Guangxi Jingui Pulp & Paper revised its *Safety, Health, and Environment Supervision and Management Measures*. Besides adding a monthly assessment on the three measures of environment, safety, and health, it also refined the financial reward and punishment system for related departments. The Regulatory Department on Environmental Protection undertakes an assessment every year to grade companies on five metrics such as standardized management of hazardous

waste, emission permit implementation management, and environmental emergency management. As a result of the more systematic management and motivating terms, Guangxi Jingui Pulp & Paper passed all five with high scores. Hainan Jinhai Pulp & Paper has formed an environmental protection committee under the leadership of the general manager. Nine departments, including the production, energy, technology, etc., have jointly formed a working group to perform regular environmental inspections both inside and outside the mill so that problems could be discovered and fixed in a timely manner.

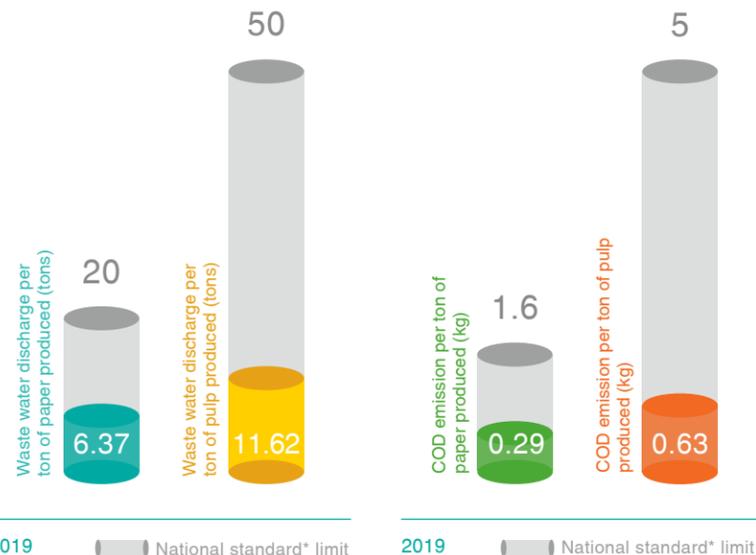
Water Resources Management

Water is the source of life and also an important resource for the pulp and paper industry chain. It is the responsibility of pulp and paper companies to save water and treat waste water properly. APP China pays close attention to the impact of water withdrawal, consumption, and drainage in the production process on the local water environment and surrounding communities and has established a sound water resources management system. All mills have in place a strict internal supervision mechanism and water resources management targets. They regularly track the implementation and continuously improve performance in related areas; they maintain active communication with the local governments, regulatory authorities, community residents, and other stakeholders and fully fulfill their obligation of information disclosure.

The mills continue to optimize their water use patterns and actively build water-saving mills to drive a sustained decline in the amount of fresh water consumed in production. In 2019, Guangxi Jingui Pulp & Paper, Hainan Jinhai Pulp & Paper, Ningbo Asia, and other mills undertook a water saving initiative aimed at reducing water consumption per unit of product. It included activities like identifying areas to improve in the production process, optimizing processes and technologies, conducting regular analyses of water saving effectiveness, and sharing hands-on experience with other mills. Through a

series of initiatives such as improving white water utilization rate and recycling cooling and seal water, Gold Huasheng could save 44,650 tons of fresh water annually.

In 2019, the total water withdrawal by APP China mills within the reporting scope decreased by 674,329 tons compared with the previous year.



2019 National standard* limit

*Discharge Standard of Water Pollutants for Pulp and Paper Industry (GB3544-2008).



Case Strictly Complying with Waste Water Discharge Standards

Hainan Jinhai Pulp & Paper has built separate waste water treatment plants for its pulp and paper projects. Its COD emissions in 2019, which stood at 0.22 kg per ton of paper produced and 1.15 kg per ton of pulp produced, were well below the national limit set in the *Discharge Standard of Water Pollutants for Pulp and Paper Industry (GB3544-2008)*. In 2019, the company worked with its suppliers to develop new chemicals for waste water treatment, greatly improving its efficiency. The company also invited an external organization to perform ecological impact monitoring on the waters near the company's drainage outlets to gain an objective knowledge of the plants' impact on the surrounding waters and used the

monitoring results to inform better waste water management and ecological protection. The monitoring report produced by the Institute of Oceanology, Chinese Academy of

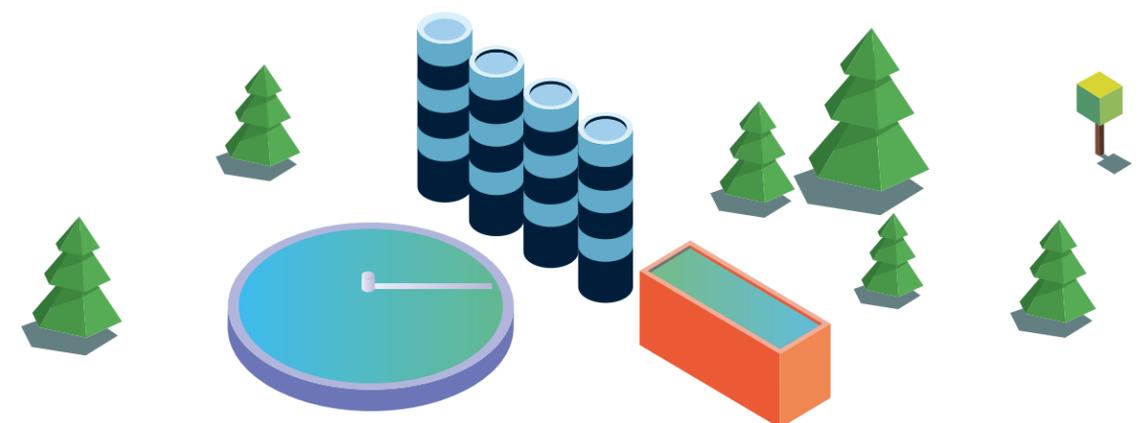
Sciences in January 2019 on the waters of the company's Port of Yangpu showed that the waters as a whole met the Grade I sea water quality standard.



Hainan Jinhai Pulp & Paper Waste Water Treatment Plant ▲

Case Implementing Water Saving Actions

In 2019, Ningbo Asia carried out sedimentation concentration treatment of waste water. The filtering would produce an upper layer of clear liquid that could be recycled for production so that the water resources could be better utilized. Moreover, problems during water use such as evaporating, emitting, dripping, or leaking were addressed right away, leading to increasingly better water saving results. In 2019, the company saved a total of 234,000 tons of water, with a water reuse rate of 94.63%. The company plans to broadly share its water saving experience both internally and externally to further deepen the water saving measures and make them more effective.



Strengthening Energy Management

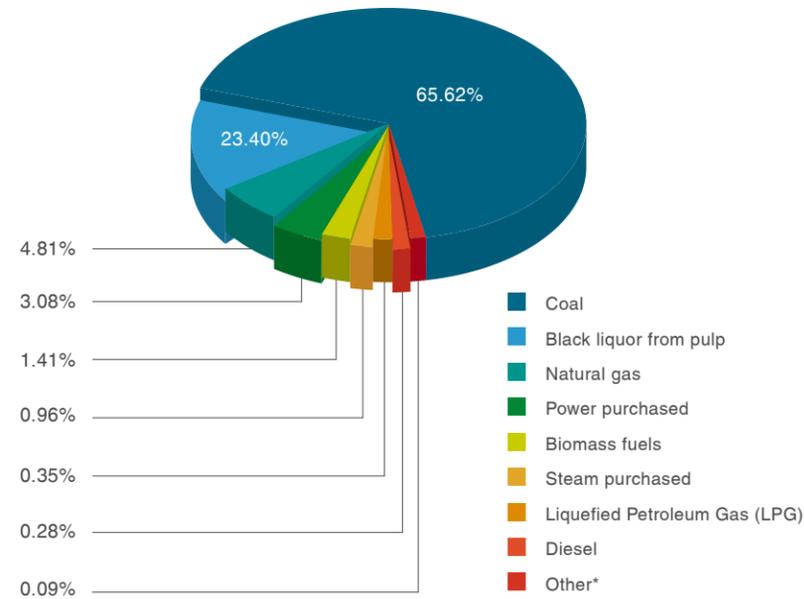
The paper industry is one of the key participants in the national carbon trading market system. Measures such as reducing the use of fossil fuels, improving energy efficiency, and increasing the use of renewable energy are of great significance to curbing climate change. APP China acts in strict compliance with national, local, and industry policies on energy conservation and consumption reduction and has set up energy management committees and relevant leading groups in each mill to collectively advance efforts in this regard. All mills actively participate in internal and external carbon trading training to fully brace themselves on data and theories for future participation in the carbon trading system.

Solar power generation:

26,040.5 MWh



2019 Energy Mix of Mills within Reporting Scope



*Other energy sources include solar energy, fuel oil, gasoline, and kerosene.

Case Establishing a Sound Energy Management System

Gold Huasheng set up an energy management system in 2014 drawing on the national standard *Energy Management Systems – Requirements*, which undergoes regular audits by the China Quality Certification Center. In line with the latest national and local environmental protection requirements, the company continuously updates its energy management goals and formulates corresponding implementation plans. In 2019, Gold Huasheng completed the latest energy audit. The audit team conducted a comprehensive analysis and evaluation of the company's current energy management mechanism, energy structure, and energy use. Based on the results and recommendations, Gold Huasheng has established new energy performance benchmarks and goals for the next stage to further stimulate improvements in its energy management.

Case Saving Energy by Various Means

In 2019, Hainan Jinhai Pulp & Paper invested over RMB10 million in energy saving renovations. For instance, the company installed an energy recycling system in the workshops, transformed the energy utilization equipment, and carried out equipment maintenance. Measures like those significantly improved the comprehensive energy efficiency. In terms of energy conservation in its own power plants, the company optimized the mix of purchased power and self-generated power based on the peak and valley cycle of electricity consumption, thereby effectively reducing the use of raw coal. In 2019, the raw coal consumption in Hainan Jinhai Pulp & Paper decreased by 13.15% compared with 2018, and the boiler electricity consumption decreased by 11%.

Reducing Waste Gas Emissions

APP China continues to step up efforts to reduce air pollutant emissions to aid the nation's plan to protect the blue sky. As of the end of 2019, the four major mills, namely Guangxi Jingui Pulp & Paper, Ningbo Asia, Gold East Paper, and Hainan Jinhai Pulp & Paper, had all completed ultra-low emission retrofitting, which could reduce 197 tons of soot emissions, 227 tons of sulfur dioxide emissions, and 2,627 tons of nitrogen oxides every year. With the continued progress of the ultra-low emission retrofitting, the total air pollutant emissions from our mills within the reporting scope are decreasing each year. In 2019, the sulfur dioxide emissions dropped by 556.31 tons from 2018, representing a year-on-year decrease of 44.36%.

Case Ultra-Low Emission Retrofitting

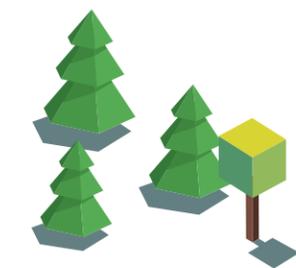
With a total budget of RMB143.4 million, Gold East Paper officially started ultra-low emission technical retrofitting of its boilers in 2018. Based on the boiler desulfurization and denitrification carried out in 2014, the new retrofitting project adopted ozone denitrification and wet electric dust removal technology. This could further reduce the emission of nitrogen oxides, sulfur dioxide, soot, and other pollutants and lead to full compliance with requirements of the State Council's *Three-Year Plan on Defending the Blue Sky* and of the local Zhenjiang Atmospheric Administration. As of mid-June 2019, ultra-low flue gas emissions had been realized in all four boilers of Gold East Paper's power plant, which could reduce 212 tons of nitrogen oxide, 13.2 tons of sulfur dioxide, and 51.1 tons of soot every year.

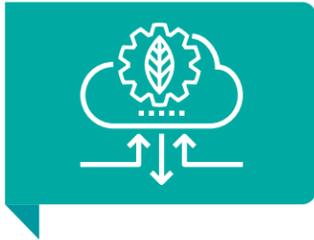


Gold East Paper actively carrying out ultra-low emission retrofitting

Case Continuing to Strengthen Odor Control

Hainan Jinhai Pulp & Paper invested over RMB150 million in 2019 for ultra-low emission retrofitting, equipment upgrading, and odor inspection and remediation. The company focused on improving the existing odor disposal system to eliminate unorganized emissions of odorous gases. For the odor generated during waste water treatment, the company built a waste water treatment plant conditioning tank and a sludge storage tank and sealed the odor produced in the sludge dewatering room; it also established an odor treatment facility inspection system at the waste water treatment plant, further optimizing the operations standard management mechanism and real-time reporting mechanism and ensuring that all treatment measures were put in place. In 2018 and 2019, approximately 7,000 trees have been planted in and around the waste water plant area to improve the self-purification rate of the environment.





Intelligence-Driven Industrial Upgrade

The *Made in China 2025* strategy contains the demand to "seek innovation-driven development and apply smart technologies". Strategic documents since 2018 like the government work reports have repeatedly emphasized the need to strengthen "construction of new infrastructures", notably artificial intelligence, industrial Internet, and the Internet of Things. Those national policies are clear signals that the cultivation of the digital economy has become a new driver of national economic growth. For traditional manufacturing industries such as the papermaking industry, intelligent manufacturing will become the leading force driving industrial transformation and upgrading.

APP China focuses on digital transformation as a key development strategy and works to promote the construction of Industry 4.0 and intelligent manufacturing with an open and innovative attitude. We are taking advantage of emerging technologies to expand our industrial territory and quicken the transition of the papermaking industry to "intelligent manufacturing".

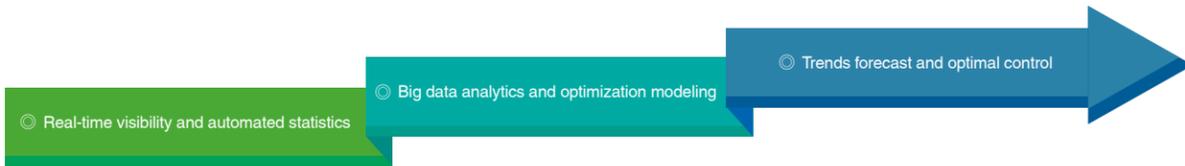
Embracing the Intelligence Revolution

APP China thoroughly implements the *Made in China 2025* strategy and continuously advances to the goal of "intelligent equipment, digital management, and automated processes" by formulating and implementing the "Industry 4.0" roadmap. We take automation-oriented transformation as our current focus and make an all-out effort to promote the upgrading of papermaking equipment and processes; by virtue of big data technology

and scientific management, we manage to improve our information management capabilities and gradually foster the linking and integration of the various information systems for different parts of our operations.

Relying on a real-time database platform and a production execution management system, APP China is steadily pushing forward the trilogy for making production

data digital and intelligent. With improved efficiency and guaranteed product quality control, we strive to reduce material and energy consumption and thoroughly enhance the company's ability to pursue sustainability.



APP China Trilogy for Digitized and Intelligent Production Data

In 2019, APP China invested tens of millions of *yuan* developing dozens of automation projects. Using high technologies such as big data, cloud computing, and the Internet of Things, we have managed to digitize information collection throughout the full lifecycle from raw materials to finished products and to

recycling, leading to better product quality control and traceability. Meanwhile, the adoption of smart warehousing has greatly enhanced the efficiency of warehousing and logistics operations and management. We have also expanded the application of real-time data visualization and automatic statistics to cover more production and

operations processes. The pending 5G era will see us collect and analyze data on consumers' purchase behavior to gain a deeper insight into consumer needs and promote precise product R&D and innovation upgrades.



Automated papermaking workshop ▲

Case Real-Time Database System Construction



In traditional factories, the control and management systems of production equipment are scattered and independent of each other, making it difficult for the managers to have an overall grasp of the equipment's running status. In line with the Group strategy, Guangxi Jingui Pulp & Paper started developing the PI (Plant Information) Real-Time Database System in 2019. The system extracts data from different production equipment and forms an infographic based on data processing and analysis before presenting it on the managers' computers, smart terminals, and other devices via wired, wireless, or 4G networks. This has notably improved the company's capabilities of comprehensive management and rapid response.

The system improves the company's ability to perform equipment maintenance and fault warning, which can reduce unplanned downtime by 10% every year, equal to RMB7.62 million in loss reduction. Meanwhile, based on

the data analysis by the system, the company will be able to know about the optimal raw material input ratio and the point of balance among steam, electricity, and water in a timely and accurate manner, thus realizing further savings in resources and energy.



Energy monitoring interface of the PI real-time database system ▲

Case Digital Information End-to-End Tracking



The Radio Frequency Identification (RFID) technology stores product data in electronic tags and is a type of remote automatic identification technology. APP China applies the RFID technology in its entire production process (for example, base paper winding, rewinding, slitting, post-processing) and to its logistics and warehousing management (for example, delivery and inspection, warehousing, storage, inventory, transportation) to realize digitized quality control. The RFID technology has such advantages as fast information reading, contactless long-distance recognition, penetrable omnidirectional recognition, and high reliability. This makes it possible to comprehensively track and synchronize data of the production, warehousing, and logistics processes, thereby realizing full traceability of the digital information and more automated and efficient operations.

Creating an Intelligent Industry Eco-Chain

APP China integrates the intelligence strategy fully into its industrial development plan, making full use of cutting-edge technologies such as artificial intelligence, big data, and cloud computing to create an intelligent and green paper industry ecosystem and help boost the digital and intelligent transformation of China's paper industry.

APP China's first new intelligent manufacturing upgrading project, the Rudong High-Grade Tissue Industrial Base, was initiated in July 2019. With "Industry 4.0 + Artificial Intelligence" guiding its production, it takes advantage of new technologies such as big data and 5G to automate production and realize intelligent management and operations

and will be the most advanced of its kind in the world. Phase I of the project will begin operations in 2020. When put into full production in 2021, the project is expected to produce 3.96 million tons of high-grade tissues annually, and the per capita production will be tripled compared with the original factory.



Rudong High-Grade Tissue Industrial Base breaking ground ▲

Case Logistics Automation at New Base



At the new production base under construction, APP China has launched a logistics automation project, which will create an automated logistics model through the combined use of various technologies. From 2020 to 2021, we will focus on promoting the use of intelligent transport vehicles. Those vehicles are equipped with advanced technologies such as

unmanned driving and lidar and are connected with a variety of support systems, such as intelligent port system, automated warehousing system, automated transport system, and automated operations system, to facilitate intelligent operations at the new base.



Robust Products

Innovation is the soul that drives high-quality business development, and one important way of product innovation for the papermaking industry is to follow the global sustainability trend. In this era of challenges and rapid development, APP China aligns its actions with the needs of the market and social development and constantly injects innovation into developing industrial paper, cultural paper, and tissue products. At the same time, we seek extensive cooperation and engagement with the outside world and actively promote the implementation and wider application of best practices on issues such as "Paper for Plastic" and sustainable consumption.

"Paper for Plastic" Starting a New Trend

Disposable plastic products are difficult to degrade and heavily used and have a low recycling rate. According to United Nations statistics, at least 8 million tons of plastic waste enter the ocean every year, and this number is still rising. In response to this increasingly severe pollution problem, the Chinese government has issued a number of policies and rules in recent years, clearly stating that bans and restrictions on the production, sales, and use of certain plastic products will come into force in a number of regions and fields first by the end of 2020. "Paper for Plastic" will become an inevitable trend in food

packaging, takeaway catering packaging, and other fields. As an expert provider of paper packaging solutions, APP China strives to be a pioneer in the "Paper for Plastic" initiative and actively promotes the R&D and production of plastic product alternatives. We continue to deepen innovation in "zero plastic" food packaging products and step up the promotion of the degradable and recyclable Foopak food cardboard products for the Chinese market. Meanwhile, companies such as Gold Huasheng and Ningbo Asia have developed a series of

high-quality products such as "zero plastic" coated food cardboard, "zero plastic" oilproof food cardboard, and drinking straw base paper. In the future, we will foster more innovations in the field of medical packaging, plastic laminate alternatives, paper trash bags, etc., doing our part at the industry source to facilitate a broader transition to a green and low-carbon lifestyle.

Case "Zero Plastic" Product Promotion Taken a Step Forward



The Sinar Mas Group's Foopak Bio Natura™ biodegradable food cardboard debuted at the first CIIE. The product can well replace traditional disposable food packaging thanks to features like thorough degradation rate, airtightness, and cold and heat resistance. Meanwhile, the water-based laminate inside of Foopak is plastic-free and fully biodegradable within 12 weeks. With technical optimization, Foopak products' performance has been further improved in 2019 to withstand high temperatures up to 220 degrees Celsius and be recycled and reused five to seven times.

At the second CIIE in 2019, the Group entered into an agreement with a number of Chinese companies to collaborate on the full range of APP products including Foopak. This was another solid step towards the scale-up and marketization of "Paper for Plastic" technologies as represented by Foopak and will also bring a new green consumption experience to Chinese consumers.



Sinar Mas Group and several Chinese companies reaching an agreement at the second CIIE ▲

Case Diversified "Paper for Plastic" Solutions



APP China Paper Business Unit has developed and launched a range of "Paper for Plastic" packaging product series. Examples include the "zero plastic" coated food cardboard, "zero plastic" oilproof food cardboard, drinking straw base paper, white kraft paper for food packaging, etc., providing a variety of environmentally friendly packaging solutions for the domestic market.

Gold Huasheng, a company engaged in special papers, has successfully developed a drinking straw paper product that complies with the restrictions set out in EU BfR (German Federal Institute for Risk Assessment) on food contact materials. To do so, the company conducted extensive research and testing, based on which it determined suitable eco-friendly chemicals and pulp processing conditions. In addition to straw paper, Gold Huasheng

is also developing dialysis paper that meets the requirements of medical packaging. The paper can withstand high-temperature steam sterilization while also effectively blocking bacterial penetration and is thus suitable for cases like mask packaging and dental consumables packaging. Moreover, the development of plastic lamination alternatives is also an important future direction for the product R&D at Gold Huasheng.

	<p>"Zero plastic" coated food cardboard</p> <p>Waterproof and impermeable, free of plastic lamination and fluorescent agents; recyclable, 100% industrially degradable, capable of being broken down for pulping, compostable, and other eco-friendly properties; suitable for directly making all kinds of paper cups, paper bowls, meal boxes, soup cans, and other forms of takeaway food packaging.</p>
	<p>"Zero plastic" oilproof food cardboard</p> <p>Free of silicone oil or fluorine-based coatings, exceptionally oilproof, non-stick, and anti-seep because a dense coating is formed on the surface of the paper through the use of the graphene nano-barrier technology; degradable, recyclable, free of fluorescent agents; suitable for directly making food packaging cartons, oilproof catering paper packaging, stamped food containers, etc.</p>
	<p>Drinking straw base paper</p> <p>Made of virgin wood pulp, recyclable and degradable; QS certified, food-grade; suitable for making paper straws, airline cups, paper bag cups, and other products.</p>
	<p>White kraft paper for food packaging</p> <p>QS certified, free of fluorescent agents, food-grade; highly strong, stiff, and smooth, highly tear- and burst-resistant, suitable for large ink full-page printing; suitable for making solid food stand-up pouches, food packaging paper bags, takeaway packaging paper bags, tray paper, etc.</p>



Applications of Ningbo Asia's "Paper for Plastic" product series ▲

Forest Certification Labeling for Products

Forests are the largest and most expansive and biodiverse ecosystems on land and play an irreplaceable role in conserving water and soil, sequestering carbon and producing oxygen, and maintaining global ecological balance. Forests also provide ample resources for human production and living and are a true treasure house of resources.

APP China is fully aware that only by respecting and protecting forest ecology can we ensure the long-term and sustainable use of forest resources and truly turn "lucid waters and lush mountains" into "invaluable assets". For years, we have

actively conducted forest certification and continuously promoted sustainable forest management (FM) and chain of custody (CoC) management. On this basis, we continue to facilitate forest certification

labeling for products to draw wider attention to the environmental and social impact of sustainable paper products and advocate sustainable consumption.

246,735 hectares of plantations are CFCC/PEFC-FM-certified

92.27% of plantations are CFCC/PEFC-FM-certified

16 affiliated entities have obtained CFCC/PEFC-CoC certification

Note: For more detailed information, please refer to the Sustainability Management section.

Normalization of Product Labeling

Forest certification has been widely recognized by the international community and governments as an effective tool for promoting sustainable forest management and market access for forest products. China Forest Certification Council (CFCC) and the Programme for the Endorsement of Forest Certification (PEFC), a leading international forest certification system, reached mutual recognition in 2014. It gives China's sustainable forestry products an "international passport" while setting stricter requirements for the management of certified paper products in terms of

"traceable product information, reliable eco-friendly production, and sustainable raw materials".

Under the guidance of the Science and Technology Development Center of State Forestry and Grassland Administration, APP China has continued to promote the labeling of certified forest products in recent years and is the first in the industry to carry the CFCC/PEFC label on its products. In 2019, our Touchcare functional tissue under the well-known brand Breeze™ and some products under

the high-grade tissue brand EMPORIA also started to carry the joint label, further expanding APP China product series with forest certification labeling. The CFCC/PEFC joint certification and labeling will be normalized for an array of products under EMPORIA and VIRJOY in 2020.



EMPORIA tissue products carrying the forest certification label ▲



By normalizing the labeling of certified forest products, we hope to bring more sustainable products to consumers and make it easier for them to identify products made from raw materials sourced from sustainably managed forests. In this way, we can help increase the social awareness of sustainable consumption and the development of sustainable forestry.

What does a CFCC/PEFC Forest Certification Label Mean?

Paper products carrying the CFCC/PEFC joint label are subject to audits by certification bodies for the source of their wood materials, which have to be 100% from scientifically planted, legally compliant, and environmentally protected plantations. For those products, material traceability has to be guaranteed throughout the whole process from material input, manufacturing, transportation, storage, and sales to consumer use. The forest label gives products the dual qualifications of "raw material reliability" and "product traceability".

Increasing Awareness of Sustainable Consumption

While continuing the efforts to advance product labeling, APP China is also actively popularizing sustainability ideas represented by forest certification to the society by undertaking publicity and advocacy initiatives. With strong support of the Science and Technology Development Center of State Forestry and Grassland Administration, a series of CFCC/PEFC philanthropic campaigns jointly sponsored by Nanjing Forestry University and APP China was held on campuses and in communities and city areas of Nanjing in November 2019. We showcased the company's products with the CFCC/PEFC label and held a lecture at Nanjing Forestry University on forest certification. We mainly introduced relevant practices at APP China and called on the public to pay attention to the conservation and sustainable development of forests.



Lecture on forest certification at Nanjing Forestry University ▲



Injecting Innovation in Products

APP China continues to step up R&D investment and technological innovation and manages to meet the increasingly diversified paper needs by constantly optimizing and enriching its product series. In terms of industrial paper and cultural paper, we have developed a wide range of high-bulk products in line with the lightweight trend of applied paper; we

constantly adjust product formulas and production technologies and processes and strive for excellence in product performance. In terms of tissues, we have launched a series of Healthy Family products, which can effectively meet people's requirements for a healthy and hygienic life.



Case Meeting New Demands For Health



The general trend of consumption upgrading and classification has created a higher demand for the functionality and personalization of paper in our daily life. Based on an in-depth analysis of the needs of contemporary consumers, Suzhou Gold Hongye has launched a series of functional wipes for different situations, including glass cleansing wipes, dish wipes, cooling wipes, and stain remover wipes. For people with sensitive skin, the company has developed a moisturizing facial tissue. Infused with moisturizing factors and vitamin E, the tissue effectively locks in moisture and offers a moisturizing and smooth soft touch. For baby skin, the company has developed a series of special products for mothers and babies using a number of patented technologies, such as moisturizing dry towels for babies, baby cotton tissues, and addictive-free hand and mouth wipes for babies.

In 2019, the company continued to deepen R&D and launched an array of antibacterial products, such as antibacterial cream paper products and 75% alcohol wipes (dish wipes), which adequately meet people's sanitizing and cleaning needs in

daily life. The outbreak of the epidemic has driven home the harm of bacteria and other microorganisms and led to increased recognition for sanitizing and antibacterial products.

With a relentless commitment to innovation, Suzhou Gold Hongye obtained 22 patents in 2019, of which 20 were invention patents, ushering it to China's top 500 enterprises in terms of patents.



Moisturizing dry towels for babies ▲



Dish wipes ▲



Dry & wet dual-use wipes ▲

Case Pursuing Excellence in Fine Cultural Paper



Coated paper is commonly used in printed products such as book covers and commercial advertisements. As people's taste improves, the traditional coated paper can no longer meet many customers' new requirements for paper products as they go after elegant paper color, embossed feel, high color reproduction quality, etc. Gold Huasheng has developed the "Art Paper" product series using optimized product formulas. This type of product offers a natural hue and excellent color reproduction and is suitable for a variety of printing processes. In addition to ordinary paper colors, the new product also provides special color options such as ivory white and high white, which satisfies customers' different needs in paper color and offers new possibilities for coated paper printing.

Case Thermal Paper Leading to Eco-Friendly Weight Reduction



Thermal paper is notable for its ink-free way of using chemical reactions to create colors and is commonly found in places like cash registers, labels, and tickets. Generally speaking, the thickness of the paper is related to its base weight – the higher the base weight, the higher the thickness and the amount of pulp used. Gold Huasheng has developed the high-bulk thermal paper, which reduces the base weight of finished paper by more than 20% while maintaining its thickness. This has effectively reduced the use of pulp as a raw material and is another step in the direction of greener thermal paper.

02

Responsible Operations for a Sustainable Business

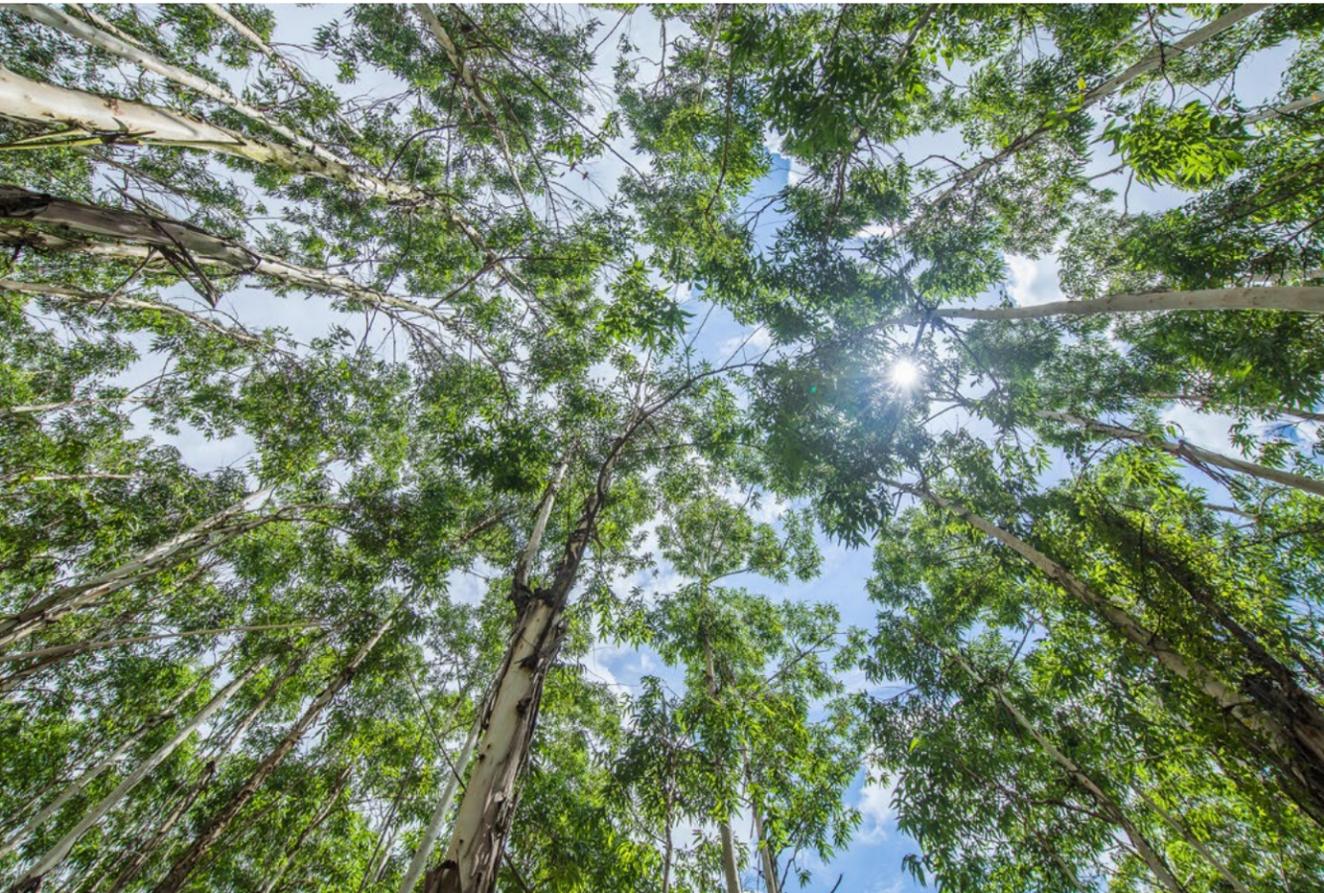
Embedding sustainability into the corporate development strategy is not only what the society expects of a company but also an inevitable choice for a company in order to survive and thrive in the context of global governance. From the outset, APP China has begun to pay attention to its economic, social, and environmental impacts and drive the gradual incorporation of sustainability ideas into the entire value chain. We have been a long-standing supporter of sustainable forest management. We undertake various initiatives aimed at this goal such as the forest management certification, High Conservation Value (HCV) Forests appraisal, and ecological monitoring and comprehensively strengthen forest safety risk management. We have put in place strict safe production management measures to effectively protect our employees and suppliers; we deeply institute sustainable procurement practices to continuously foster more responsible practices along the supply chain.





Sustainable Forest Management

"Scientific, ecological, and legal forestry" is the fundamental forest management approach that APP China adopts. On the basis of the *APP Forest Conservation Policy*, APP China Forestry has drawn up a series of forestry policies to further optimize management in this regard and ensure that its forest management is both socially and environmentally friendly. They include the *Sustainable Management Policy*, the *Society and Labor Policy*, the *Environmental Policy*, etc. APP China Forestry fully implements its forestry policies based on the ISO 14001 Environmental Management Systems. It works with third-party professional organizations to perform environmental monitoring and evaluation on a regular basis and makes timely improvements based on the results; it takes measures to actively prevent safety risks like fires and illegal logging. APP China Forestry also conducts regular internal and external audits in line with forest certification requirements and organizes sustainability training for employees to continuously improve its sustainable forestry management.



Continuous Promotion of R&D and Innovation

APP China has built a modern seedling nursery and R&D center dedicated to the cultivation and planting of seedling strains. The company constantly improves its capabilities of innovative R&D in areas like the fostering of new seedling strains and industrial development and innovation. It also actively participates in industry dialogues on development to continuously contribute to the progress and development of the eucalyptus industry.

Based on samples from the Guangxi Gene Bank, the R&D team developed the RD-5, a new eucalyptus strain, which has been successfully bred after years of experimental planting. A hybrid between DH33-27 and the fine leaf eucalyptus T12, RD-5 has such fine properties as wind resistance, scorch resistance, fast growth, and high yield. It has been brought to forest areas in Hainan, Guangdong, and Guangxi, with 100,000 planted in 2019. We have also introduced new strains such as Lei-11 and Lei-40 from the Leizhou Forestry Bureau, which are wind-resistant, fast-growing, and high-yielding, with around 2,700 planted in Fangcheng in 2019. Additionally, we have introduced U7

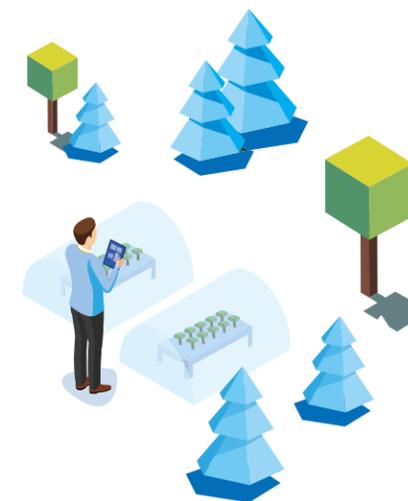


A lecture on eucalyptus science and sustainable forestry development at the CIIE ▲

from the Leizhou Forestry Bureau, which is a high-yielding and upright strain, and had 95,300 of them planted in 2019.

In 2019, APP China Forestry hosted and participated in a number of industry exchanges and seminars. For instance, it initiated a conference and lecture on eucalyptus science and sustainable forestry development at the 2nd CIIE; it

attended industry conferences such as the National Eucalyptus Alliance Conference and the National Eucalyptus Industry Development and Academic Seminar, engaging in discussions with industry experts on the research directions of strains, among many other topics.



In 2019, Hainan Jinhua Forestry was included in the first batch of China Forestry and Grassland Industry Innovation Bases – "Raw Material Forest Base for Integration of Plantation-Pulp-Paper", the first such base in China. The selection was

organized by China Forestry Industry Association to highlight companies in the forestry and grassland industry with an outstanding performance in innovation, innovation bases, innovation personnel, and brand trustworthiness in 2019.

Forest Management Certification

APP China Forestry carries out CFCC/PEFC-FM certification every year and continues to use the audits and evaluations to inform better management, thus laying a solid foundation for realizing sustainable forestry.

In 2019, a third-party forest certification agency undertook the annual CFCC/PEFC-FM audit on APP China Forestry's business units (BU) in Guangxi, Guangdong, and Hainan and a renewal audit on Lancang and Wenshan forest areas in Yunnan. In accordance with the *Forest Certification in China – Forest Management (GB/T28951-2012)*, Chinese laws and regulations, international conventions, and company rules and regulations, the audit team conducted a strict document audit and site audit from the environmental, social, and economic perspectives respectively. During the site audit, the audit team looked at a range of issues based on scientific sampling such as the forestry management procedures of different companies and forestry farms, as

well as the seedling cultivation at nurseries, material warehousing management, and chemical control. All of the 12 forestry companies passed the audit. Regarding the minor nonconformities found during the

audit or items under observation, relevant forestry farms have been required by the audit team to complete rectification within a particular time limit and continue to follow up.



CFCC/PEFC-FM certification audit ▲

Forestland Carbon Inventory

Forest carbon sequestration refers to the process by which forest plants absorb carbon dioxide from the atmosphere and fixate it in vegetation or soil, thereby effectively reducing the concentration of carbon dioxide in the atmosphere. It is pointed out in the *Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)* that forestry is related to both climate change mitigation and adaptation and that increasing forestry carbon sequestration is an important and economically viable measure for reducing carbon emissions. It can be predicted that forestry carbon sink trading will become an important part of the future domestic carbon trading market.

As a pioneer of "Integration of Plantation-Pulp-Paper", APP manages more than 27 million mu of plantations in Indonesia

and China. These trees have played an important role in carbon sequestration. In 2019, we invited climate change experts to provide training on carbon trading, carbon accounting, and carbon sinks for all APP China Forestry business units. The training featured a systematic introduction

to climate change trends, national climate change policies, development of domestic and foreign carbon markets, methods of carbon sink calculation, etc. It has laid the foundation for the company's future work in forestry carbon sink calculation and implementation of carbon-neutral projects.



APP China Forestry sustainability seminar and carbon sink training and field inspection ▲

High Conservation Value Management

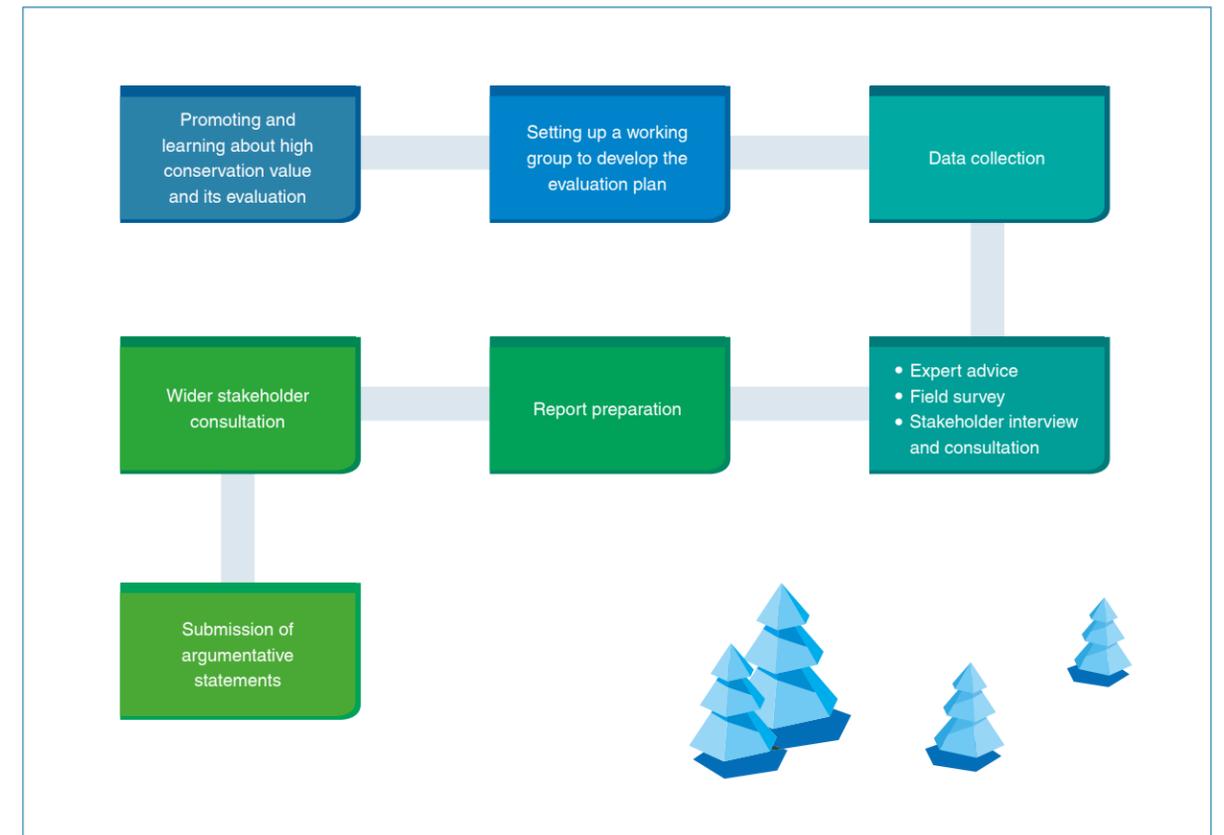
High Conservation Value (HCV) forests refer to forest areas with one or more particular attributes regarding the six areas of biodiversity, landscape-level ecosystems and ecosystem mosaics, ecosystems and habitats, basic ecosystem services, necessities of local communities, and cultural significance. Responsible forest managers need to determine the HCVs of the forests they manage, monitor the effectiveness of management, and make corresponding behavioral improvements so that those values are better conserved.

We pledge to protect and properly manage the HCVs within our business scope and also help our employees understand those values in depth by means of brochures,

training sessions, etc. so that we can fully operationalize our protection efforts. APP China forest areas have devised the *High Conservation Value Management Measures* and the *High Conservation Value Forests and Determination and Protection of Traditional Rights* and set up the HCV working group. We determine, evaluate, and protect the HCVs of forestlands through data collection and analysis, forest field surveys, stakeholder engagement, and other approaches.

As of the end of 2019, 54% of our plantations had completed HCV assessment. APP China Forestry will continue to pay attention to the environmental changes of forestlands and

surrounding areas. Once potential HCV attributes are detected, we will conduct evaluation and confirmation in accordance with the HCV determination criteria and follow up with appropriate conservation measures.



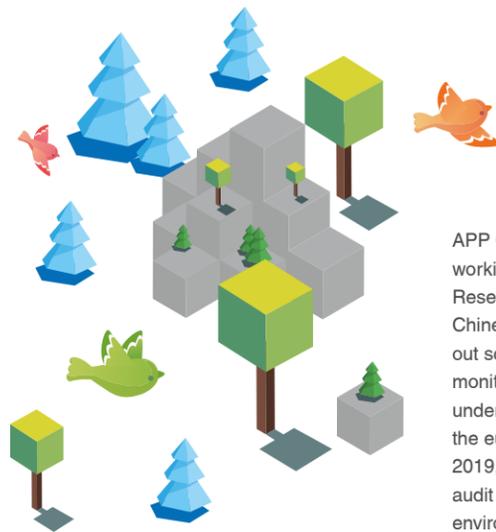
General process for determining high conservation value ▲

Ecological Impact Monitoring

Attention to and protection of biodiversity remains the focus of APP China during forestland management. APP China Forestry has drawn up a series of management measures, including the *Buffer Zone Management Measures*, the *Guidelines for Eco-Friendly Operations*, the *Provisions on Wildlife Protection*, etc., to guide the recording, monitoring, and protection of wild animals and plants during forestry activities. Consistent with relevant national lists and protection requirements of rare, threatened, and endangered species, the forest areas have compiled albums and wallcharts of wild animals and plants that need to be protected so that foresters can learn about and recognize them. Each small class at the forestry farms undertakes a biodiversity survey at least once a year, where they locate animals and plants by using GPS, take photos to keep records, and summarize and analyze the survey and monitoring data. All of those contribute to the establishment of a biodiversity database that enables a closer tracking of those animals and plants. During the 2019 biodiversity survey, the protected plant *Alsophila spinulosa* was discovered in both our Hainan BU and Lancang Sub-BU. The survey team has marked and recorded the protected plants and will continue to monitor them in the future.



The protected plant *Alsophila spinulosa* in Wusha Forestry Farm of Hainan BU ▲



APP China Forestry has long been working with Guangxi University and the Research Institute of Tropical Forestry, Chinese Academy of Forestry to carry out scientific research such as ecological monitoring and has continuously undertaken environmental monitoring of the eucalyptus plantations it manages. In 2019, APP China Forestry conducted self-audit and evaluation and developed an environmental impact assessment report, summarizing its past work in environmental

management while offering suggestions for future improvements. The assessment mainly looked at impacts in areas like soil erosion, soil quality, and biodiversity and showed that the eucalyptus plantations had certain positive ecological effects. While lower than that of philanthropic forests, their ecological benefits are still greater than that of rubber forests and mango forests. The plantations have also created ample employment opportunities, bringing significant social benefits.

Forest Safety Risk Management

Forest fires not only severely damage the ecosystem but also cause great loss of life and property for human society. Preventing forest fires is a top priority of APP China Forestry's work in forest resources management and protection. The company has established a forest fire prevention command, delineated forest fire risk zones, and formed a fire prevention squad. It has also built an artificial patrol monitoring network, information monitoring network, and prediction and forecasting system. Those systems, in conjunction with local forest fire prevention command and meteorological department, has enabled forest fire monitoring and forecasting in key fire prevention areas using satellite monitoring and other high-tech means. During high-risk fire seasons, the company implements a 24-hour duty system and a daily reporting system to keep abreast of changes in forest fire risks and take prompt control.

Employees in the forest areas assume the important responsibility of guarding the safety of the forests. In order to enhance the employees' awareness of fire safety and equip them with better fire-fighting skills and emergency response abilities, APP China Forestry organizes multiple fire drills and competitions every year to ensure timely and effective response in the event of a fire. It has also hired a large

number of local residents as forest rangers, helping reduce unemployment among local farmers. The rangers and APP employees would go to villages near the forestry farms and educate local people on fire prevention in ways like home visits, radio broadcasts, and banners, to make them better informed and effectively prevent and control fires.



Case Forest Fire Drills

In October 2019, forest fire drills were organized in Lingshan and Pubei forestry farms in our Guangxi BU. Asset Managers of the forestry farms shared knowledge about firefighting, the correct use of fire extinguishers, and the ways to save oneself and each other when one catches fire. Then the team rehearsed the whole process from detecting to extinguishing a fire, putting out a 250-meter-long fire line in just 20 minutes while completing follow-up work like a safe evacuation and residual-fire cleanup. The drill honed the firefighting team's emergency response ability and teamwork, leading to better firefighting skills and tactics.



The fire drill ▲

Case Building a Strong Firewall Through Extensive Education

In September 2019, Fangcheng Forestry Farm of our Guangxi BU held the "Forest Protection and Fire Prevention Education Week". Working with local authorities, the forestry farm sent 5 groups, 16 people in total, to mountains and borders and to townships, villages, and communities around key forest areas. There they put up banners and slogans and handed out publicity leaflets, among other forms of publicity, to educate local people on forest fire prevention. According to available statistics, over 5,000 bags and 15,000 copies of publicity material were handed out, 20 banners and over 100 slogans were put up, and over 30 warning signs were strengthened during this campaign.



Putting up publicity banners ▲



Distribution of publicity bags on forest protection and fire prevention ▲

Another major risk area in forest management is illegal logging. APP China has set up a security team in each forest area and works to prevent illegal logging, illegal settlement, and deforestation through continuously strengthened daily patrols. In addition, each forest area actively works with local police to combat illegal activities together and build a strong "protective wall" for the forests.



Ensuring Safe and Orderly Production

Safe production is a company's lifeblood and the prerequisite and guarantee for its normal production activities. APP China firmly institutes a culture of production safety, continuously strengthens management in this regard, and commits itself to creating a "zero-accident" production environment.

APP China has established a Safety, Health and Environment (SHE) management system covering all employees, production and operating activities, and workplaces. In 2019, we issued the *Management Measures for Abnormal SHE Events Notification and Handling* and the *SHE Performance Management Measures* to all mills and contractors. Through them, we standardized and optimized the safety and health management at all levels and the procedures for handling abnormal events, identified key performance indicators, and set the yearly goals. APP China mills have all signed the SHE liability statement and set up a system for continuously tracking and improving their SHE performance.

At the monthly SHE meetings, APP China Headquarters communicates with the mills on various matters. It passes on policy requirements, reports accidents, reviews the achievement of the key performance indicators, and holds discussions on the problems employees are faced with at work. This is done to improve the SHE management and more effectively guard against safety accidents.



Contractors are highly mobile and have vastly different attitudes towards safety. Continuously strengthening contractor safety management is one of the key tasks of safety management. APP China mills have all formulated their own rules, such as contractor safety management measures and safety assessment guidance, and signed a safety liability statement with the contractors. They continuously tighten supervision and inspection on all the projects, programs, and daily service contractors and intensify efforts in checking and removing hidden hazards and correcting behaviors. At the same time, they actively provide contractors with safety training and regular learning sessions on relevant national laws and regulations, corporate safety systems and rules, and general knowledge of safe production.

The number of lost hours per million working hours at APP China was 854.70 in 2019. There were zero work-related fatalities.

Lost Hours per Million Working Hours at APP China (hours)



*The 2019 data do not include those of APP China Forestry.

Case Safety Management: Assigning Responsibilities and Refining Duties

Case

To further strengthen safety management, Gold Huasheng set up the Environment, Health and Safety (EHS) Department in 2019, launching a series of initiatives to this end and completing the transition to the ISO 45001 Occupational Health and Safety Management Systems certification. Out of a heightened focus on managing the risk factors, the company in particular substituted ammonia solution for liquid ammonia, successfully eliminating a major risk source in the mill.

In terms of contractor safety management, the company placed a special focus on strengthening safety training and communication. In August 2019, the General Manager of Gold Huasheng mill took it upon himself to convene a meeting themed "Compliance and Win-Win Cooperation" for the responsible persons of all contractors to further stress requirements for safety management. The company also invited third-party safety management experts to offer special free training on forklift safety to contractors responsible for short barging in the Logistics Department to guarantee safer operations.



"Compliance and Win-Win Cooperation" communication meeting ▲

Strengthening Risk Management and Control

APP China mills have formulated management measures for safety inspection and hidden hazard identification. They continuously intensify efforts to identify and remove hidden hazards through measures like regular safety inspections and routine checks. The mills make a point of undertaking hazard identification and risk evaluation in all workplaces, work equipment, and work activities and take timely measures to eliminate potential hazards to avoid and reduce safety accidents. Hainan Gold Hongye has devised the *Management Measures for Rewarding Reports of Safety Hazards*, encouraging employees to report on-site safety hazards to department heads, the safety department, or the company's primary persons in charge through proposals, meetings, emails,

phone calls, or other channels. In 2019, the hazard correction rate in all mills stood above 91%, reaching 100% at Ningbo Asia, Ningbo Zhonghua, Guangxi Jingui Pulp & Paper, and Hainan Gold Shengpu.

To fully prevent damages that fires inflict on the company and individual employees, we continue to strengthen the identification and removal of potential fire hazards. In 2019, we created a joint fire prevention mechanism. Designed to be preventative, the mechanism has the mills regularly check on each other and work together to identify the problems and hidden risks related with fire safety, based on which they will then draw up corrective measures in a timely manner.

We provide our employees with protective equipment that meets the national

standards and suits the nature of their jobs and organize education and training sessions to ensure that all personnel wear the equipment correctly; meanwhile, we continuously monitor and examine whether the safety measures are properly implemented. The mills conduct occupational hazard testing regularly to ensure that all the indicators meet the national standards; the employees are also given an annual occupational health checkup so that their wellbeing at work is truly looked after.

Safety Training

In 2019, we created the APP-SHE Case Study Repository based on the APP Corporate University Online Learning Management Platform. SHE accidents that had happened over the years were collected by the respective mills and uploaded to the online platform, available to all users. The mills would organize case study sessions regularly to draw lessons from past accidents and keep them from happening again.

We provide safety and health training for all employees and contractors, which covers contents like work safety knowledge, firefighting knowledge, and first-aid knowledge and skills; we invite health professionals to give lectures on the prevention of occupational diseases; we organize various safety drills and knowledge competitions to improve our employees' safety skills and awareness. In 2019, APP China mills conducted 267

safety drills in total. Guangxi Jingui Pulp & Paper held more than 200 training sessions on topics such as safety hazard removal, safe use of machinery, and general knowledge of workshop environment safety, involving 13,519 person-times of participants.



Practicing Sustainable Procurement

APP China incorporates sustainability throughout the procurement decision-making and management processes. It gives full consideration to the social and environmental criteria when evaluating and selecting suppliers and continuously pushes for improvements in the suppliers' performance in fulfilling their responsibilities.

In January 2019, we officially launched our Supplier Management Platform. It has brought online processes like supplier registration, certification, and due diligence and risk assessment and is another step forward in the construction of an integrated procurement control system that is efficient, transparent, compliant, and consistent.

In terms of supplier risk assessment and approval, we audit the suppliers' business qualifications and assess their financial risks while also requiring related information in areas like technology and quality management as well as health, safety, and environmental protection. Based on the suppliers' overall performance in those aspects, we form a risk assessment. We have added social responsibility related clauses to the contract and sign a *CSR Statement and Commitment Form* with our suppliers. This requires them to make commitments in respect of compliance with business ethics, respect for human rights, environment protection, positive impact on the community, etc. Meanwhile, we have created a supplier blacklist system to urge our suppliers to continuously improve their management and practices in fulfilling their responsibilities.

We have established a due diligence mechanism for timber source legitimacy, implementing a series of procedures and measures such as information collection, risk assessment, and risk mitigation to ensure the compliance and traceability of the sources of our raw materials. In addition, when entering into contracts with our suppliers, we require an undertaking from them that the raw materials they provide are free from disputed sources. In 2019, we increased the proportion of internationally certified wood pulp procured to 19.8%.

As regards raw material acceptance, we have laid out strict criteria in accordance with national and industry standards and the company's product quality requirements. For nonconforming products, we would promptly report back to suppliers and urge revisions. Hainan Gold Hongye has developed criteria for the acceptance and fining of raw materials. It also holds meetings with the suppliers from time to time, working together to continuously improve the quality of the raw materials. Gold East Paper regularly updates its raw material acceptance criteria and has created a blind sample system, a duty separation system, and a job rotation system to ensure the fairness and prudence of raw material inspection.



Case Conducting Safety Training to Improve Overall Safety Awareness



In 2019, Ningbo Asia and Ningbo Zhonghua organized five successive training sessions to include all of their employees. The training offered a systematic introduction to safety management knowledge and safety concepts and explained the company's reward and punishment system for production safety; the company's own safety accidents were cited for case study, which involved an in-depth analysis of their causes to help improve the employees' safety awareness and ability to avoid accidents. The training also included an examination, which could assess its effectiveness while further deepening the employees' awareness of safe production.



Safety training examination ▲

Case Intensifying Contractor Safety Training



Guangxi Jingui Pulp & Paper requires newly recruited contractors to take the safety training organized by the Industrial Safety Division and pass the examination before they can start working. The training covers many aspects such as national laws and regulations, company safety regulations, traffic safety, safe operations, and accident case study. The Industrial Safety Division carries out safety training for contractors every month in batches and covers all of them within the year. The company also requires the contractors to give internal all-staff safety training at least once a month to ensure timely information and communication on issues like safety regulations, accidents, and safety inspection results.



Monthly contractor safety meeting ▲

03

Joining Forces to Bring Harmony and Prosperity

"Community of shared life" contains the harmonious idea of "compatibility with everything" and endorses the philosophy that people and all things come together to form an organic whole. APP China strives to join hands with its customers, employees, and communities to form a community of shared life in which to live and thrive together. We put our customers first and thank them for their trust and support through the provision of desirable services; we regard talents as a valuable asset for both our development and that of the wider industry; we value every employee and offer ample opportunities to advance their careers; we actively give back to society, remain committed to doing good, and work with our community partners to create a better future.





Delivering Quality Service

APP China goes all out to build a service system centered on customer needs. We have established diversified channels for customer communication and carried out a variety of customer engagement activities to fully understand customer needs and continuously improve the quality of our products and services based on such interactions.

2019 saw our "All-Hands Marketing" strategy in full swing. Under this model, R&D, production, finance, administration, logistics, and other departments all adopt customer-centricity into their work, thereby forming a complete chain of value creation for the customers. "All-Hands Marketing" has given our non-sales employees more opportunities to get into contact with the market, which has made them more perceptive of customer needs.

All-Hands Marketing is not just marketing by all employees. More importantly, it is for all employees to be committed to their own duties with an ownership spirit and be guided by the purpose of "creating a community of shared life with customers" so as to create more value for our customers.

We launched the "Little A Classroom" in 2018, which is a customer interaction program. The program includes features like information sharing, product introduction, technical communication, strategic thinking, and more. Over a year into its launch, the classroom has become a platform for the company to communicate with the customers at zero distance regarding cultural paper and industrial paper. In 2019, we brought the "Little A Classroom" to provinces like Guangxi, Jiangsu, Guangdong, and Hunan, where we engaged our customers in discussions on topics such as trends in the paper and packaging industries, product development, customer complaint risk and management, and printing technologies. As of the end of

Case Staying United in All-Hands Marketing



Suzhou Gold Hongye takes full advantage of WeChat features such as mini-program, Subscription Account, and Moments to promote its products, as well as communicate with customers. The company provided its employees with training on products and sales skills. Direct engagement with the customers has equipped the employees with a deeper understanding of their needs, leading to better integration between production and marketing. The company's management also carried out firsthand market research, discovering problems with its products that needed to be fixed. They also held discussions with relevant departments based on the main findings of the research, which informed timely improvement plans.

2019, the "Little A Classroom" had served more than 2,000 customers. In the future, we will continue to enrich the formats

and resources of our courses to make the sharing and communication more normalized, convenient, and innovative.



"Little A Classroom" lecturing ▲

Case "Little A Classroom" in Rich Formats



The "Little A Classroom" offers flexible and diverse class formats, such as one-to-one lecturing, one-to-many product promotions, and VIP customer communication meetings, to provide the customers with more customized value-added services.

- One-to-one lecturing: The APP service team identifies customers' real needs through thorough communication, sets up the "Enhanced Classroom" jointly with the market, technology, customer service, and other departments at the mill end, custom-makes a very detailed curriculum, and gives lectures and answers questions for customers on the spot.
- One-to-many group solutions: APP's internal professional team explains products to customers; meanwhile, upstream and downstream experts in the paper industry are invited based on the customers' business category and needs to offer comprehensive information on the latest updates and future trends of the industry.
- VIP customer communication meetings: We bring together top talents of the paper industry and provide a platform for insiders to learn and talk about the future of the paper industry by offering contents like introduction to frontier products and technologies, sharing of the latest industry news, and on-site customer service.



"Little A Classroom" one-to-one lecturing ▲

Customer satisfaction is a goal that APP China relentlessly pursues. We attach great importance to customers' feedback and opinions and continue to optimize our complaint handling mechanism and procedure, going all out to provide our customers with a better experience. Customers can raise complaints and suggestions about our products or services through our website, service hotline,

customer relationship management system, mobile phone system, email, and other channels. Relevant departments like the Customer Complaint Department and Logistics Department actively take collaborative measures, such as investigation and evidence-gathering, analysis and verification, and satisfaction surveys, to ensure that customer complaints are handled promptly and

properly. In addition, we make a point of conducting the customer satisfaction survey to fully understand customers' opinions and expectations of the company in terms of brand image, product quality, sales services, logistics services, IT services, etc. and make improvement plans on this basis.

Case Actively Carrying out Customer Satisfaction Survey to Improve Quality of Service



From November to December 2019, Gold Huasheng conducted customer satisfaction surveys in ways like face-to-face visit, WeChat communication, and questionnaire survey. The 2019 survey results showed an overall customer satisfaction score of 4.47 (out of 5), higher than 2018. The Customer Service Department later classified the problems and opinions and referred them to related departments, such as the Technical Department and the Production Department, to inform joint improvement plans. At the same time, the Customer Service Department included customers who had offered specific

opinions in the key return-visit list to better evaluate the effectiveness of the improvement plans.

For five consecutive years, Gold East Paper has been adopting the model of the third-party consulting firm Horizon Research to conduct a comprehensive domestic sales satisfaction survey. In 2019, the company received a total of 353 valid questionnaires, which showed a higher overall satisfaction rate than in 2018. Based on customers' opinions and suggestions, the company has taken prompt improvement actions.



Moving Forward with Employees

The collective efforts of all the employees are central to a company's growth. APP China strictly abides by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Provisions on Collective Contracts, and other national laws and regulations to ensure employees' lawful rights are well protected. We ensure equal pay for equal work and respect our employees' right to freedom of association and collective bargaining. We prohibit the use of child and forced labor and create a diverse, equal, safe, and healthy working environment for our employees.

We regard talents as the cornerstone of company development and help our employees realize their full value by building a well-structured career development system and providing a wealth of training resources. We make our employees feel delighted at work by fostering open and frank communication, listening to their concerns and caring for their physical and mental wellbeing.

Cultivating Professionals

APP China has built a systematic and scientific staff training system and designed training courses that suit the growth needs of employees of different posts. Those courses are designed to train employees in a variety of areas like corporate culture, professional knowledge, management skills, and comprehensive competencies. We continue to enrich our courses to equip our employees with well-rounded capabilities needed to grow and advance their careers.

APP's first global learning resource sharing platform – APP Online Learning Management System (LMS) – was officially launched in March 2019. Incorporating the four features of online learning, training

management, global exchange, and cultural inheritance, the platform hosts over 500 courses under eight major learning sections on subjects such as management, professional skills, corporate culture, and the Management by Olympic System (MBOS) feature. This allows the employees to study quality training courses anytime and anywhere.

Meanwhile, we continue to deepen offline training to give employees of different positions and levels access to quality training resources. In 2019, the president of APP Corporate University and a number of experts from the field of organization and management provided the company's

executives and some top-performing employees with leadership training under such themes as "High-Performance Work" and "Coaching Leadership". For frontline technicians, we provided a series of training on professional knowledge and skills to help them better adapt to their positions. We also invited senior trainers from outside the company to give in-depth training on teaching skills to employee candidates for internal trainers. While supporting the construction of the company's internal knowledge transfer system, we also give employees more room for independent development.



The 7 Habits of Highly Effective People training ▲



Coaching Leadership Workshop ▲

Case

Cultivating Excellent Managers



In 2019, Suzhou Gold Hongye carried out diversified training for different departments. The company entered middle and senior executives in general management courses on the LMS online platform, which covered contents in team management, efficient negotiation, time management, stress management, emotional intelligence management, and so on. For HR supervisors of the production and marketing departments, the company offered a training session on Change Management and guided the participants to have discussions about challenging work problems and work out the solutions. The company also held a leadership training camp for production supervisors to further enhance their leadership and teamwork skills.



Group discussion at the leadership training camp for production supervisors ▲

Case

Combining Theory with Practice to Improve Effectiveness of Training



From October to November 2019, Hainan Gold Hongye held the second Instrument and Electrical Class Training Camp and the third Mechanical Class Training Camp. Designed to improve the comprehensive competencies of frontline employees, the training camp courses covered not only professional theoretical knowledge but also modules such as paper machine process flow, work-related injury case study, and basic management and leadership. There was also a written test on theoretical knowledge and a hands-on competition. Such an arrangement prompted the participants to combine theory with practice and apply what they had learned to real work scenarios, thereby stimulating their enthusiasm at work.



Skill competition of Mechanical Class Training Camp ▲

APP China has been implementing the technical competency model for production positions for five consecutive years, covering various professional positions such as pulp production, paper production, energy, environment, safety, quality assurance, and maintenance. The mills have effectively enhanced the employees' professional skills through systematic training and assessment of position-specific technical competencies. In 2019, a total of 608 supervisors participated in the technical competency certification for production management positions, showing notable progress in the assessment results compared with previous years.



2019 Technical Competency Certification for Production Management Positions ▲

Employee Communication and Care

APP China respects and safeguards the legitimate rights and interests of its employees, listens to their opinions and voices through multiple channels, and responds to their needs in a timely manner. The company treats employees with consideration and works to foster a stronger work-life balance among its employees.

Listening to Employees

In 2019, following the example set by the Economic Commission in China, the APP China Headquarters communication team launched the "C-time" communication initiative under the leadership of the Group Culture Development division. Taking such leisurely forms as afternoon tea, tea party, and coffee time, the initiative was designed to be a bridge between company management and frontline employees, where they spent time together and the employees voiced their needs, problems, and concerns. As of the end of 2019, the Economic Commission in China and the APP China Headquarters communication team had organized "C-time" on a number of occasions for the three major sales teams of industrial paper, cultural paper, and tissues. A total of 93 sales problems were solved during those sessions, and they made the frontline employees truly feel supported and valued by the Group.



C-time special communication meeting for industrial paper sales team ▲

What is C-time?

- C-time = Culture time
- C-time = Communication time
- C-time = Coffee time

Case Lightening the Hearts

In April 2019, the first C-time communication meeting was held in Ningbo Asia. The APP China Economic Commission led the headquarters communication team to have a face-to-face exchange with the employee representatives. Their conversation was heated and all-encompassing, covering everything from the many details, operating procedures, and systems concerning finance, credit, and logistics to human resources issues like team building, talent development, and incentive systems, and to more micro problems like transparency of the Group's various rules and regulations and the company's future strategic planning. This not only provided support for frontline work but also drove the headquarters to think more about the future direction of its overall management improvements.

Case Using Collective Employee Wisdom to Inform Company Development

Living the Group's MBOS spirit of "emulating, learning from, catching up with, helping, and surpassing each other", APP China mills organize a variety of activities like indicator competitions, improvement activities, and exchange and sharing sessions to stimulate in-depth employee participation in the company's development. In 2019, Hainan Gold Hongye and Hainan Gold Shengpu received 2,984 improvement proposals from employees, with 11 outstanding proposals finally selected to enter the proposal competition. The company management selected the excellent proposals based on a comprehensive consideration of the content, overall benefits, and presentation and offered rewards to departments for active contribution of proposals, which gave a strong boost to the employees' enthusiasm for making suggestions.

Caring for Employees

We care about our employees' physical and mental wellbeing and the happiness of their families. We organize a series of activities such as team building, mass birthday parties, sports competitions, and employee family days to make our employees and their families feel the care from the company.



Case Taking Multiple Initiatives to Care for Employees' Life

In 2019, Guangxi Jingui Pulp & Paper carried out a wealth of activities to show care to its employees and their families. On the Women's Day, the company planned 12 programs, such as giving exquisite gifts and group outings, to provide diverse welfare options for the female employees to thank them for their contributions to the company. On the Employee Family Open Day, the company invited the employees' families to the mill to experience the environment firsthand and learn about the history of papermaking. Children could operate a DIY paper machine and experience for themselves the papermaking process. At the Mid-Autumn Festival garden party, the employees tasted specialties such as noodles, snacks, and mooncakes and played a number of entertainment games like "darts", "rings", and "karaoke".



Employees and children experiencing the papermaking process together ▲

Case Visiting the Mills with Family Members

In 2019, Hainan Jinhai Pulp & Paper, Hainan Gold Hongye, and Hainan Gold Shengpu invited employees to visit the mills with their families. They were enlightened on the establishment and development of APP China and its mills in Hainan, the pulp and paper production processes, and the outstanding achievements in environmental protection. The tour at the Hainan Jinhai Pulp & Paper Cultural Paper Production Workshop gave them a more intuitive experience of the papermaking equipment and processes. This event was very well received and made our employees even prouder of their jobs.



Family members of employees listening to the introduction to pulp and paper products ▲



Building a Better Community

Supporting philanthropy and giving back to society are the inherent responsibilities for APP China as a good corporate citizen. Through the Huang Yicong Foundation, we have long been undertaking a series of philanthropic initiatives in areas such as educational equity, philanthropic capacity building, and promotion of urban and rural integration. We also continue to extend the influence of those projects to deliver wider benefits. APP China mills have conducted a variety of philanthropic activities in education, environmental protection, paper culture promotion, etc. and maintained sound interactions with the communities, doing their part to help build a harmonious society.

Strong Support for Philanthropy

The Huang Yicong Foundation has long been devoted to charitable causes in China and continues to carry on the torch of corporate philanthropy. Since its official establishment in 2010, the Foundation has set up a number of long-term, sustainable branding projects with the aim of "supporting the development of China's philanthropy, helping those in distress and in need, helping the elderly and the young, and building a harmonious society

together." In 2019, the Foundation held 19 projects in areas such as supporting educational equity, building philanthropic capacity among college students, and promoting urban and rural integration. This has benefited schools, teachers, and students in remote and rural areas, students in vocational schools, people with disabilities, and college students interested in philanthropy, among other groups.



Scan the QR code to learn more about the Huang Yicong Foundation

The Sunshine Preschool Project

A proper early childhood education is essential to the healthy development of children in terms of intelligence, character, and literacy. In 2015, the Foundation joined hands with a non-profit organization specializing in early childhood education to launch the "Sunshine Preschool Project" in Ximeng, a national-level poverty-stricken county in Yunnan Province home to many ethnic minorities. The project provided preschool classes for local rural children aged 3 to 6 and assisted in training early childhood teachers, thus helping lift local villages out of the intergenerational cycle of poverty.

Each class adopts a mixed-age format and complements traditional subjects with nature, music, art, and other subjects. The teaching methodologies emphasize developing the children's independence and sense of responsibility. The project

features a sustainable operating model of "helping people help themselves". Besides supporting the students' early-stage growth and development, the project also offers training to local teachers and parents to enhance their cognition and know-hows in early childhood education and community building. As a result, when the project ends, the team will pass the schools down to local communities for future management.

As the project model continued to mature, the Foundation began to explore ways to replicate and expand its success to other impoverished areas. As part of the national "One Village, One Preschool" program, our preschools were set up in Funing and Lancang of Yunnan Province in 2017 and 2019 respectively at the invitation of the local education bureau. As of the end of 2019, the Foundation had supported 39 preschool classes in Ximeng, Funing,

and Lancang counties, benefiting 2,319 children. The project will continue to deepen the "localized teaching" model and explore and develop more innovative and cutting-edge educational materials to secure a brighter future for local children under a multitude of efforts.

"This job is full of joy. It gives every child a golden childhood and a sunny smile. I would like to be a candle for the children and light up their beautiful hearts."

Ms. Ye
Teacher at Wolong Preschool
Ximeng County



Ms. Chianghua Su, Secretary General of the Foundation, ▲ paying a visit to Preschools



Sunshine Preschool children drawing ▲



Yicong Capacity Building Summer Camp for High School Students

Caring for the growth of young people and helping children see and enter a wider world is one of the founding purposes of the Foundation. Since 2016, the Foundation has been organizing the Yicong Capacity Building Summer Camp every year for high school students in remote areas to undertake course training and capacity building. It aims to encourage high school students in remote areas to pursue their future dreams by building their capacity outside of the school curriculum.

Students participating in the summer camp are all recipients of various high school scholarships and grants from the Foundation and mainly come from Guangxi, Gansu and Fujian provinces. For many of them, the camp is the opportunity to leave their hometowns for the first time and get a brand-new learning experience. In two to three weeks' time, the students can study through a rich selection of subjects, participate in visits and

exchanges, communicate with each other, and share their experiences and findings.

In 2019, 22 students participated in the fourth summer camp themed "Technology and Innovation". In the course, the students tried programming for the first time and experienced firsthand the creation of mini-games and mini-programs; they completed the town renovation challenge under the guidance of instructors from the Makers' Workshop, honing their own ability to identify and solve problems; they appreciated the beauty of traditional art during cultural exchanges; and they practiced their oral communication skills in English classes.

For the originality of its operational mode and impacts it creates, the Yicong Summer Camp was listed in the 2019 "China CSR Best Case Collection" initiated by the China Philanthropy Times. In the future, the summer camp will continue to optimize

its courses and activities and provide more outstanding high school students in remote areas with opportunities to participate and prepare them for a broader and more exciting life.

"After returning from the Yicong Summer Camp, I feel more natural and confident when expressing my opinions or suggestions in front of my peers. When I stand on the podium facing my teachers and classmates, I feel less frightened and worried than before. I am now more courageous and optimistic. This is all thanks to the great learning experience at the camp."

Zirui Ling
Student from Guangxi

APP China mills have long been actively involved in philanthropic undertakings in education and poverty alleviation through monetary and in-kind donations, event support, and volunteer services. In 2019, Hainan Jinhai Pulp & Paper, Ningbo Asia,

Guangxi Jingui Pulp & Paper, Gold East Paper, among others, carried out a number of educational philanthropic activities, such as scholarships and grants, funds for preschool education, donations of school supplies and teaching equipment, and

sponsorship of schools' cultural and sports activities, cooperation with universities to support students' social practice, and customized practical courses for children in the community.



Guangxi Jingui Pulp & Paper donating computers to primary schools in impoverished areas



Ningbo Asia and Ningbo Zhonghua Summer Practice class for community children



Students visiting the Shanghai Sinar Mas Plaza



Summer Camp Makers' Workshop

Case "Forever Love with Papers"

Suzhou Gold Hongye and the Suzhou Charity Federation signed an agreement in September 2019 to donate RMB500,000 worth of tissues to the "Swap Campus Waste Paper for Toilet Paper" project. The goal was to improve the public health on campus and combine philanthropic and environmental protection with education. Suzhou Gold Hongye has been carrying out the "Forever Love with Papers" charitable activity for many years, donating tissues to many primary and middle schools and undertaking educational campaigns under the theme of "Using Paper Scientifically".



Donation ceremony of "Swap Campus Waste Paper for Toilet Paper" project

Facilitating Development of Vocational Education

APP China launched the "Dream Plan" project in 2018. The project works with professional colleges and universities to provide academically outstanding students in remote areas with all the tuition and accommodation fees and part of the living and transportation expenses needed while they are in school and offer them employment opportunities upon graduation.

As of the end of 2019, the "Dream Plan" had jointly set up classes with Guangxi Vocational and Technical Institute of Industry and the Mechatronics major of Nantong Vocational University. It has also offered professional courses on pulp making and papermaking collaboratively with College of Light Chemical Engineering

and Food of Guangxi University and Zhejiang University of Science and Technology. The second "Dream Plan" in 2019 prioritized students from middle schools in remote rural areas, enrolling 42 in total. The "Dream Plan" was qualified for the list of the First Batch of Pilot

Construction and Cultivation of Industry-Education Integrated Enterprises of Guangxi Zhuang Autonomous Region. It will continue to go to impoverished areas in the future to help more students get schooling and become great assets for the paper industry.



Outreach training of "Dream Plan" Guangxi APP Class ▲

Case Lighting up Professional Dreams

Hainan Jinhai Pulp & Paper has been in a great cooperative partnership with Yangpu Technical School since 2008. The company has participated in the preparatory work for the school's construction and provides financial support for high-achieving students from impoverished families. As of the end of 2019, a total of 550 students from Yangpu Technical School had been awarded the "APP Scholarship" by the company. The company also serves as a social practice location for universities and receives regular visits from university teachers and students.

In March 2019, Suzhou Gold Hongye received over 130 students from Shaanxi University of Science and Technology for a two-day visit to the Suzhou mill. The students regarded the event as an excellent opportunity to gain a better understanding of the paper industry and become more appreciative of and interested in this professional field.



"APP Scholarship" Award Ceremony ▲

Environmental Protection Advocacy

With high regard for environmental management, we maintain close communication with the community and encourage the public to participate in environmental monitoring. We have conducted a variety of philanthropic activities such as educational campaigns on environmental protection, volunteer tree planting, low-carbon cycling, and garbage collection, calling on people to work together to help build a better community.

Case Maintaining Community Communication to Build a Better Home

In April 2019, Ningbo Asia led a group of about 40 people, who were resident representatives of the Dongsheng Community, on the "Heading for Green Civilization, Creating Harmony and Goodness" trip to the ancient town of Qiantong. They were given an explanation of the local river treatment and demonstration of simple device operations and came to understand the principle of the environmentally friendly practice of "turning waste water into clean water". Meanwhile, the company employees updated the representatives on the company's recent work on environmental protection.

The normalized exchanges between Ningbo Asia and the community on environmental protection date back several years. In 2015, the company set up a team of volunteer environmental supervisors. The six supervisors came from different communities, and their extensive connections with the residents made them highly representative of the residents' opinions. In turn, the company's feedback and responses can also be promptly communicated to the residents through them. At the Volunteer Environmental Supervisors' Meeting held in July 2019, the company gave a detailed introduction to the government's environmental requirements and the company's work in related fields. The supervisors showed recognition of the company's performance in environmental protection.

Case Passing on Positive Energy of Environmental Protection

In 2019, Guangxi Jingui Pulp & Paper took an active part in the Qinzhou Environmental Protection and Energy Conservation Publicity Week & Opening of Environmental Protection Facilities to the Public event. It organized Qinzhou citizens and primary school teachers and students to visit the mill. The employee volunteers recounted in detail the company's pulping and papermaking processes, environmental protection measures, and sustainability ideas to the visitors.

At the cultural event co-hosted by the Publicity Department of Qinzhou Municipal Committee, the Qinzhou Municipal Bureau of Ecological Environment, and other units, Guangxi Jingui Pulp & Paper gave a performance in the language category named "Environmental Protection in Three and a Half Sentences". Through

catchy remarks conveyed in a humorous way, the company imparted knowledge about energy conservation and emission reduction, low-carbon development, and environmental protection. It also

communicated the approaches that the company had adhered to all along in its environmental protection efforts. The performance was highly applauded by the audience.



Students visiting Guangxi Jingui Pulp & Paper Mill ▲

Bringing Warmth to Community

APP China seeks actively to build harmonious and friendly community relations. Our mills are regularly open to community residents so that people have more opportunities to learn about them firsthand. We carry out activities on important occasions to build a closer rapport with the community. For example,

we give away Spring Festival couplets for the Spring Festival and make rice dumplings for the Dragon Boat Festival. In addition, we provide volunteer services and support community activities as needed to do our part to assist with community development.

Case Actively Involved in Volunteering

Gold East Paper has a long history of donating funds in areas such as regional construction, emergency response, and community development while encouraging employee volunteering. The company has set up a charitable club back in 2006 and developed its own volunteer information management system in 2008. Every year, a large number of company employee volunteers offer help in places like museums, communities, railway stations, hospitals, and welfare homes, forming a beautiful landscape to behold in the construction of harmonious communities in Zhenjiang. As of the end of 2019, Gold East Paper employees had clocked more than 360,000 hours of volunteer service.

Case Building a Happy Community

In June 2019, Ningbo Zhonghua employee volunteers and Xiaocao Community staff visited the Fire Squadron on Yinfeng Road, bringing the firefighters holiday greetings and blessings for their service on the frontline all year round. The volunteers taught the firefighters how to make rice dumplings and sew sachets for the Dragon Boat Festival, making them feel the warmth of home when they were on duty and away from home.



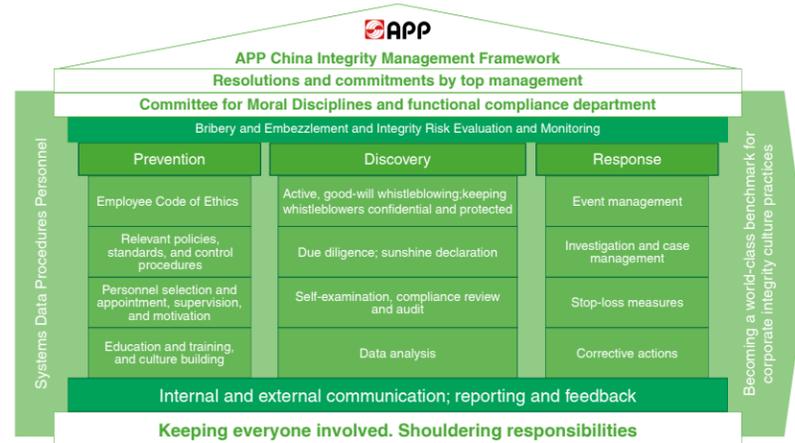
Volunteers teaching firefighters how to make rice dumplings ▲

Sustainability Management

Integrity and Compliance

Continuing to Intensify Integrity and Compliance Management

Integrity and compliance are the cornerstones of APP China's corporate culture. We hold up the ethical principles of "integrity and commitment" in everything that we do. We developed the APP China Integrity Management Framework in 2018 in accordance with the ISO 37001 Anti-Bribery Management Systems. We use the framework as the guidance as we provide anti-corruption training for employees at all levels, perform risk assessment and due diligence on our projects and business partners, implement corrective measures against non-compliance risks, and follow up the improvement actions of relevant business departments. The framework was formally implemented across the Group in 2019, with a priority on incorporating integrity and compliance throughout every level of our business activities to lay the groundwork for the full implementation of the framework.



We have a dedicated email and telephone number for reporting violations. In 2019, we unified the emails and telephone numbers of our business units and mills for reporting to optimize the report handling procedure. Both internal and external personnel of the Group can file a report by email (GRW@app.com.cn) or telephone (021-22839763). The contents of the report include but are not limited to corruption, malpractice, theft, forgery, commercial bribery, and conflict of interest. All cases verified and confirmed

by the investigation department will be presented to the company's senior management to ensure that they are handled in a fair manner.

We have put in place an objective, systematic, and standardized risk assessment and compliance process for our suppliers and customers. We conduct in-depth and prudent investigations on customers with high risks or high line of credit and carry out regular or ad hoc reviews on existing customers to effectively prevent conflicts of interest and risks of fraud. On the supplier side, we have established three risk control lines, namely quality, compliance, and audit, to ensure that all suppliers are reviewed for authenticity and legality, and further compliance investigations are conducted on suppliers assessed to be of high risk.

Building a Culture of Integrity



▲ Employees studying the reporting of malpractice



▲ Guangxi Jingui Pulp & Paper employees participating in Integrity Month training

The establishment of an honest and compliant business requires the concerted efforts of all the employees. APP China has formulated codes of conduct and policies, such as the *Provisions on the Prohibition of Accepting Gifts and Hospitality*, to drive all employees to uphold integrity, self-discipline, and honesty in their professional life. We have instituted a reward and punishment system, where individuals or units responsible for any non-compliance issues are publicly criticized and receive a financial penalty.

We have carried out a series of educational activities on compliance advocacy to foster a culture of compliance. In 2019, we compiled malpractice cases into our training materials and communicated them to employees through morning classes, special training, group discussions, short promotional videos, etc. to raise their awareness of compliance.

From November to December 2019, we held the Group-wide "Sunshine Integrity Month" event themed "Integrity and Commitment". The activities took such varied forms as themed training, core values promotion, case study, short video, and online knowledge contest and were designed to enhance employees' awareness of risk prevention and integrity. A total of 1,397 level-eight employees or above participated in the monthly integrity training, and the online competitions covered most of the employees nationwide. The satisfaction rate for the Integrity Month training was 9.5 (out of 10).

Sustainability Certificates

CFCC/PEFC-FM Certification* at APP China

No.	APP China Forestry Companies	CFCC/PEFC-FM Certificate No.
1	Hainan Jinhua Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000003
2	Heyuan Jinmei Science & Technology Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000030
3	Leizhou Jin-taiyang Science and Tech Forestry Ltd.	CFCC/PEFC-FM-ZTFC-000030
4	Yangjiang Jin-taiyang Science and Tech Forestry Ltd.	CFCC/PEFC-FM-ZTFC-000030
5	Jin-Qingyuan Timberland (Paper mill) Ltd.	CFCC/PEFC-FM-ZTFC-000007
6	Shaoguan Jin-Shaoguan First Quality Timberland (Paper mill) Ltd.	CFCC/PEFC-FM-ZTFC-000008
7	Guangxi Jin Gui Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000005
8	Guangxi Jin Qinzhou High-Yield Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000006
9	Guangxi Xing Guilin Agriculture Technology Co., Ltd.	CFCC/PEFC-FM-ZTFC-000031
10	Guangxi Jin Taiyang Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000031
11	Wenshan Jin Wenshan High-Yield Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000017
12	Simao Jin Lancang High-Yield Forestry Co., Ltd.	CFCC/PEFC-FM-ZTFC-000018

*CFCC/PEFC-FM certification refers to CFCC/PEFC Forest Management certification.

CFCC/PEFC-CoC Certification* at APP China

No.	APP China Affiliates	Certificate No.
1	Gold East Paper (Jiangsu) Co., Ltd.	SGS-CFCC/PEFC-COC-001002
2	Gold Huasheng Paper (Suzhou Industrial Park) Co., Ltd.	SGS-CFCC/PEFC-COC-001026
3	Ningbo Zhonghua Paper Co., Ltd.	SGS-CFCC/PEFC-COC-001030
4	Ningbo Asia Pulp and Paper Co., Ltd.	SGS-CFCC/PEFC-COC-001031
5	Hainan Jinhai Pulp & Paper Co., Ltd.	SGS-CFCC/PEFC-COC-001058
6	Gold HongYe Paper Group Co., Ltd.	SGS-CFCC/PEFC-COC-001032
7	Hainan Gold Hong Ye Paper Co., Ltd.	SGS-CFCC/PEFC-COC-001084
8	Gold Hongye Trading (Hong Kong) Co., Ltd.	SGS-PEFC/COC-1463
9	Guangxi Jingui Pulp & Paper Co., Ltd.	SGS-CFCC/PEFC-COC-001013
10	Hainan Jinhai Trading (Hong Kong) Co., Ltd.	SGS-PEFC/COC-1467
11	Gold East Trading (Hong Kong) Co., Ltd.	SGS-PEFC/COC-0249
12	Gold Shengpu Paper Products (Suzhou Industrial Park) Co., Ltd.	SGS-CFCC/PEFC-COC-001037
13	Yalong Paper Products (Kunshan) Co., Ltd.	SGS-CFCC/PEFC-COC-001059
14	Gold Huasheng Trading (Hong Kong) Co., Ltd.	SGS-PEFC/COC-1464
15	Ningbo Yajiang Trading (Hong Kong) Co., Ltd.	SGS-PEFC/COC-1465
16	Jinxin (Qingyuan) Paper Industry Pte.,Ltd.	SGS-PEFC/COC-1764

*CFCC/PEFC-CoC certification refers to CFCC/PEFC Chain of Custody certification.

2019 Sustainability Management System Certification at APP China

	ISO 9001	ISO 14001	OHSAS 18001	ISO 45001*	CFCC/PEFC-CoC
Gold East Paper	Periodic audit	Certificate renewal	/	New Certificate Transition	Periodic audit
Gold Huasheng	Periodic audit	Certificate renewal	/	New Certificate Transition	Periodic audit
Suzhou Gold Hongye	Periodic audit	Periodic audit	/	New Certificate Transition	Certificate renewal
Ningbo Zhonghua	Periodic audit	Periodic audit	Periodic audit	/	Periodic audit
Ningbo Asia	Periodic audit	Periodic audit	Periodic audit	/	Periodic audit
Hainan Jinhai Pulp & Paper	Periodic audit	Periodic audit	Periodic audit	/	Periodic audit
Guangxi Jingui Pulp & Paper	Periodic audit	Periodic audit	Periodic audit	/	Periodic audit

*In 2019, Gold East Paper, Gold Huasheng, Suzhou Gold Hongye upgraded their management system on occupational health and safety, and successfully switched from OHSAS 18001 Standards to ISO 45001 Standards. Hainan Jinhai Pulp & Paper, Guangxi Jingui Pulp & Paper, Ningbo Asia and Ningbo Zhonghua will also complete the certification transition in the future.

Stakeholder Engagement

Drawing on an array of internal information collection, communication, and interviews, we have identified ten key stakeholder groups. Each of our functional departments engages directly and maintains close contact with a range of stakeholder groups

through multiple channels. They manage to respond promptly to stakeholder expectations and concerns and continuously improve their management and practices in this process.

In 2019, we participated in a number of exchange activities, such as the Second CIIE, China Paper Industry Sustainability Forum, China Printing Industry Innovation Conference, and International Paper Technical Conference. We engaged in in-

depth discussions with governments and regulatory agencies, industry experts and scholars, customers, and partners on a range of topics including the R&D and innovation of environmentally friendly products, the integrated development

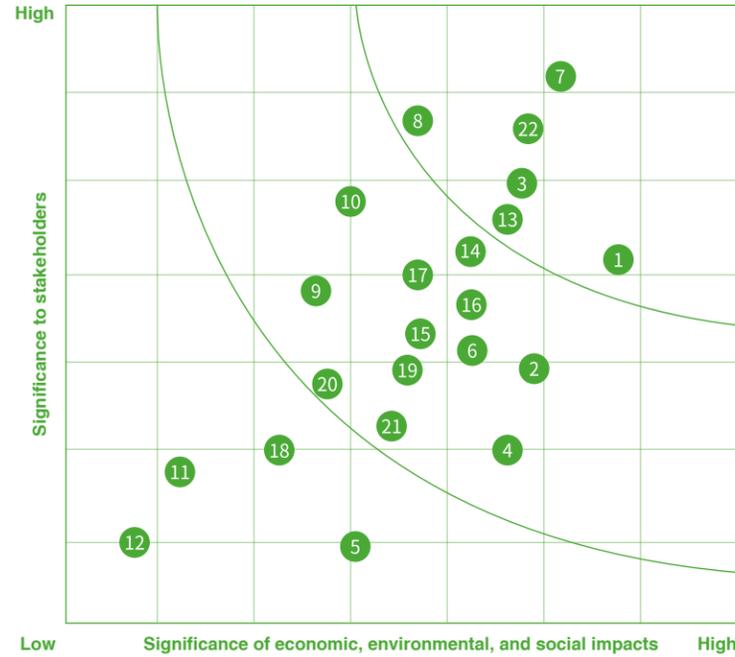
of papermaking and printing, and the sustainable development of the industry.

Stakeholders	Top Concerns	Engagement Channels
Employees 	<ul style="list-style-type: none"> - Occupational health and safety - Employment - Economic performance - Business ethics - Human rights 	<ul style="list-style-type: none"> - Company intranet, internal magazine - Employee representative meetings - Employee communication meetings - Executive mailbox - MBOS Conference/Contest - APP Online Learning Management System - Family opening day, book club, etc. - Sustainability reports - WeChat Official Account
Customers and consumers 	<ul style="list-style-type: none"> - Business ethics - Product quality and safety - Sustainable forest management - Human rights - Occupational health and safety 	<ul style="list-style-type: none"> - Customer visits, store visits - Engagement meetings/activities - Industry conferences/events - Customer satisfaction surveys - Customer service hotline/mail - Company website - Sustainability reports - WeChat Official Account
Suppliers/contractors 	<ul style="list-style-type: none"> - Business ethics - Human rights - Customer service quality - Responsible supply chain - Environmental compliance - Air pollutant emissions 	<ul style="list-style-type: none"> - Supplier/Contractor meetings - Cooperative R&D mechanism - Supplier/Contractor training - Regular supervision and inspection - Email, phone, and other daily communication channels - Sustainability reports
Banks 	<ul style="list-style-type: none"> - Business ethics - Air pollutant emissions - Economic performance - Occupational health and safety - Employment - Sustainable forest management 	<ul style="list-style-type: none"> - Daily communication meetings - Cooperative agreement - Sustainability reports - Company website
Government agencies 	<ul style="list-style-type: none"> - Sustainable forest management - Biodiversity - Air pollutant emissions - Waste management - Water management - Energy conservation and emission reduction 	<ul style="list-style-type: none"> - Government communication meetings - Governmental inspection and supervision - Information disclosure and reporting - Regular visits - Awards and recognition - Sustainability reports - Company website

Stakeholders	Top Concerns	Engagement Channels
Community representatives 	<ul style="list-style-type: none"> - Water management - Environmental compliance - Win-win cooperation - Business ethics - Community relations and cultural popularization - Waste management - Sustainable forest management 	<ul style="list-style-type: none"> - Daily visits - Community opinion processing and feedback - Community representatives' supervision and engagement - Mill visits - Community charitable activities
Industry associations 	<ul style="list-style-type: none"> - Product quality and safety - Win-win cooperation - Energy conservation and emission reduction - Economic performance - Resource effectiveness 	<ul style="list-style-type: none"> - Industry communication meetings - Regular visits - Industry exhibitions and forums - Awards and recognition - Research and cooperation - Industry publications - Sustainability reports
Academic institutions 	<ul style="list-style-type: none"> - Product quality and safety - R&D and innovation - Responsible supply chain - Environmental compliance - Water management 	<ul style="list-style-type: none"> - Cooperative R&D mechanism - Talent cultivation - Company website - Sustainability reports
NGOs 	<ul style="list-style-type: none"> - Occupational health and safety - Employee training and development - Waste management - Energy conservation and emission reduction - Supporting philanthropy 	<ul style="list-style-type: none"> - Communication on specific topics - Charity projects donation and cooperation - Sustainability reports - Company website - WeChat Official Account
Media 	<ul style="list-style-type: none"> - Resource effectiveness - Product quality and safety - Air pollutant emissions - R&D and innovation - Sustainable forest management - Energy conservation and emission reduction 	<ul style="list-style-type: none"> - Media coverage - Participation in meetings and forums - Press conferences - Company website - WeChat Official Account - Executive interviews

Materiality Analysis

Drawing reference from the GRI Standards, the Global Compact Ten Principles, the latest national and industry policies, and key industry sustainability issues, we identified 22 issues closely related to the company's development. Compared to 2018, "resource effectiveness" is added to the material issues list, in response to the policy and industry trends of circular economy and "Paper for Plastic"; other than the merging of certain issues and refining the description, such as the inclusion of "responsible raw material sourcing" and "supplier social assessment" in "responsible supply chain" and the adjustment of "anti-corruption" to "business ethics", etc. No significant changes have taken place in issue boundaries. In 2019, we conducted online and offline surveys regarding the significance of the issues to stakeholders. A total of 1,554 valid questionnaires were collected. The issues have been arranged in order of materiality based on discussions with internal and external experts.



High Materiality Issues

- 7 Occupational health and safety
- 22 Business ethics
- 1 Product quality and safety
- 3 Economic performance
- 13 Environmental compliance
- 8 Employment

Moderate Materiality Issues

- 14 Air pollutant emissions
- 17 Sustainable forest management
- 16 Water management
- 10 Human rights
- 2 Customer service quality
- 6 Responsible supply chain
- 15 Waste management
- 9 Employee training and development
- 19 Energy conservation and emission reduction
- 4 R&D and innovation
- 21 Compliance management and risk control
- 20 Resource effectiveness

Low Materiality Issues

- 18 Biodiversity
- 5 Win-win cooperation
- 11 Community relations and cultural popularization
- 12 Supporting philanthropy

Issues	Contents in report	Internal boundaries	External boundaries		
			Customers and consumers	Suppliers	Community
Occupational health and safety	Warm Companionship During Epidemic Ensuring Safe and Orderly Production Performance in Numbers	●		●	●
Business ethics	Integrity and Compliance	●	●	●	●
Product quality and safety	Robust Products	●	●	●	●
Economic performance	About APP China Performance in Numbers	●			●
Environmental compliance	Circular Model Fueling Development Performance in Numbers	●		●	●
Employment	Moving Forward with Employees Performance in Numbers	●			
Air pollutant emissions	Circular Model Fueling Development Performance in Numbers	●			●
Sustainable forest management	Sustainable Forest Management	●	●	●	●
Water management	Circular Model Fueling Development Performance in Numbers	●			●
Human rights	Ensuring Safe and Orderly Production Practicing Sustainable Procurement Moving Forward with Employees Building a Better Community	●		●	●
Customer service quality	Delivering Quality Service	●	●		
Responsible supply chain	Robust Products Practicing Sustainable Procurement Performance in Numbers	●	●	●	
Waste management	Circular Model Fueling Development Performance in Numbers	●			●
Employee training and development	Star Employees at APP Moving Forward with Employees Performance in Numbers	●			
Energy conservation and emission reduction	Circular Model Fueling Development Performance in Numbers	●			●
R&D and innovation	Intelligence-Driven Industrial Upgrade Robust Products Looking Forward	●	●	●	●
Compliance management and risk control	Sustainability Management	●	●	●	●
Resource effectiveness	Circular Model Fueling Development Robust Products	●	●		●
Biodiversity	Sustainable Forest Management	●	●	●	●
Win-win cooperation	Intelligence-Driven Industrial Upgrade Practicing Sustainable Procurement	●	●	●	●
Community relations and cultural popularization	Building a Better Community	●			●
Supporting philanthropy	Building a Better Community Performance in Numbers	●			●

Looking Forward

China is seeing an accelerating fusion between the real economy and digital economy and a prevailing trend for the manufacturing industry to be digitized, networked, and intelligent. APP China actively promotes transformation and upgrading and has made a good start on the key development strategy of digital transformation. In the future, we will undertake digital exploration even more resolutely to build up new competitiveness for the company in the era of digital economy. We will strive to empower enterprises to pursue high-quality development and contribute innovative solutions to drive the industry's intelligent development.

We will further promote the construction of an integrated intelligent management system and open up the Group-wide business system that covers everything from planning to production, warehousing, logistics, and sales to realize interruption-free information flow and interaction for the whole process. We will rely on the intelligent manufacturing upgrading project represented by Rudong High-Grade Tissue Industrial Base to comprehensively improve the automation level of production equipment and processes, personnel management, logistics and transportation, energy management, etc. Meanwhile, we will be exploring the innovative application of emerging technologies like artificial intelligence, the Internet of Things, and 5G in the field of intelligent manufacturing to truly realize production automation and intelligent management.

We will be an active player in the digital marketing field and explore brand-new possibilities for our business model. First, emerging online channels such as live streaming and short videos will help us create new ways to directly engage with our consumers, thus enabling customers to have a more intuitive and interesting shopping experience. Second, based on the data-driven innovative thinking, we will analyze market insights by leveraging big data and use the results to guide our product innovation so that our products can meet the needs of consumers more precisely.

No one is isolated in the digital era. While improving our own digital competencies, we also look forward to working with more industry partners and stakeholders to push the digitalization of China's paper industry to new heights.



Performance in Numbers

Economic performance

Indicator	Unit	2019	2018	2017
Total assets	RMB100 million	1,914	1,726	1,582
Total taxes paid	RMB100 million	30	30	26
Sales revenue	RMB100 million	651	590	553
Total profit	RMB100 million	48	30	36
Net profit	RMB100 million	39	23	26

APP China sources of pulp procurement*

Region	2019	2018	2017
North America	25.7%	23.9%	27.0%
South America	1.1%	2.8%	3.8%
Europe	2.8%	1.1%	2.2%
South Africa	—	—	0.1%
Other Asian regions	26.6%	22.7%	23.2%
China	43.8%	49.4%	43.4%
Oceania	—	0.1%	0.3%

*The change in the proportion of different locations mainly resulted from the quality and market price of pulp.

Energy

Indicator	Unit	2019	2018	2017
Coal	Tons	4,999,054.08	5,035,063.85	5,195,476.17
Gasoline	Tons	464.35	581.74	687.50
Diesel	Tons	10,306.70	10,065.11	8,155.76
Fuel oil	Tons	846.51	144.35	26,112.59
Natural gas	10,000 cubic meters	21,396.76	21,859.78	19,400.94
LPG	Tons	10,985.74	9,126.50	7,350.49

Indirect economic impact

Indicator	Unit	2019	2018	2017
Employee volunteer time	Hours	18,618	31,018	26,645
Donations*	RMB10,000	3,197	3,207	3,066

*Data scope includes APP China Headquarters, Suzhou Gold Hongye, Gold Huasheng, Gold East Paper, Ningbo Asia, Ningbo Zhonghua, Guangxi Jingui Pulp & Paper, Hainan Jinhai Pulp & Paper, and APP China Forestry. The 2017 and 2018 data of donations have been corrected. The data disclosed before did not include donations to support relevant research conducted by domestic universities.

Materials

Indicator	Unit	2019	2018	2017
Total volume of pulp purchased	10,000 tons	564.94	534.38	573.25
Total volume of certified pulp purchased	10,000 tons	111.88	76.07	98.71
Proportion of certified pulp in total pulp purchased	%	19.80	14.23	17.22
Proportion of certified wood fiber in total wood fiber purchased*	%	19.41	17.45	16.90
Volume of waste paper purchased	10,000 tons	19.81	38.19	44.08

*In 2019, wood fiber was used in Hainan Jinhai Pulp & Paper, Guangxi Jingui Pulp & Paper, and Gold East Paper. The data of this indicator include those of Hainan Jinhai Pulp & Paper and Guangxi Jingui Pulp & Paper.

Indicator	Unit	2019	2018	2017
Kerosene	Tons	0.96	2.24	2.09
Power purchased	10,000 kWh	133,309.85	157,975.17	149,857.23
Steam purchased	GJ	1,490,357.25	2,455,775.16	1,455,093.24
Black liquor from pulp	Tons	2,735,798.96	2,592,609.55	2,527,691.50
Biomass fuel	Tons	295,426.22	240,512.46	272,813.88
Solar power generation	10,000 kWh	2,604.05	2,964.05	2,355.62

Water resources and waste water*

Indicator	Unit	2019	2018	2017
Total water withdrawal**	Tons	125,397,098	130,935,175	118,173,907
Total waste water discharge***	Tons	88,160,320	90,097,689	84,968,795
Waste water discharge per ton of paper produced	Tons	6.37	6.79	6.35
Waste water discharge per ton of pulp produced	Tons	11.62	12.68	13.90
COD emission per ton of paper produced	Kg	0.29	0.23	0.26
COD emission per ton of pulp produced	Kg	0.63	0.94	1.99

*Not including data from APP China Headquarters and APP China Forestry.
 **98.31% came from surface water, 1.69% from third-party facilities.
 ***In 2019, there were zero incidents of major water body pollution at APP China.

Water reuse

Amount of reused water (tons)	2019	2018	2017
Gold East Paper	573,048,504	567,192,412	581,093,529
Hainan Jinhai Pulp & Paper	981,208,947	1,290,127,756	1,046,378,081
Ningbo Zhonghua	135,490,647	134,936,133	135,358,599
Ningbo Asia	269,558,416	269,995,863	219,904,179
Gold Huasheng*	377,985,044	372,484,717	368,663,480
Guangxi Jingui Pulp & Paper	596,060,424	322,287,500	445,290,787
Hainan Gold Hongye	67,569,742	82,413,167	65,982,500
Hainan Gold Shengpu	61,526,999	59,984,587	56,721,070

*The data of Gold Huasheng include those of Suzhou Gold Hongye.

Air pollutant emissions*

Indicator	Unit	2019	2018	2017	Exhaust gas emissions (tons)	SO ₂	NO _x	Soot
Total SO ₂ emissions	Tons	697.80	1,254.11	2,622.63	Gold East Paper	142.75	377.76	49.61
Total NO _x emissions	Tons	5,362.75	5,715.42	6,883.50	Hainan Jinhai Pulp & Paper**	330.84	3,093.24	194.83
					Ningbo Zhonghua	21.09	237.24	35.63
					Ningbo Asia	48.17	635.84	28.10
					Gold Huasheng***	55.57	344.30	56.82
					Guangxi Jingui Pulp & Paper	99.38	674.37	64.07

*Not including the data of APP China Headquarters and APP China Forestry.
 **The data of Hainan Jinhai Pulp & Paper include those of Hainan Gold Hongye and Hainan Gold Shengpu.
 ***The data of Gold Huasheng include those of Suzhou Gold Hongye.

Waste

Indicator	Unit	2019	2018
General waste generated	Tons	1,592,579.39	1,743,836.25
General waste disposed of	Tons	1,592,473.46	1,738,064.25
Recycling and reuse	Tons	513,583.54	179,793.10
Incineration	Tons	446,418.20	539,570.50
Selling to external parties for reuse	Tons	564,674.86	1,011,777.75
Centralized treatment by local sanitation departments	Tons	5,653.00	6,747.70
Hazardous waste generated	Tons	883.84	989.81
Hazardous waste disposed of	Tons	1,003.65	939.54

Environmental investment

Indicator	Unit	2019	2018	2017
Environmental investment	RMB10,000	87,457.18	64,083.68	82,593.16

Employment*

Indicator	Unit	2019	2018	2017
Employees directly and indirectly employed	Number	20,460	21,381	23,633
Employees directly employed	Number	18,909	19,976	21,746
Male employees directly employed	Number	14,003	14,507	15,779
Female employees directly employed	Number	4,906	5,469	5,967
Employees indirectly employed	Number	1,551	1,405	1,887
Male employees indirectly employed	Number	1,107	870	1,156
Female employees indirectly employed	Number	444	535	731
New employees	Number	1,773	1,514	2,259
New male employees	Number	1,256	1,064	1,473
New female employees	Number	517	450	822
Employee turnover	Number	2,796	3,862	3,786
Male employees who voluntarily resigned	Number	1,274	1,282	1,274
Female employees who voluntarily resigned	Number	645	626	698
Male employees who involuntarily resigned	Number	544	1,341	1,301
Female employees who involuntarily resigned	Number	265	557	460
Male employees who retired	Number	9	13	23
Female employees who retired	Number	59	43	30

*The employment data are within the reporting scope.

Environmental compliance

Indicator	Unit	2019	2018	2017
Environmental fines	RMB	90,000	1,620,000	977,400

Employee turnover rate

Indicator	Unit	2019	2018	2017
Employee turnover rate	%	12.88	16.20	15.77
Male employee turnover rate	%	11.54	15.38	15.09
Female employee turnover rate	%	16.48	18.31	17.50

Employee retention after maternity/paternity leave

Indicator	Unit	2019	2018	2017
Female employees who took maternity leave	Number	373	530	634
Female employees who returned to work after maternity leave	Number	340	479	568
Female employees who resigned after maternity leave	Number	31	44	50
Male employees who took paternity leave	Number	447	808	991
Male employees who returned to work after paternity leave	Number	425	756	943
Male employees who resigned after paternity leave	Number	20	41	31

Employee composition by level

Indicator	Unit	2019	2018	2017
Percentage of senior-level managers	%	1	1	1
Percentage of middle-level manager	%	10	10	9
Percentage of line-level employees	%	89	89	90

Employee composition by gender

Indicator	Unit	2019	2018	2017
Percentage of female employees	%	25.97	27.38	27.44
Number of female employees in management	Number	573	560	528
Percentage of female employees in management	%	26.69	25.85	24.28

Employee composition by age

Indicator	Unit	2019	2018
Percentage of employees aged 30 and below	%	16.33	20.66
Percentage of employees aged between 31 and 50	%	79.27	75.79
Percentage of employees aged 51 and above	%	4.40	3.55

Employee training

Indicator	Unit	2019	2018	2017
Total training investment	RMB10,000	475.42	523.14	396.50
Total employee training time	Hours	762,701	717,135	762,557
Number of employees who participated in company-paid diploma programs	Number	35	78	96
Total investment in company-paid diploma programs for employees	RMB10,000	11.20	12.77	29.51
Average training time for senior-level managers	Hours	29.53	21.08	28.77
Average training time for middle-level managers	Hours	46.03	41.82	32.71
Average training time for line-level employees	Hours	39.79	35.43	34.39

Occupational health and safety*

Indicator	Unit	2019	2018	2017
Employee safety training time	Hours	333,033	294,354.45	206,759.50
Total investment in protective gears	RMB10,000	578.74	630.35	615.55
Lost hours per million working hours	Hours	854.70	830.61	1,090.55
Work-related injuries of employees**	Person-times	51	50	79
Number of work-related fatalities of employees	Number	0	1	1
Work-related injuries of contractors**	Person-times	3	—	—

*The 2019 data do not include those of APP China Forestry.

**According to APP China's *Group Management Measures*, work-related injuries are determined based on assessments by the Labor Department.

Anti-corruption*

Indicator	Unit	2019
Number of governance agency members reached by anti-corruption policies and procedures	Number	13
Percentage of governance agency members reached by anti-corruption policies and procedures	%	100
Number of governance agency members receiving anti-corruption training	Number	13
Percentage of governance agency members receiving anti-corruption training	%	100
Number of senior-level managers receiving anti-corruption training	Number	188
Percentage of senior-level managers receiving anti-corruption training	%	100
Number of middle-level managers receiving anti-corruption training	Number	1,548
Percentage of middle-level managers receiving anti-corruption training	%	79.02
Number of line-level employees receiving anti-corruption training	Number	15,804
Percentage of line-level employees receiving anti-corruption training	%	94.28

*During supplier registration, APP China requests suppliers to sign an anti-corruption statement. The percentage of suppliers that APP China's anti-corruption policies have been communicated to is 100%.

Assurance Statement



Independent Verification Statement

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch (hereinafter referred to as "TÜV SÜD") has been engaged by Sinar Mas Paper (China) Investment Co., Ltd. (hereinafter referred to as "APP China" or "the Company") to perform an independent third-party verification on APP China Sustainability Report 2019 (hereinafter referred to as "the Report"). During this verification, TÜV SÜD's verification team strictly abided by the contract signed with APP China and provided verification regarding the Report in accordance with the provisions agreed by both parties and within the authorized scope stipulated in the contract.

This Independent Verification Statement is based on the data and information collected by APP China and provided to TÜV SÜD. The scope of verification is limited to the said information. APP China shall be held accountable for authenticity and completeness of the provided data and information.

Scope of Verification

Time frame of this verification:

- The Report contains the data disclosed by APP China during the reporting period from January 1st, 2019 to December 31st, 2019, including economic, environmental and social information and data, methods for management of substantial issues, actions/measures and the Company's sustainable development performance during the reporting period.

Physical boundary of this verification:

- Except for Zhonghua Pulp & Paper Co., Ltd., the subject and address of the on-site verification are the same with those specified in the report.

The following information and data are beyond the scope of this verification:

- Any information and contents beyond the reporting period of this Report; and
- The financial data and information disclosed in this Report that have been audited by an independent third party are not verified again herein.

Limitations

- This verification was performed at aforementioned sites, and no other branch or subsidiary was visited during the aforesaid verification; and
- The Company's standpoint, opinions, forward-looking statements and predictive information as well as the historical data and information before January 1st, 2019 are beyond the scope of this verification.

Basis for the Verification

This verification process was conducted by TÜV SÜD's expert team who are highly experienced in the corporate social responsibility, economic, social, environmental and other relevant issues and this team drew the conclusions thereof. The verification referred to the following standards:

- Global Reporting Initiative: *Sustainability Reporting Standards (GRI Standards) (2018)*
- TÜV SÜD *Procedure of Verification on Sustainability Report*

In order to perform adequate verification in accordance with the contract and provide reasonable verification for the conclusions, the verification team conducted the following activities:

TUV SUD Certification and Testing (China) Co., Ltd. Shanghai Branch
No.151 Heng Tong Road,
Shanghai 200070

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Tel: +86 21-61410737
Fax: +86 21-61408600
Web: <http://www.tuv-sud.cn>



- Preliminary investigation of the relevant information before the verification;
- Confirmation of the presence of the highly substantial issues and performance in the Report;
- On-the-spot review of all supporting documents, data and other information provided APP China; tracing and verification of key performance information;
- Interviews were carried out with the management of APP China, and with the employees who are engaged in collecting, organizing and reporting the disclosed information; and
- Other procedures deemed necessary by the verification team.

Verification Conclusions

Based on the verification, we believe that the reports prepared by APP China are reliable, consistent and substantive; the information disclosure is made in an objective, truthful, complete and clear manner, without systematic or material issues. This Report can be used by the stakeholders of APP China.

As to this report, the verification team has come to the following conclusions:

Stakeholder Inclusiveness	In the Report, internal and external stakeholders have been fully identified; direct communications with them were maintained through multiple channels. In this report, sufficient responses to the stakeholders' highly concerned issues are provided.
Sustainable Context	The Report displays the company's influence on economy, environment and society in a broader context of sustainable development.
Materiality	The Report discloses the company's process of analyzing substantive issues, including identification of the substantive issues and their boundaries, where the priority substantive issues are identified based on the significance thereof to the stakeholders and sustainability, while the materiality level of some issues can be further promoted, such as toxic emissions and water stewardship.
Completeness	The Report discloses the scope of the materiality issues' influences; as well as how the company is involved in these influences. Generally, the information collection process of the company is appropriate and reasonable.
Accuracy	Upon on-site verification and confirmation, it is believed that the company utilizes a reasonable data collection system. The reported information is authentic, objective and valid; the data used are accurate and traceable.
Balance	During the process of preparing the Report, the balance of the Report was adequately considered, where both positive information and negative information are disclosed.
Clarity	In the Report, diversified expression means of pictures, diagrams and texts are used; terminologies and acronyms are clearly interpreted; the ways of directly accessing the report are also disclosed.
Comparability	In the Report, comparability of the information and data is fully considered, with the data over the recent 3 years clearly displayed, for convenience of the stakeholders and other organizations.
Reliability	In the Report, the statistical caliber of data, assumptions and calculation and estimation methods are specified. Sources of the data used are provided, but there is still room for improving the consistency of statistical caliber.
Timeliness	The Company publishes reports to the stakeholders on an annual basis. The time frame of the Report is consistent with the annual report, so the stakeholders can obtain information in a timely manner to make decisions.

Recommendations on Continuous Improvement

- The Company is recommended to continue to improve data collection system, to ensure the consistency of statistical caliber;
- The Company is recommended to promote the materiality level of toxic emissions and water stewardship issues, for example, adding indicators of emission concentration of waste gases, emission load and concentrations of NH3-N, TP and TN in the waste water, as well as continue to monitor the annual trend of emissions.

Statement on Independence and Verification Capability

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Since 1866, TÜV SÜD has remained committed to its purpose of enabling progress by protecting people, the environment and assets from technology-related risks. Today, TÜV SÜD is present in over 1,000 locations worldwide with its headquarters in Munich, Germany. TÜV SÜD has been committed to sustainable development and actively promotes environmental protection related projects. Over the years, TÜV SÜD has been actively expanding its performance in energy management, renewable resources, and electric automobiles, etc., helping its customers meet sustainable development needs. TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is one of TÜV SÜD's global branches and has an expert team whose members have professional background and rich industrial experiences.

TÜV SÜD and APP China are two entities independent of each other and both TÜV SÜD and APP China and their branches or stakeholders have no conflict of interest. No member of the verification team has business relationship with the company. The verification is completely neutral. All the data and information in the Report are provided by APP China. TÜV SÜD has not been involved in preparation and drafting of the Report, except for the verification itself and issuance of the verification statement.

Signature:

On Behalf of TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Zhu Wenjun
TÜV SÜD Sustainability Product Manager

Date October 15th, 2020

Note: In case of any inconsistency or discrepancy, the simplified Chinese version of this verification statement shall prevail, while the English translation and the traditional Chinese version are used for reference only.

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About this Report

This is the 13th Sustainability Report issued by Sinar Mas Paper (China) Investment Co., Ltd. and the group of companies under its direct investment in China (herein referred to as APP China). The report is released in both Chinese and English. The English report is translated from the Chinese report. If there is any discrepancy between the two reports, the Chinese version shall prevail.

Reporting Boundary and Scope

The time span of this report is from January 1, 2019 to December 31, 2019. The chapter "Bravely Fighting the Battle against the Epidemic" contains events and actions that took place in 2020. Our last Sustainability Report was published in November 2019. Data in "Company Profile", "Economic Performance", "APP China sources of pulp procurement", and "Materials" relate to Sinar Mas Paper (China) Investment Co., Ltd. and the group of companies under its direct investment in China; cases and other data in the report are collected from APP China Headquarters, nine pulp & paper mills, and APP China Forestry Business Unit, unless otherwise stated.

- ◎ APP China Headquarters
- ◎ Gold East Paper (Jiangsu) Co., Ltd. (Gold East Paper)
- ◎ Hainan Jinhai Pulp & Paper Co., Ltd. (Hainan Jinhai Pulp & Paper)
- ◎ Guangxi Jingui Pulp & Paper Co., Ltd. (Guangxi Jingui Pulp & Paper)
- ◎ Ningbo Zhonghua Pulp & Paper Co., Ltd. (Ningbo Zhonghua)
- ◎ Ningbo Asia Pulp & Paper Co., Ltd. (Ningbo Asia)
- ◎ Gold Huasheng Paper (Suzhou Industrial Park) Co., Ltd. (Gold Huasheng)
- ◎ Gold Hongye Paper Group Co., Ltd. (Suzhou Gold Hongye, including Suzhou Mill and Sales & Marketing)
- ◎ Hainan Gold Hongye Paper Co., Ltd. (Hainan Gold Hongye)
- ◎ Hainan Gold Shengpu Paper Co., Ltd. (Hainan Gold Shengpu)
- ◎ APP China Forestry Business Unit (APP China Forestry, including Forestry Business Headquarters, Hainan, Guangxi, and Guangdong BUs, and Lancang, Wenshan, Ganzhou and Henan Sub-BUs)

Reporting Frameworks

The report has been prepared in accordance with the core option of the GRI Standards (2018) issued by the Global Sustainability Standards Board (GSSB). Additionally, the report refers to the Global Compact Ten Principles and papermaking industry clean production and emissions standards.

Content and Indicator Selection

This report was prepared in accordance with the GRI principles of materiality, stakeholder inclusiveness, sustainability context, completeness, etc. At the preliminary stage, our work group conducted policy analysis, industry issues analysis, stakeholder surveys, and field visits to our headquarters and pulp & paper mills to collect the management approaches, specific practices and performance indicators on sustainability issues most relevant to APP China.

Report Assurance

APP China commissioned Technischer Überwachungs-Verein (TÜV) to assess the reliability, objectivity, and transparency of this report. Please refer to the Assurance Statement for further details.

Contact Us

We sincerely welcome readers' comments and suggestions regarding this report and our work. Readers can contact us by email: csr@app.com.cn.



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